In Reply Refer To: MS 5231

May 6, 1994

Gulfstream Resources, Inc.
Attention: Mr. William M. Gray
3850 North Causeway Blvd., Suite 830
Metairie, Louisiana 70002

Gentlemen:

Reference is made to the following plan received April 19, 1994:

Type Plan - Unit Development Operations Coordination Document
Leases - OCS 0228 and 0229
Blocks - 93 and 90
Area - Eugene Island
Activities Proposed - Wells 12,13 w/ plat, EI 90; Cais 13, EI 93

In accordance with 30 CFR 250.34, this plan is hereby deemed submitted
and is now being considered for approval.

Your control number is S-3255 and should be referenced in your
communication and correspondence concerning this plan.

Sincerely,

(Orig. Sgd.) Kent E. Stauffer

William H. Martin
Acting Regional Supervisor
Field Operations

bcc: Lease OCS 0228 POD File (MS 5032)
Lease OCS 0229 POD File (MS 5032)
MS 5034 w/public info. copy of the plan
and accomp. info.

DTrocquet:cic:05/06/94:DOCDCOM

NOTED-SCHEXNAIDRE
April 18, 1994

Mr. Ralph J. Melancon  
Regional Supervisor  
Production and Development  
Minerals Management Service  
1201 Elmwood Park Blvd.  
New Orleans, LA 70123-2394  

Re: Eugene Island Block 89 Unit  
Contract No. 754393020  
Offshore Louisiana  
Supplemental DOCD  

Gentlemen:

Reference your letter dated August 10, 1993 approving the initial plan of operations for the subject unit through July 31, 1994. Gulfstream Resources, Inc. proposes to supplement the initial plan to provide for the drilling and completion of three (3) additional unit wells as follows:

Block 90, OCS-0229, Well Nos. 12 and 13  
Block 93, OCS-0228, Well No. 13

Submitted herewith for your approval is a supplemental DOCD for these three (3) wells. Enclosed are nine (9) copies, five (5) of which contain proprietary information.

By letter dated February 3, 1994, to the Acting Regional Director, Gulfstream requested a waiver of the $3,000,000.00 general bond requirement. Gulfstream proposes to post the following additional supplemental bonds to cover the plugging and abandonment costs of these wells prior to commencing production:

Block 90, OCS-0229, No. 12 $85,000.00  
Block 90, OCS-0229, No. 13 $75,000.00  
Block 93, OCS-0228, No. 13 $85,000.00

Please contact Mr. Jack Newton at (504)837-1715 if you have any questions regarding this submittal.

Very truly yours,

GULFSTREAM RESOURCES, INC.

[Signature]

William M. Gray  
President

WMG/JN/sm  
Enclosures

3850 North Causeway Boulevard, Suite 830  
Metairie, Louisiana 70002  
(504) 837-1715  Fax: (504) 837-1718
GULFSTREAM RESOURCES, INC.

UNIT SUPPLEMENTAL DEVELOPMENT OPERATIONS COORDINATION DOCUMENT

Eugene Island Block 89 Unit (Unit No. 7543930200)
Eugene Island Block 90, OCS-0229
Eugene Island Block 93, OCS-0228
Offshore, Louisiana

In compliance with 30 CFR 250.34, the following information is submitted for the planned development and production activities for the Eugene Island Block 89 Unit on Eugene Island Block 90, OCS-0229, and Eugene Island Block 93, OCS-0228.

1. **Description of Proposed Unit Activities**

Gulfstream plans to drill two wells in Eugene Island Block 90 from a single surface location, and one well in Eugene Island Block 93 from another surface location. Gulfstream plans to complete two of the three wells as dual completions and the other as a single completion. If the wells are commercially productive, Gulfstream plans to set a two well structure over the two proposed wells in Block 90 and a single well caisson over the well in Block 93, and lay dual 3" flowlines from the structure in Block 90 and a single 3" flowline from the caisson in Block 93 to the existing Eugene Island Block 90 CF structure. This proposed activity is anticipated to commence about July 1, 1994, and is expected to take approximately 90 days and be completed about October 1, 1994.

2. **Description of Drilling Rig**

The jack-up drilling rig similar to the "Penrod Rig No. 90" will be utilized to drill and complete the three proposed wells. Specifications for this rig are listed on Exhibit 1.

3. **Well Location**

The location of each of the proposed wells is shown on the attached well location plat, Exhibit 2.

4. **Subsurface Structure Map and Structural Cross Section**

Attached are four (4) structure maps, and two (2) cross sections, Exhibit 3.

5. **Shallow Hazards**

Attached as Exhibit 4 are two letters from John E. Chance and Associates, Inc. dated February 16, 1994, evaluating the potential for shallow hazards at the two (2) proposed surface locations.
6. **Bathymetry Map**
   
   Attached as Exhibit 5 is a bathymetry map.

7. **Oil Spill Contingency Plan**
   
   Attached as Exhibit 6 is data regarding the Clean Gulf Associates.

8. **Trajectory Analysis**
   
   Attached as Exhibit 7 is a Trajectory Analysis.

9. **New or Unusual Technology**
   
   No new techniques or unusual technology will be required for these operations.

10. **Lease Stipulations**
    
    The Regional Supervisor has determined that these leases are located in an area where the probability of a cultural resource is minimal.

11. **Discharges**
    
    All discharges from proposed drilling in Eugene Island Blocks 90 and 93 will comply with the Environmental Protection Agency NPDES General Permit for the Gulf of Mexico. Attached as Exhibit 8 is a discussion of the quantity, rates of discharge, and composition of wastes, and Exhibit 9 is a list of Mud Components.

12. **Hydrogen Sulfide**
    
    Attached as Exhibit 10 is a letter concerning the absence of hydrogen sulfide in the area.

13. **Projected Emissions**
    
    Projected Air Emissions Schedule is included as Exhibit 11.

14. **Onshore Base**
    
    Gulfstream Resources, Inc. will utilize an existing onshore facility in Amelia, Louisiana. This will serve as port of debarkation for supplies and crews. No onshore expansion or construction is anticipated with respect to this activity.

    This base is capable of providing the service necessary for the proposed activities. It has 24-hour service, radio tower with telephone patch, dock space, equipment and supply storage space, drinking and drill water, etc. The service boat's travel time is approximately 6 hours and it will be making
approximately 5 trips per week during drilling operations. See Exhibit 12 for a map showing Eugene Island Blocks 90 and 93 in relation to the shoreline and base at Amelia.

15. **Coastal Zone Consistency**

A certificate of Coastal Zone Consistency for the State of Louisiana is attached as Exhibit 12. Attached to the Coastal Zone Consistency are copies of the letters to the Baton Rouge State Times and the Franklin Banner, St. Mary Parish, requesting publication of the Public Notice.

16. **Environmental Report**

An environmental report is Exhibit 13.

17. **Authorized Representative**

Inquiries may be made to the following authorized representative of Gulfstream Resources, Inc.

Mr. Jonathan C. Garrett  
Vice President - Engineering  
Gulfstream Resources, Inc.  
3850 North Causeway Boulevard, Suite 830  
Metairie, Louisiana 70002  
(504) 837-1715

18. **List of Exhibits**

1. Rig Specifications  
2. Well Location Plat  
3. Geological Structure Maps (4) & Cross Sections (2)  
4. Shallow Hazards Letters (2)  
5. Bathymetry Map  
6. Oil Spill Contingency Plan  
7. Trajectory Analysis  
8. Rates of Discharge  
9. Mud Components  
10. Letter regarding Hydrogen Sulfide  
11. Projected Air Emission Schedule  
12. Certificate of Coastal Zone Consistency  
13. Environmental Report  
14. Vicinity Map
EXHIBIT 1
**Certificate of Inspection**

**Vessel Name:** ENROD 90  
**Home Port:** NEW ORLEANS, LA  
**Owner:** ENROD DRILLING CORPORATION  
**Address:** 1405 PINHOOK ROAD, P.O. BOX 52268, OCS, LAFAYETTE, LA 70505

<table>
<thead>
<tr>
<th>Date Built</th>
<th>Gross Tons</th>
<th>Net Tons</th>
<th>DWT</th>
<th>Length</th>
</tr>
</thead>
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<tr>
<td>18JUN82</td>
<td>4783</td>
<td>4783</td>
<td>907</td>
<td>207.40</td>
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</table>

This vessel must be manned with the following licensed and unlicensed personnel, included in this there must be 4 Certificated Lifeboatmen and 0 Certificated Tankerman.

- **Master**  
- **Chiefmate**  
- **2nd Mate**  
- **Mates**  
- **Operator(s)**

**Other Required Crew:** 1 Offshore Installation Manager

Addition, this vessel may carry 0 Passengers, Other Persons in Crew, Persons in Addition to Crew, and 1 Industrial Personnel. Total persons allowed: 58.

**Route Permitted and Conditions of Operation:**

- OCEANS

LIMITED TO THE GULF OF MEXICO, NOT ON AN INTERNATIONAL VOYAGE.

**Special Tensile Steels Used in Construction.** See Construction Portfolio Prior to Commencing Repairs.

**While Vessel is in the Stacked Mode, Sufficient Certificated Lifeboatmen Shall Be Provided to Man Primary Life-saving Equipment to Accommodate One Hundred Percent (100%) of Persons on Board.**

---

***SEE NEXT PAGE FOR ADDITIONAL CERTIFICATE INFORMATION***
<table>
<thead>
<tr>
<th>FIRE EXTINGUISHERS - HAND PORTABLE AND SEMI-PORTABLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 A-II</td>
</tr>
<tr>
<td>B-IV</td>
</tr>
</tbody>
</table>

--- CERTIFICATE AMENDMENTS ---

PORT AMENDING/MORMS

CREDIT DRYDOCK COMPLETED.

AMENDMENT

DATE AMENDED/ 16JUN92

*** END ***

BEST AVAILABLE COPY
Transverse dots equal 10' increments.

DESIGNATED SAFE WELDING AREA
<table>
<thead>
<tr>
<th>FLOATING WAVE (CONDITION)</th>
<th>MAXIMUM DRAFT (NOTE 1)</th>
<th>WIND VELOCITY</th>
<th>LEG LENGTH</th>
<th>LOCATION OF TIP OF CAN (NOTE 2)</th>
<th>CANTILEVER RACK LOAD (NOTE 3)</th>
<th>ALLOWABLE KG (NOTE 4)</th>
<th>MOTION LIMITS</th>
<th>SEE NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FT.</td>
<td>KNOTS</td>
<td>FT.</td>
<td>FT. BELOW BL</td>
<td>KIPS</td>
<td>FT.</td>
<td>ANGLE DEGS.</td>
<td>PERIOD SECS.</td>
</tr>
<tr>
<td>SHALLOW WATER</td>
<td>10.9</td>
<td>50</td>
<td>360</td>
<td>1.25</td>
<td>500</td>
<td>65.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NORMAL TOW</td>
<td>10.9</td>
<td>70</td>
<td>360</td>
<td>12.38</td>
<td>500</td>
<td>65.0</td>
<td></td>
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</tr>
<tr>
<td>SEVERE STORM</td>
<td>10.9</td>
<td>100</td>
<td>360</td>
<td>60.50</td>
<td>500</td>
<td>38.75</td>
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<td></td>
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</table>
CERTIFICATE OF CLASSIFICATION
FOR HULL

PENSOD 90

MORGAN CITY, LA

Description: SELF-ELEVATING DRILLING UNIT

Length: 207' 4"  Breadth: 176'  Depth: 20'

Registered Tonnage Gross: 4763  Net: 4783

Owner: PENRO DRILLING CO.

DALLAS, TX

Shipbuilder: MARATHON LE TROHEAU COMPANY (GULF MARINE DIVISION)

BROWNSVILLE, TX

Year of Build: 1962  Hull Number: 169

This is to certify that the above Vessel has been surveyed in
accordance with the Rules of this Bureau and entered in its
Record with the Class: A1 SELF-ELEVATING DRILLING UNIT

New York, 2 August 198

VICE PRESIDENT

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.
MAY 19 1993

INTERNATIONAL LOAD LINE CERTIFICATE (1966)

Issued under the provisions of the International Convention on Load Lines, 1966, under the authority of the Government of the

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

by the American Bureau of Shipping
duly authorized for assigning purposes under the provisions of the Convention

Certificate No. 8205090-3

<table>
<thead>
<tr>
<th>Name of Ship</th>
<th>Official number or Distinctive Letters</th>
<th>Port of Registry</th>
<th>Length (L) as defined in Article 2 (F)</th>
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</thead>
<tbody>
<tr>
<td>PENROD 90</td>
<td>647859</td>
<td>MORGAN CITY LA</td>
<td>199.04</td>
</tr>
</tbody>
</table>

Freeboard assigned as: A new ship

Type of Ship:

*Delete whatever is inapplicable.

Freeboard from deck line CENTER OF RING 9'-1"

<table>
<thead>
<tr>
<th>Season</th>
<th>Feet</th>
<th>Inches (T)</th>
<th>N/A</th>
<th>Inches (S)</th>
<th>N/A</th>
<th>Upper edge of line through center of ring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tropical</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>inches above (S)</td>
</tr>
<tr>
<td>Summer</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>Upper edge of line through center of ring</td>
</tr>
<tr>
<td>Winter</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>inches below (S)</td>
</tr>
<tr>
<td>Winter North Atlantic</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>inches below (S)</td>
</tr>
</tbody>
</table>

Note: Freeboards and load lines which are not applicable need not be entered on the certificate.

Allowance for fresh water for all freeboards N/A inches.

Note: All measurements are to upper edge of the respective horizontal lines.

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 LONG AS THE OPERATING STRICCTIONS IN THE U.S. COAST AND STABILITY LETTER DATED JANUARY 1983 ARE OBSERVED.

Date of initial or periodical survey 30 JUNE 1992

This is to certify that this ship has been surveyed and that the freeboards have been assigned and load lines shown above have been marked in accordance with the International Convention on Load Lines, 1966.

This Certificate is valid until 30 JUNE 1997, subject to annual surveys in accordance with Article 14 (1) (c) of the Convention, and endorsement thereof on the reverse side of the Certificate.

**At the expiration of this certificate, applicable reissuance should be obtained in accordance with the Load Line Regulations.


The undersigned declares that he is duly authorized by the said Government to issue this Certificate.

J. A. Schmidt
Survey Manager
ABS Americas
American Bureau of Shipping
American Bureau of Shipping
45 Eisenhower Drive
P.O. Box 910
Paramus, New Jersey 07652-0910
Telephone (201) 368-9109

8 September 1987

Penrod Drilling Company
1405 Pinhook Road
Lafayette, LA 70503

Attn: Mr. Carl Redmond

SUBJECT: "PENROD 90" (ID-8205090)
Marathon Le Tourneau Company(Gulf Marine Division) Hull 169
207'-4" x 176'-0" x 20'-0"
Drilling Platform (USA)
Load Line Certificate

Gentlemen:

Attached please find Load Line Certificate, original and duplicate. The original is
to be placed aboard the vessel for ready reference and the duplicate is for your
files.

The certificate expires 30 June 1992, at or before which time, the periodical survey
required by the Load Line Regulations should be carried out for further renewal.

Please be advised that the expiry date of this certificate now coincides with the due
date of the Special Survey which is the last day of the month.

A periodical Load Line inspection is due within three months, either way, at each
annual anniversary of the initial or periodical survey date, which is shown on the
certificate. The certificate is to be properly endorsed upon satisfactory completion
of this inspection in order for it to remain valid.

Please return duly signed duplicate of this letter as acknowledgment of receipt.

Very truly yours

AMERICAN BUREAU OF SHIPPING

[Signature]

C.M. George
Assistant Secretary

Enc. PENROD DRILLING CO.
LAFAYETTE, LOUISIANA
April 14, 1988

Penrod Drilling Company
P. O. Box 52268
Lafayette, Louisiana 70505

ATTN: Mr. Harold Keys

RE: Design Criteria for Conductor Guide Supports

Dear Mr. Keys:

Pursuant to our telephone conversation this date, the following criteria is proposed for design of the conductor guide supports. The criteria listed below is typical for 100 year return storms in the Gulf of Mexico:

1. Water depth - 300 ft
2. Winds - 125 mph
3. Wave Height - 56 ft
4. Wave Period - 15 seconds
5. Surface Current - 2 knots

This criteria would be utilized to calculate the maximum anticipated forces, and once calculated, these forces would be used to design the supports to provide adequate lateral support for a forty-eight inch (48") diameter conductor with a dry mounted BOP. A safety factor of 1.2 is typically used for similar designs, and is proposed for use in this design.

I hope this response adequately clarifies the design criteria. Should you have any questions or comments, please feel free to call. We look forward to working with you on this project.

Sincerely,

Ron W. Schnoor
Project Engineer

cc: W. L. Porter
J. L. Holloway

Main Office • Telephone (601) 762-8230 • Telefax (601) 760-0413
4301 Industrial Road • P. O. Box 43 • Pascagoula, Mississippi 39567
Operators of Deep Water Port • West Bank, Pascagoula River
Conductor Support Frame
CONDUCTOR SUPPORT FRAME

18"  9"

Main Deck

Slot Transom to Let Flange Through

Hull Transom

1/2" Pipe Handrail

W14x34

9"  3/8" Pipe

W14x34

12"  4'-6"

11'-0"

Profile @ 12'-0" offshore

BEST AVAILABLE COPY
2 - W 14 x 34  24' - 0"  1632 #
2 - W 14 x 34  16' - 0"  1080 #
2 - W 14 x 34  22' - 0"  1496 #
4 - 6" Ø Std Pipe  8' - 0"  607 #
2 - 6" Ø Std Pipe  9' - 0"  341 #

Total: 5356 # Press Pins, Rivets, Hardware & Gaskets
Riser Support Frame for three well riser positions.

1. Stowage is by removal of the transverse frames and horizontal diagonal members and swinging frames outboard parallel with transom.

2. The frames do not have to be relocated to accommodate lateral conductor positions.

3. Conductor upper end support is by collar and links as shown on Sheet No. 2.
Sling A

(2 Req'd)

1 - 35T Safety Shackle
1 - 1st Steamboat Ratchet (12" barrel)
1 - 1/4 Coupling Link 2\frac{1}{2}" x 5/4"
1 - 7/8 Coupling Link 2" x 3\frac{1}{2}"
1 - 7/8 Grade 80 Chain 61 links
1 - 3/8 Coupling Link 2" x 3\frac{1}{2}"
1 - 3/8 Grab Hook

Sling B

(2 Req'd)

1 - 35T Safety Shackle
1 - HJISO Oblique Master Link
1 - 7/8 Coupling Link 2\frac{1}{2}"
1 - 7/8 Grade 80 Chain 78 links
1 - 3/8 Coupling Link 2" x 3\frac{1}{2}"
1 - 3/8 Grab Hook

Note: All chain parts to be Grade 80
Penrod 90
Choke Manifold
(Revised - January 1983)

Ring Gaskets:
3-1/16" 10M - BX-154

2" Pump-in outlet

Cameron 3-1/16' 10M
Manual Gate Valve
Type FC

Cameron 3-1/8' 10M
Manual Gate Valve
Type FC

3-1/16" 10M
Lo-Torque
Ball Valve

To Buffer Tank
To Buffer Tank

From Drilling Spool

SWACO 10M
Hydraulic
Super Choke

3-1/16" 10M x
2-9/16" 10M
DSA
Option 1: 10" Diverter Valve connects to 10" I.D. x 7" (minimum) Diverter Lines, 3700 psi Burst Pressure, Port and Starboard.

Option 2: 10" Diverter Valve connects to 10" I.D., Non-Collapsible, 350 psi Hoses which connect to 10" I.D., 3700 psi Burst Pressure Diverter Lines.
PENROD 90

Diverter
Top View

(Revised - January 1983)

Cantilever Beam

62'

10" I.D. Diverter Line
2100 psi Burst Pressure

(Not to Scale)
Centerline

Variable
11° to 40°

10" I.D., Non-Collapsible
350 psi Hoses
(2) 25' Sections each side
Port and Starboard

Demco Series 600
10" x 10"
Hydraulics
Bell Valve
1140 psi Working Press
2170 psi Test Pressure

10" I.D., Non-Collapsible
350 psi Hoses
(2) 20' Sections each side
Port and Starboard

Cantilever Beam

62'
PENROD 90

Diverter Detail
Top View
(Revised - January 1993)

Cantilever Beam

62'

10' I.D. Diverter Line
3700 psi Burst Pressure

(Not to Scale)
Centerline

Cantilever Beam

62'

10' I.D. Diverter Line
3700 psi Burst Pressure

Variable
10' to 40'

10' I.D. x 7' (minimum)
Diverter Line
3700 psi Burst Pressure

Demco Series 600
10' x 10'
Hydraulic
Ball Valves
1140 psi Working Pressure
2170 psi Test Pressure
PENROD RIG 90

SUBJECT: Diverter Operating Procedures

October, 1989

The hydral and top rams are connected together with a bar
at the closing unit.

To operate, close the hydral which in turn opens both 12" hydraulic diverter valves on the diverter assembly. The well
can be diverted port or starboard of the hull by disconnecting
the bar from blind ram or pipe ram control handles. The well
can be diverted to the stbd. side by closing the port diverter
valve or the port side by closing the stbd. diverter valve.
PENROD 90 INVENTORY

Unit Operator
Penrod Drilling Corporation
Headquarter address
2100 Thanksgiving Tower
Dallas, Texas 75201
Telephone
(214) 880-1700
(214) 880-1787
Fax

UNIT SPECIFICATIONS

Unit Name
PENROD 90
Type
Marathon LeTourneau 82SD-C Jack-Up
Flag
U.S.A.
Classification
A.B.S.
Certification of Inspection
U.S.C.G. - Certificate of Inspection
Accommodation Limit
58 persons
Delivery Date
June 18, 1982
Constructed by
Marathon LeTourneau
Brownsville, Texas

MAIN DIMENSIONS

Jack-up Design
Triangular Shape
Cantilever Substructure
Length O.A.
207' - 4"
Width O.A.
176' - 0"
Hull Depth
20'
Distance from Bottom of Hull
to Top of Jacking System
46' - 6"
Tip of can below hull with
leg in raised position
Zero
Number of Legs
3
Leg Type
Triangular Truss
Length of each Leg
360'
Spud tank diameter
40' Across Flats
Spud tank height
21' - 4 1/2"
Jacking System
LeTourneau A.C. Electric
Spud Tank Jetting System
Water pumped thru down leg piping
and jets on bottom of can.
Drilling area dimensions
Cantilever (See Grid)
Conditions for jacking
operations
Conditions are determined by the
O.I.M. based on experience, rig
behavior and sea state at time
of jacking operations.

VARIABLE LOAD

Maximum Variable Load
4,144,980#

3/30/93 ML
Maximum Combined Hook, Rotary, Setback and Conductor Tension Load (Drilling Loads) (Refer to Cantilever Load Chart) 881,200#

Maximum Operating Loads (Includes Variable and Drilling Loads) 5,026,180#

OPERATING DEPTHS

Max drilling depth with 5" D.P. 20,000 ± feet
Max operating water depth for which the unit is fully equipped. 250 feet
Minimum water depth without special or extra equipment 13 feet

MOORING EQUIPMENT

Number of Anchor lines 4 – mooring used only to get on/off location
Type of Line
Diameter of Line 1 1/2 inch
Breaking Strength 160,000 lbs.
Available line length 2,000 feet
Anchor winch
Number of anchor winches 4
Make Marathon LeTourneau W - 1500 TS
Type Marathon LeTourneau AC Motor
Powered by

Anchors
Number/Type 4 Stockless
Weight in air 10,000 lbs.
Pendant Lines
Pendant chain 4
Diameter 1 1/8" Stud Link
Length (each) 160 feet

STORAGE CAPACITIES

Fuel 2,058 bbls.
Drilling Water 6,630 bbls.
Potable Water 983 bbls.
Liquid Mud 1,470 bbls.
Bulk Mud/Cement 7,700 cu. ft.
Sacks Material 2,500 sq.
Pipe Racks 4,260 sq. ft.
Miscellaneous Storage Area 1,000 sq. ft.
CRANES

Number
Make
Type
Boom Length
Powered by
Max hoisting capacity at min.
boom straddle
Max hoisting capacity at max.
boom straddle
Rigged with single line

HELIICOPTER DECK

Octagonal
Capacity

Helicopter transfer fuel system
(refuelling)
Foam fire extinguishing system

DRILLING MACHINERY AND EQUIPMENT

Derrick
Make
Type
Height
Width of Base
Maximum hook load capacity
Racking platform capacity
Casing stabbing platform
Adjustable - height

Dead Line Anchor
Make/Type
Sub-Structure
Make
Height
Simultaneous capacity
Set back & rotary

Drawworks
Make
Type
Electric Brake
Model
Crown-o-matic
Drawworks Drum Grooving
Sand Reel line capacity

3
LeTourneau
PCM-120AS Electric
100 feet
AC Motors
100 kips
at 24 feet
7.99 kips
at 103.5 feet
150 ft/min with
7.99 kips

65 feet across flats
Sikorsky S-61 or equivalent
N/A

2-Ansul 150# Portable
Dry Chemical Fire Extinguishers

Superior
Beam Leg
160 feet
30 x 30
1,000,000 lbs. w/12 lines
159 stands 5" drill pipe
plus 10 stands 8" collars
Deckard-air
30 to 58 feet

National Type E-B
Marathon LeTourneau
27'- 8" w/cantilever
See Attached Grid Sheet

National
1320-UE
Baylor
7040
Koomey
1 3/8"
20,000'(no line
on reel)
Sand line sheave grooved
   for line size
Drawworks Power

Crown Block
Make
Model
Capacity
Number of sheaves
Diameter of sheaves
9/16"
2 EMD D79
DC Motors each
1000 HP
National
760 FA
583 tons
7
6 X 60" & 1 X 50"

Traveling Block
Make
Model
Capacity
Number of sheaves
Diameter of sheaves
National
660H500
500 tons
6
60"

Hook
Make
Type
Capacity
National
H-500
500 tons

Swivel
Make
Type
Capacity
National
P-650
650 tons

Rotary Table
Make
Type
Max opening
Powered By
Continuous rating
National
C-375
37 1/2"
1 - EMD D79
800 HP

Master bushing
Make
Type
Varco
MPCH

Kelly bushing
Make
Type
Varco
27 HDP

TOP DRIVE
Varco BJ Model TDS-4H with 650 ton load rating and maximum
continuous torque output of 45,500 ft/lbs at 110 RPM in low gear and
29,100 ft/lbs at 175 RPM in high gear. Includes raised back-up
system (RBS-I) to handle 5" drill pipe.

TRANSFORMER SYSTEM
Output volts
KVA
Hertz
480
1500
60

Distribution control centers arranged to
control simultaneously:
Number of drilling motors
7
Number of mooring winch motors
Ship services mode and lighting total power

POWER

Generator Sets
Number of AC generator sets
Total drilling horsepower
Engines
Model
Max. drilling power rating(each)
AC Generators
Type
Max drilling KW
Volts
Hertz

SCR Conversion System
Number of SCR Bays
Make
Type
Volts

MUD CIRCULATING SYSTEM

Mud Pumps
Make
Model
Each Powered by Total Continuous Rating Each Pump Charging pumps

Stand Pipes
Number of stand pipes
Size of stand pipes
Working pressure

Mud Tanks Volumes
Tank No. 1
Tank No. 2
Tank No. 3
Tank No. 4
Slug Tank
Main Deck Shaker Tank Total volume

Mud mixing pumps
Make - Type
Horsepower

Electrical mud agitators
Make
Quantity

3/30/93 ML

PENROD 90 INVENTORY, Page 5
Powered by motor
Installed on mud tank

**Bottom guns**
- **Quantity**
- **Mud shearing device**
  - **Make**
  - **Location**
- **Shale shaker**
  - **Number**
  - **Make**
  - **Type**
- **Desander**
  - **Make**
  - **Type**
  - **Driven by**
- **Desiliter**
  - **Make**
  - **Type**
  - **Driven by**
- **Degasser**
  - **Make**
  - **Type**
- **Mud gas separator**
  - **Make**
  - **Type**
  - **Gas discharge line size**
- **Trip Tank**
  - **Capacity**
  - **Centrifugal Pumps**

**20HP XPLF AC**
1, 2, 3, 4
2 each tank
Mission
Venture at hopper

Two (2)
Derrick
Flo-Line Cleaner Plus
Sweco
P10-C03
75 HP Motor and
Mission Magnum
5x6 centrifugal pump

Sweco
P05C16 Cone
75 HP Motor and
Mission Magnum
5x6 centrifugal pump

Swaco
Vacuum
Fabricated
Vertical
6"

38 bbls.
1-3 x 2 Mission Magnum
driven by a 25 HP
motor

**DRY CEMENT AND MUD BULK STORAGE AND TRANSFER SYSTEM**

**For Cement**
- **Number of tanks**
- **Capacity of each**
- **Installed on**
- **Total capacity**

**For barite/bentonite**
- **Number of tanks**
- **Capacity of each**
- **Installed on**
- **Total capacity**

**Surge tanks for cement**
- **Quantity**
- **Capacity**

2
1925 cu. ft.
Main Deck
3,850 cu. ft.

2
1925 cu. ft.
Main Deck
3,850 cu. ft.

1
80 cu. ft.
Surge tanks for barite/bentonite
  Quantity
  Capacity
  1
  70 cu. ft.

Transfer system
  Type
  Rating
  Conveying line size
  Air
  40 psi
  5"

Supply hoses
  Quantity for diesel
  Quantity for drill water
  Quantity for potable water
  Quantity for bulk material
  Connection type
  1
  1
  1
  Quick Connects

CEMENTING UNIT

Make (Free Placement)

Make: Halliburton SKE-4 with RCM
Type: 2
Working pressure: 10,000 psi
Motors: EMD D79
Manifold working pressure: 15,000 psi
Total horsepower: 800 HP each
Working pressure: 2
Cementing discharged lines: 6,500 psi
Cement discharge lines from cementing unit to drill floor and choke manifold:

BOP WELL CONTROL EQUIPMENT

Auxillary Annular Preventer

Make: Hydrid MSP 2000
Size: 21 1/4"
10" pipe with 10" hydraulic operated ball valves - Route port and Starboard
Diverter System
Spool

Main Annular Preventer

Make: Hydrid Type GL
Size: 13 5/8"
Working pressure: 5,000 psi
For H₂S Service
Top Connection

Lower Connection

Ram Type Preventer

Make: Cameron Type U
Size: 13 5/8" Double
Working Pressure: 10,000 psi
For H₂S Service
Top and Bottom Connection Type
Outlets
Ram sets available

Ram Type Preventer
Make
Size
Type
Working pressure
For H₂S Service
Top and Bottom Connection
Outlets

Drilling Spool
Top and Bottom Connection
I.D. x height
Outlets size W.P.

Valve (Hydraulic Operated) to choke/kill
Make
Number
Size W.P.

Valve (Manual Operated) to choke/kill
Make
Number
Size W.P.

BOP Control System and Associated Equipment

Surface Accumulator Unit
Make
Type
Installation Site
Number of Stations
Soluble oil reservoir capacity
Number of bottles
Capacity of each bottle
Total bottles capacity
Bottles working pressure

Triplex Pumps
Driven
Pump capacity
Max working pressure

Air Pump
Model
Pump capacity
Max working pressure

13 5/8" x 10,000 psi Flanged
2 - 4 1/16" x 10,000 psi Flanged
1 - Blind
3 - 5"
Cameron
13 5/8" Single
U
10,000 psi
13 5/8" x 10,000 psi Flanged
2-4 1/16" x 10,000 psi Flanged
Cameron Type F
2
3 1/16" x 10,000 psi
Cameron Type F
2
3 1/16" x 10,000 psi
Koomey Type 80
160-11S
In Cantilever
7
280 gallons
16
10 gallons
160 gallons
3,000 psi
25 HP motor
11.4 G.P.M. each
3,000 psi
U7A26
6.4 G.P.M.
3,000 psi
Master Driller's Control Panel
On drill floor for all preventers, choke and kill wing valves
Model A7GRB

Remote Control Panel(s)
Installation Site
Outside port side of living quarters

Diverter Control Panel
Installation site
Drill Floor
Provision may be made for any type furnished by operator

Burner Booms

**CHOKE MANIFOLD**

<table>
<thead>
<tr>
<th>Manual Adjustable Chokes</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Make</td>
<td>2</td>
</tr>
<tr>
<td>Size</td>
<td>Cameron</td>
</tr>
<tr>
<td>Working Pressure</td>
<td>3 1/16&quot;</td>
</tr>
<tr>
<td>For H₂S Service</td>
<td>10,000 psi</td>
</tr>
<tr>
<td>Remote Operated Choke</td>
<td>1</td>
</tr>
<tr>
<td>Make</td>
<td>Swaco</td>
</tr>
<tr>
<td>Type</td>
<td>Superchoke</td>
</tr>
</tbody>
</table>

**DRILL PIPE**

<table>
<thead>
<tr>
<th>Total length</th>
<th>5952'</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal O.D.</td>
<td>5&quot;</td>
</tr>
<tr>
<td>Grade</td>
<td>E</td>
</tr>
<tr>
<td>Range</td>
<td>2</td>
</tr>
<tr>
<td>Weight lb/ft</td>
<td>19.5</td>
</tr>
<tr>
<td>Tool joint O.D.</td>
<td>6 3/8&quot;</td>
</tr>
<tr>
<td>Type of connections</td>
<td>4 1/2&quot; IF</td>
</tr>
</tbody>
</table>

**DRILL COLLARS**

| Quantity | 14 |
| Size (OD) | 8" |
| Connection | 6 5/8" Reg |
| Remarks   | Spiral |

**DRILL PIPE ELEVATORS**

| Quantity | 2 |
| Size     | 5" |
| Make     | BJ |
| Type     | GG |
| Capacity | 350 ton |

**DRILL PIPE SLIPS**

| Quantity | 2 |
| Size     | 5" |
### Drill Collars Slips

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Make</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Varco</td>
<td>5 1/2&quot;-7&quot;</td>
</tr>
<tr>
<td>1</td>
<td>Varco</td>
<td>6 3/4&quot;-8 1/4&quot;</td>
</tr>
</tbody>
</table>

### Safety Clamps

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Make</th>
<th>Range Sizes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Varco</td>
<td>5 1/2&quot; - 8 1/4&quot;</td>
</tr>
</tbody>
</table>

### Drill Pipe and Drill Collar Rotary Tongs

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Make</th>
<th>Type</th>
<th>Range Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 set</td>
<td>BJ</td>
<td>DB</td>
<td>3 1/2&quot; to 14 3/4&quot;</td>
</tr>
</tbody>
</table>

### Elevator Links

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Make</th>
<th>Capacity</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 pair</td>
<td>BJ</td>
<td>500 ton</td>
<td>3 9/16&quot; x 180&quot;</td>
</tr>
<tr>
<td>1 pair</td>
<td>BJ</td>
<td>350 ton</td>
<td>3 x 108&quot;</td>
</tr>
<tr>
<td>2 pair</td>
<td>Varco</td>
<td>350 ton</td>
<td>2 3/4&quot; x 132&quot;</td>
</tr>
</tbody>
</table>

### Upper Kelly cocks

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Make</th>
<th>Working Pressure</th>
<th>Type Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Varco</td>
<td>15,000 psi</td>
<td>Remote</td>
</tr>
</tbody>
</table>

### Lower Kelly Cocks

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Make</th>
<th>Working Pressure</th>
<th>Type Operation</th>
<th>Bore</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>TIW</td>
<td>10,000 psi</td>
<td>Manual</td>
<td>----</td>
</tr>
<tr>
<td>1</td>
<td>Varco</td>
<td>15,000 psi</td>
<td>Manual</td>
<td>2 1/2&quot;</td>
</tr>
</tbody>
</table>

### Rotary Hoses

<table>
<thead>
<tr>
<th>Number of rotary hoses</th>
<th>Size (inside diameter)</th>
<th>Length</th>
<th>Working pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>3&quot;</td>
<td>75'</td>
<td>5,000 psi</td>
</tr>
</tbody>
</table>
KELLY

| Number | 1 |
| Make   | Drilco |
| Size   | 5 1/4" HEX |
| Total length | 40' |

KELLY SAVES SUBS

Quantity & Size
3 - 4 1/2 IF box x 4 1/2 IF pin

INSIDE BOP

| Quantity | 2 |
| Make     | Gray |
| Nominal OD Drill Pipe | 5" |

EZY TORQUE

| Make | Drilco |

KELLY SPINNER

| Make | International |
| Model | PJ A6C-2 |

SPINNING WRENCH

| Make | Weatherford Lamb |
| Model | Spinnerhawk 13000 J-29 |

SAFETY VALVE

| Quantity | 1 |
| Make     | Omsco |
| Max OD   | 6 3/8" |
| Working pressure | 10,000 psi |
| Type connection | 4 1/2" IF |

CHICKSAN JOINTS

| Quantity | 6 |
| Size     | 2" |
| Working pressure | 15,000 psi |
| Length of each joint | 10 feet |

WIRE LINE MEASURING ASSEMBLY

| Make | Mathey |
| Line Capacity | 15,000' |
| Line size | .092" |
| Power | Electric |
FISHING TOOLS

Overshots
Quantity 1
Make Bowen
OD 9 5/8" FS
Series 150
Connection 4 1/2" XH
Oversize Guide 15"-11 1/4"
Extension 11"-15" 30"

Taper taps
Quantity 1
Make Tri-State
Min OD 2"
Max OD 5"
Length 60"
Connections 4 1/2" FH
ID 1"

INSTRUMENTATION

Weight Indicator
Make Totco
Type 100
Sensor Type E

Weight Indicator console including:
Mud pump pressure gauges
Make Totco
Capacity range 5,000

Rotary torque indicator
Make Weston

Rotary Speed tachometer
Make Totco
Type RPM 391-351
Capacity RPM 0 - 300

Tong torque assembly
Make Totco
Type DCT 20-25

Drilling recorder
Make Geolograph
Type 6 pen
Parameter recorded:
Weight on bit
Rate of penetration
RPM rotary table
Torque
Pump pressure
Stroke per minute

Drift Indicator

3/30/93 ML PENROD 90 INVENTORY, Page 12
Environmental data and unit motion

Indicators
- Wind speed & direction
- Air Temperature and Barometric pressure

Mud Pit Level Indicator
- Make: Totco
- Type: Air
- Warning instrument sites: Drill Floor

Mud Flow Indicator
- Make: Totco
- Type: Air
- Warning instrument site: Drill Floor
- Warning instrument types: Alarm

Combustible Gas Detector
- Make: Sieger - FSI
- Sample points: Pits, Shaker, Drill Floor
- Warning site: Rig Floor
- Warning type: Meter & Alarm
- Number: 2
- Make: MSA
- Model: 361
- Type: Portable-Combustible Gas & Oxygen

OTHER EQUIPMENT AND FACILITIES

Air Compressor Units
- Mfg.
- Capacity: 490 CFM @ 125 psi each

Air dryers
- Quantity: 1
- Mfg.: Hankison
- Type: Model 80800
- Capacity: 800 scfm @ 100 psi/100°F

UTILITY HOISTS

Rig Floor
- Number of hoists: 1
- Make: IR
- Type: K-4UL
- Rated pull: 5000 lbs.

In Substructure for handling BOP's
- Number of hoists: 1
- Make: Beebe Bros.
- Type: ADBB20 PT30
- Rated pull: 80,000 lbs.
Other hoists

4-hand operated hoist for snubbing BOP's
2-air operated hoist for moving BOP work platform

MISCELLANEOUS

Workshop complete with

Warehouse
Welding machines
Make
Forklift truck
Marine Sanitation Unit capacity

Potable water distillation units

Drill press, vise and mechanics hand tools
1
2
Lincoln 400 amp
Toyota 4,000 lb. cap.
Red Fox Model Paco SLD Duplex
1 Maxim TCF 7.5/
7500 GPD total

EMERGENCY SYSTEM

Emergency Power Generator
Quantity
Max continuous power
Volts
Hz

Remarks:
The emergency power generator is located in an area remote from the main power to feed the following independent distribution circuits:

- BOP Accumulator System
- BOP Control Panel System
- Emergency Lighting
- Navigation Aids
- Radio
- Fire Pumps
- Positive pressure system of accommodation
- Flood lighting at all life boat and life raft stations
- Emergency power at all life boat and life raft stations
- All other systems required for the safety of personnel and the rig.

The emergency power generator will come into service automatically in the event of a main circuit failure.

SAFETY EQUIPMENT

Life Boats
Quantity
Type
Capacity
Mfg.
Launching device
Approved by U.S.C.G.

2
Self Propelled
58 men each
Watercraft
Davit

3/30/93 ML
Life Vests (or jackets) Quantity 110 minimum
Life Buoy with Igniting Light Attachment and Self Activating Smoking Signal Quantity 2 USCG Approved
Type
Working Life Jackets/Vests Quantity 14
Fireman's Suits & Air Breathing Apparatus Quantity 2 USCG Approved
Type
First Aid Sick Bays 1
Number of beds 6
Resuscitators with spare charged oxygen cylinder 1 with 2 spare
Stretcher 5
Sick bay equipped with all instruments and medical supplies as recommended by USCG.

FIXED FIRE FIGHTING SYSTEM
Fire Water Delivery Stations
The water fire fighting system is serviced by at least two fire pumps, each of adequate capacity and each located in separate room. One of the two fire pumps is driven by the emergency generator or by diesel engine as per USCG/ABS requirements.
Fire CO2/Halon Delivery Systems Per USCG/ABS Requirements
Portable Fire Extinguishers Per USCG/ABS Requirements
15 lbs CO2 Type
20 lbs dry chemical (CO2 change)

LIVING QUARTERS
Accommodation for Contractor’s personnel: 3 – two bed rooms
15 – four bed rooms
Accommodation for Operator’s personnel 3 – two bed rooms
Total people accommodation: 72
Sickroom 6 beds
Galley & mess for number of people 24
Number of recreation rooms 2
Entertainment sets in recreation rooms TV, 2-Card Tables
Number of Contractor toolpusher offices 1
with connecting bedroom
Number of Operator toolpusher offices 1
with connecting bedroom
COMMUNICATIONS EQUIPMENT

2 - 110 watt RCA FM standby base station
1 - VHF Marine Transceiver Sailor Model RT144AC
4 - VHF Marine Hand Held Transceivers
30 Stations Intercom System GAI-Tronics
12 Stations Sound Powered Telephone System
1 - Petrocom Cellular Phone with Fax

3/30/93 ML
EXHIBIT 2
WELL LOCATIONS

EI 90 #12  SURF. LOC: 395' FSL & 2538' FEL of EI 90 (LOC. "A")
           PBHL:  1313' FSL & 230' FEL of EI 90
           PTVD:

EI 90 #13  SURF. LOC: 400' FSL & 2538' FEL of EI 90 (LOC. "A")
           PBHL:  1768' FSL & 271' FRI, of EI 90
           PTVD:

EI 93 #13  SURF. LOC: 2600' FNL & 1690' FEL of EI 93 (LOC. "B")
           PBHL:  2600' FNL & 469' FEL, of EI 93
           PTVD:
EXHIBIT 4
February 16, 1994

Gulfstream Resources Inc.
3850 Causeway Blvd. - Suite 830
Metairie, La. 70002

Attention Mr. Edward Schehr

RE: Proposed "A" Surface Location
Block 90 (OCS-0229)
Eugene Island Area

Gentlemen:

Gulfstream Resources Inc. contracted John E. Chance & Associates, Inc. to provide a Proposed Wellsite Clearance Letter associated with the Proposed "A" Surface Location within Block 90, Eugene Island Area. John E. Chance & Associates, Inc. performed a high resolution Hazard Survey across the southeast corner of Block 90 and the eastern portion of Block 93, Eugene Island Area, on February 2 - 3, 1994. The survey was performed aboard the M/V El Topografo. Horizontal positioning of the survey vessel was accomplished with the John Chance STARFIX® Satellite Navigation System. Geophysical systems employed during the survey include an analog GI Airgun System, Echotrac Bathymetric System, O.R.E. 3.5 kHz Pinger Profiler, GeoMetrics Proton Magnetometer, and E.G.&G. 260 Side Scan Sonar. Survey coverage consisted of nine (9) north-south tracklines (Lines 1 - 9) spaced 300 meters apart and eight (8) east-west tie lines (Lines 10 - 17) spaced approximately 900 meters apart. Shot points (navigational fix marks) were recorded at every 150 meter intervals along all of the survey lines. Trackline spacing was designed to provide complete lateral seafloor coverage with the side scan sonar and representative sampling with the magnetometer and seismic systems.

The geophysical survey within Blocks 90 and 93, Eugene Island Area, was conducted in compliance with the Minerals Management Service NTL-83-3 which is currently in effect for the Gulf of Mexico OCS Region. NTL-83-3 stipulates that a shallow hazard survey be conducted prior to drilling operations. Cable lengths and depths for the geophysical systems were measured for each towed sensor, and the sensor setbacks behind the positioning antenna were compensated for when mapping the data with reference to post-plotted shot points. The purpose of this letter is to address specific seafloor and subbottom conditions at the Proposed "A" Surface Location.

The Proposed "A" Surface Location is situated within Block 90, Eugene Island Area at:

395 feet FSL  \[ Y = 154,298.94' \]
2,538 feet FEL  \[ X = 1,862,262.56' \]

Latitude: 29° 05' 24.910'' N  Longitude: 91° 45' 52.338'' W
The water depth at the Proposed "A" Surface Location is about -21 feet below Mean Lower Low Water. Sonar and pinger data indicate a featureless seafloor that is clear of topographic anomalies in the immediate vicinity of the Proposed Site. Seafloor sediments across Blocks 90 and 93, Eugene Island Area, are reported to consist sand (Minerals Management Service, Visual No. 3, 1983). McClelland Engineers, Inc. (1979) reports shear strength values ranging from 200 lbs./sq.ft (very soft to soft) at the seafloor to 1,550 lbs./sq.ft. (stiff) at 150 feet below the mudline. Studies performed by McClelland (1979) indicate about 80 - 100 feet of Recent Age sediment currently overlie the study area.

The subbottom profiler data record limited acoustic penetration Below Mud Line (BML). Gaseous organic accumulations were the dominant feature in the near-surface sediment sequence. Pinger profiles indicate the upper sequence of laminated strata has been locally modified by at least two episodes of erosional channel formations. There are no channel boundaries located within 500 feet of the Proposed "A" Surface Location.

Magnetometer data revealed 75 unidentified magnetic anomalies within the survey area. No unidentified magnetic anomalies were recorded within 500 feet of the Proposed "A" Surface Location. The nearest known man-made feature, with respect to the Proposed "A" Surface Location, is the an Alliance 3-inch pipeline situated about 500 feet to the northeast.

Based on the acquired geophysical data and the geologic interpretations made by John E. Chance and Associates, Inc., the vicinity surrounding the Proposed "A" Surface Location is clear of debris or obstacles to future drilling and construction activities.

Thank you, and if you have any questions concerning this project, please do not hesitate to call.

Sincerely,

JOHN E. CHANCE & ASSOCIATES, INC.

Melissa C. Jeansonne
Geophysicist
February 16, 1994

Gulfstream Resources Inc.
3850 Causeway Blvd. - Suite 830
Metairie, La. 70002

Attention Mr. Edward Schehr

RE:  Proposed "B" Surface Location
     Block 93 (OCS-0228)
     Eugene Island Area

Gentlemen:

Gulfstream Resources Inc. contracted John E. Chance & Associates, Inc. to provide a Proposed Wellsite Clearance Letter associated with the Proposed "B" Surface Location within Block 93, Eugene Island Area. John E. Chance & Associates, Inc. performed a high resolution Hazard Survey across the southeast corner of Block 90 and the eastern portion of Block 93, Eugene Island Area, on February 2 - 3, 1994. The survey was performed aboard the M/V El Topografo. Horizontal positioning of the survey vessel was accomplished with the John Chance STARFIX* Satellite Navigation System. Geophysical systems employed during the survey include an analog GI Airgun System, Echotrac Bathymetric System, O.R.E. 3.5 kHz Pinger Profiler, GeoMetrics Proton Magnetometer, and E.G.&G. 260 Side Scan Sonar. Survey coverage consisted of nine (9) north-south tracklines (Lines 1 - 9) spaced 300 meters apart and eight (8) east-west tie-lines (Lines 10 - 17) spaced approximately 900 meters apart. Shot points ( navigational fix marks) were recorded at every 150 meter intervals along all of the survey lines. Trackline spacing was designed to provide complete lateral seafloor coverage with the side scan sonar and representative sampling with the magnetometer and seismic systems.

The geophysical survey within Blocks 90 and 93, Eugene Island Area, was conducted in compliance with the Minerals Management Service NTL-83-3 which is currently in effect for the Gulf of Mexico OCS Region. NTL-83-3 stipulates that a shallow hazard survey be conducted prior to drilling operations. Cable lengths and depths for the geophysical systems were measured for each towed sensor, and the sensor setbacks behind the positioning antenna were compensated for when mapping the data with reference to post-plotted shot points. The purpose of this letter is to address specific seafloor and subbottom conditions at the Proposed "B" Surface Location.

The Proposed "B" Surface Location is situated within Block 93, Eugene Island Area at:

2,600 feet FNL  Y = 151,303.94'  Latitude: 29° 04' 55.292" N
1,690 feet FEL  X = 1,863,110.56'  Longitude: 91° 45' 42.654" W
The water depth at the Proposed "B" Surface Location is about -23 feet below Mean Lower Low Water. Sonar and pinger data indicate a featureless seafloor that is clear of topographic anomalies in the immediate vicinity of the Proposed Site. Seafloor sediments across Blocks 90 and 93, Eugene Island Area, are reported to consist sand (Minerals Management Service, Visual No. 3, 1983). McClelland Engineers, Inc. (1979) reports shear strength values ranging from 200 lbs./sq.ft (very soft to soft) at the seafloor to 1,550 lbs./sq.ft. (stiff) at 150 feet below the mudline. Studies performed by McClelland (1979) indicate about 80 - 100 feet of Recent Age sediment currently overlie the study area.

The subbottom profiler data record limited acoustic penetration Below Mud Line (BML). Gaseous organic accumulations were the dominant feature in the near-surface sediment sequence. Pinger profiles indicate the upper sequence of laminated strata has been locally modified by at least two episodes of erosional channel formations. There are no channel boundaries located within 500 feet of the Proposed "B" Surface Location.

Magnetometer data revealed 75 unidentified magnetic anomalies within the survey area. The closest unidentified magnetic anomaly, with respect to the Proposed "B" Location, is located approximately 500 feet to the north. This anomaly registered 8 gammas with a duration of 55 feet. The nearest known man-made feature, with respect to the Proposed "B" Surface Location, is the Well No. 1 Location (OCS-0228) situated about 420 feet to the southeast.

Based on the acquired geophysical data and the geologic interpretations made by John E. Chance and Associates, Inc., the vicinity surrounding the Proposed "B" Surface Location is clear of debris or obstacles to future drilling and construction activities.

Thank you, and if you have any questions concerning this project, please do not hesitate to call.

Sincerely,
JOHN E. CHANCE & ASSOCIATES, INC.

Melissa C. Jeansonne
Geophysicist
EXHIBIT 5
EXHIBIT 6
Oil Spill Contingency Plan

All drilling operations will be performed in accordance with industry standards to prevent pollution of the environment. An Oil Spill Contingency Plan was approved by the Minerals Management Service by letter dated May 14, 1993 in accordance with 30 CFR, Subpart C, Part 250.42. This plan designates an Oil Spill Team consisting of company personnel and contract personnel. This team's duties are to eliminate the source of any spill, remove all sources of possible ignition, deploy the most reliable means of available transportation to monitor the movement of a slick, and contain and remove the slick if possible.

Gulfstream Resources, Inc. is a member of Clean Gulf Associates (CGA). The CGA has permanent equipment bases in Texas, at Port Aransas and Galveston, and five bases in Louisiana, at Venice, Grand Isle, Intracoastal City, Houma, and Cameron. Each base is equipped with fast response skimmers and there is a barge mounted high volume open sea skimmer based on Grand Isle, Louisiana. In addition to providing equipment, the CGA also supplies advisors for clean-up operations. Equipment available from CGA and the base it is located at is listed in the CGA Manual, Volume I, Section III.
Gulfstream Resources, Inc. is a member of Clean Gulf Associates (CGA). The CGA stores pollution control equipment at two locations in Texas, at Port Aransas and Galveston, and five locations in Louisiana, at Venice, Grand Isle, Intracoastal City, Houma, and Cameron, and one location in Alabama, at Theodore.

Each base is equipped with fast response units and there is a barge mounted high volume open sea skimmer based at Grand Isle, Louisiana. In addition to providing equipment, the CGA also supplies advisors for clean-up operations. Equipment available from CGA and its location is listed in the CGA Manual, Volume I, Section III.

Gulfstream Resources, Inc. will make every effort to see that a spill is responded to as quickly as possible. Response equipment and response times will be suitable for anticipated environmental conditions in the area. The primary CGA base of operations would be Intracoastal City, Louisiana. Eugene Island Blocks 90 and 93 are located approximately 25 miles off the coastline and approximately 50 miles from the Intracoastal City Base. In good weather conditions, fast response with oil boom, skimmers pump and storage tanks would require approximately 13 to 14 hours, including preparation time as indicated below. A heavy equipment system response would require approximately 24-36 hours, including 6 hours as preparation time.

<table>
<thead>
<tr>
<th></th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Procurement of boat capable of handling oil spill containment equipment and deployment to nearest CGA base in Intracoastal City, LA</td>
<td>4.0</td>
</tr>
<tr>
<td>2. Load out of Fast Response Unit</td>
<td>2.0</td>
</tr>
<tr>
<td>3. Travel to lease site from CGA base (travel time to open water through freshwater bayou) (50 miles @ 10 mph to lease site)</td>
<td>2.0</td>
</tr>
<tr>
<td>4. Deployment time of spill</td>
<td>1.0</td>
</tr>
<tr>
<td><strong>TOTAL ESTIMATED TIME</strong></td>
<td><strong>14.0</strong></td>
</tr>
</tbody>
</table>

Equipment located in Intracoastal City, Louisiana would be utilized first with additional equipment transported from the nearest equipment base as required.
In the event a spill occurs from Eugene Island Blocks 90 and 93, our company has projected trajectory of a spill utilizing information in the Environmental Impact Statement (EIS) for OCS Lease Sales 142 and 143.

The EIS contains oil spill trajectory simulations using seasonal surface currents coupled with wind data, adjusted every 3 hours for 30 days or until a target is contacted.

Hypothetical spill trajectories were simulated for each of the potential launch sites across the entire Gulf. These simulations presume 500 spills occurring in each of the four seasons of the year. The results in the EIS were presented as probabilities that an oil spill beginning from a particular launch site would contact a certain land segment within 3, 10, or 30 days. Utilizing the summary of the trajectory analysis (for 10 days) as presented, the probable projected land fall of an oil spill is as follows. Also listed is the CGA Map Number corresponding to the land segment which will be utilized to determine environmentally sensitive areas that may be affected by a spill.

<table>
<thead>
<tr>
<th>Area</th>
<th>Land Segment Contact</th>
<th>%</th>
<th>CGA Map No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eugene Island</td>
<td>New Iberia, LA - 14</td>
<td>5%</td>
<td>LA Map #6</td>
</tr>
<tr>
<td>Blocks 90</td>
<td>St. Mary, LA - 15</td>
<td>11%</td>
<td>LA Map #6</td>
</tr>
<tr>
<td>and 93(C-36)</td>
<td>Terrebonne, LA - 16</td>
<td>27%</td>
<td>LA Map #6</td>
</tr>
</tbody>
</table>

Section V, Volume II of the CGA Manual containing maps as listed above, also includes equipment containment/cleanup protection response modes for the sensitive areas.

If a spill should occur from the proposed location, Gulfstream Resources, Inc. would immediately activate its Oil Spill Response Team, which would determine from current conditions the probable location and time of landfall by contacting the National Oceanic and Atmospheric Administration's (NOAA) Gulf of Mexico Scientific Support Coordinator (SSC) for assistance in predicting spill movement. Section V, Volume II of the CGA Operations Manual, which contains the maps as shown above, also includes equipment to be used for protection and clean-up should it be necessary. It includes those pieces of equipment that are stockpiled by CGA and available for use.

Section VI, Volume II of the CGA Operations Manual depicts the protection response codes that are applicable for oil spill clean-up operations. Each response made is schematically represented to show optimum deployment and operation of the equipment. Implementation of the suggested procedures assures the most effective use of the equipment and will result in reduced adverse impact of oil spills on the environment. Supervisory personnel have the option to modify the development and operation of equipment to more effectively respond to site-specific circumstances.
EXHIBIT 8
QUALITY, RATES OF DISCHARGE, AND COMPOSITION OF WASTES

Drilling Operations:

The anticipated discharge rates for Gulfstream Resources, Inc.'s drilling operations for Eugene Island Blocks 90 and 93 are listed below:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Drilling Fluids</td>
<td>2849 bbls/month</td>
</tr>
<tr>
<td>Drilling Cuttings</td>
<td>1899 bbls/month</td>
</tr>
<tr>
<td>Deck Drainage</td>
<td>900 bbls/month</td>
</tr>
<tr>
<td>Sewage and Domestic Liquid Waste</td>
<td>2,000 gals/day*</td>
</tr>
</tbody>
</table>

*based on 50 gals/person/day with average 40 persons on board

The quantity of discharge of cuttings is based on the average hole size for each section of hole. Mud may be discharged for purposes of dilution or at the end of the well. Fifty percent (50%) for attached liquids to cuttings is added to give a total drilling fluids discharge. Sewage is treated on location. Solid domestic wastes are transported to shore for proper disposal at an authorized disposal site.

The fluid used for drilling will be a typical lignosulfonate mud, unless otherwise noted in the drilling prognosis. Concentrations of the chemicals in the mud can be estimated from the daily fluids chemical inventory. Other surveillance of the fluid is accomplished by the monthly and end-of-well LC50 toxicity tests required by the EPA. A list of mud additives that may be used while conducting development drilling operations is enclosed as Exhibit 2.

The average drilling fluid discharge rate will be approximately 400 bbls/hr. In no instance will the drilling fluid discharge rate exceed 1,000 bbls/hour.

Any drilling fluid contaminated with oil will be transported to shore for proper disposal at an authorized disposal site.

Proposed Operations:

The volume of produced water discharges is presently unknown. However, all produced water discharges will be monitored in accordance with the EPA NPDES Permit.

Deck drainage is estimated at approximately 900 bbls/month from the structure.

If any solid wastes are generated on the structure, these wastes will be transported to shore for proper disposal at an authorized disposal site.
EXHIBIT 9
## DRILLING MUD COMPONENTS

<table>
<thead>
<tr>
<th>Common Chemical or Chemical</th>
<th>Description of Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum Stearate</td>
<td>Aluminum Stearate</td>
</tr>
<tr>
<td>&quot;AXTAPLO-S&quot;</td>
<td>Nonionic Surfactant</td>
</tr>
<tr>
<td>Barite</td>
<td>Barium Sulfate (BaSO₄)</td>
</tr>
<tr>
<td>Calcium Carbonate</td>
<td>Aragonite (CaCO₃)</td>
</tr>
<tr>
<td>Calcium Chloride</td>
<td>Hydrophilite (CaCl₂)</td>
</tr>
<tr>
<td>Calcium Oxide</td>
<td>Lime (Quick)</td>
</tr>
<tr>
<td>Calcium Sulfate</td>
<td>Anhydrite (CaSO₄)</td>
</tr>
<tr>
<td>Carboxymethyl Cellulose</td>
<td>Carboxymethyl Cellulose</td>
</tr>
<tr>
<td>Caustic Potash</td>
<td>Potassium Hydrate</td>
</tr>
<tr>
<td>Caustic Soda</td>
<td>Sodium Hydroxide (NaOH)</td>
</tr>
<tr>
<td>Chrome Lignite</td>
<td>Chrome Lignite</td>
</tr>
<tr>
<td>Chrome Lignosulfonate</td>
<td>Chrome Lignosulfonate</td>
</tr>
<tr>
<td>Drilling Detergent</td>
<td>Soap</td>
</tr>
<tr>
<td>&quot;E-Pal&quot;</td>
<td>Non-toxic, Biodegradable defoamer</td>
</tr>
<tr>
<td>Ferrochrome Lignosulfonate</td>
<td>Derived from wood pulp</td>
</tr>
<tr>
<td>Gel</td>
<td>Sodium montmorilloniate, bentonite, attapulgite</td>
</tr>
<tr>
<td>Gypsum</td>
<td>CaSO₄₂H₂O</td>
</tr>
<tr>
<td>Lignite</td>
<td>Lignite</td>
</tr>
<tr>
<td>Lignosulfonate</td>
<td>Lignosulfonate</td>
</tr>
<tr>
<td>&quot;Mud Sweep&quot;</td>
<td>Cement Pre-flush</td>
</tr>
<tr>
<td>&quot;MOR-REX&quot;</td>
<td>Hydrolyzed Cereal Solid</td>
</tr>
<tr>
<td>&quot;Shale-Trol&quot;</td>
<td>Organo-aluminum complex</td>
</tr>
<tr>
<td>Sapp</td>
<td>Sodium Acid Pyrophosphate</td>
</tr>
<tr>
<td>Soda Ash</td>
<td>Sodium Carbonate</td>
</tr>
<tr>
<td>Sodium Bicarbonate</td>
<td>NaHCO₃</td>
</tr>
<tr>
<td>Sodium Carboxymethyl Cellulose</td>
<td>Sodium Carboxymethyl Cellulose</td>
</tr>
<tr>
<td>Sodium Chloride</td>
<td>NaCl</td>
</tr>
<tr>
<td>Sodium Chromate</td>
<td>NaCrO₄.10H₂O</td>
</tr>
<tr>
<td>Starch</td>
<td>Corn Starch</td>
</tr>
<tr>
<td>&quot;TX-9010&quot;</td>
<td>Biodegradable drilling lubricant</td>
</tr>
<tr>
<td>&quot;TORQ-Trim&quot;</td>
<td>Biodegradable drilling lubricant</td>
</tr>
<tr>
<td>&quot;Black Magic&quot;</td>
<td>Oil base mud conc.</td>
</tr>
<tr>
<td>&quot;Black Magic Supermix&quot;</td>
<td>Sacked concentrated oil base mud</td>
</tr>
<tr>
<td>Diesel</td>
<td>Used to mix certain loss-circulation pills</td>
</tr>
<tr>
<td>&quot;Jelflake&quot;</td>
<td>Plastic foil, shredded cellophane</td>
</tr>
<tr>
<td>MICA</td>
<td>Loss-circulation material</td>
</tr>
<tr>
<td>&quot;Pipe-Lax&quot;</td>
<td>Surfactant mixed with diesel</td>
</tr>
<tr>
<td>&quot;Wall-Nut&quot;</td>
<td>Ground walnut shells</td>
</tr>
<tr>
<td>Wood Fibers</td>
<td>Loss-circulation material</td>
</tr>
</tbody>
</table>
EXHIBIT 10
A review of records of nearby wells indicate that we should not encounter H2S gas while drilling in Eugene Island Blocks 90 or 93. A review of production from the Pliocene and Upper Miocene age sands on the Eugene Island Block 89 Field (Eugene Island Blocks 88, 89, 90, 93, 94, and 95) do not indicate the presence of H2S gas. These wells produce from the same stratigraphic section as anticipated in our Eugene Island Blocks 90 and 93 development drilling.

/sm
EXHIBIT 11
PROJECTED AIR EMISSION SCHEDULE

FOR

UNIT SUPPLEMENTAL DOCD

Location: Eugene Island Blocks 90 and 93

Distance Offshore: 25 miles

Type of Rig: Jackup

Total Well Depths: 10284', 9844', and 10545'

Drilling to Commence: July 1, 1994

Operator: Gulfstream Resources, Inc.
3850 North Causeway Boulevard, Suite 830
Metairie, Louisiana 70002

Contact: Mr. J.C. Garrett

MAJOR SOURCE: (OFFSHORE):

Power used aboard drilling vessel; approximate footage drilled Block 90 well no. 12, 10284', Block 90 no. 13, 9844' and Block 93 No. 13, 10545'.

<table>
<thead>
<tr>
<th>Emitted Substance</th>
<th>Emissions (tons/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO</td>
<td>1.68</td>
</tr>
<tr>
<td>SO2</td>
<td>.53</td>
</tr>
<tr>
<td>NOX</td>
<td>7.91</td>
</tr>
<tr>
<td>VOC</td>
<td>.64</td>
</tr>
<tr>
<td>TSP</td>
<td>.56</td>
</tr>
</tbody>
</table>

Projected Air Emission Schedule  
Page Two

MINOR SOURCES (OFFSHORE):

Includes crew boats (5 trips/week), supply boats (5 trips/week),  
helicopter (1 LTO cycle/day, 7 trips/week).

<table>
<thead>
<tr>
<th>Emitted Substance</th>
<th>Emissions (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO</td>
<td>0.21</td>
</tr>
<tr>
<td>SO2</td>
<td>0.05</td>
</tr>
<tr>
<td>NOX</td>
<td>0.53</td>
</tr>
<tr>
<td>VOC</td>
<td>0.16</td>
</tr>
<tr>
<td>TSP</td>
<td>0.05</td>
</tr>
</tbody>
</table>

Tables 3.2.1-3, 3.2.3-1, and 2.1-1 "Complication of Air Pollutant  

TOTAL ALL SOURCES (TONS/YEAR):

<table>
<thead>
<tr>
<th>CO</th>
<th>1.89</th>
</tr>
</thead>
<tbody>
<tr>
<td>SO2</td>
<td>0.58</td>
</tr>
<tr>
<td>NOX</td>
<td>8.44</td>
</tr>
<tr>
<td>VOC</td>
<td>0.80</td>
</tr>
<tr>
<td>TSP</td>
<td>0.61</td>
</tr>
</tbody>
</table>

ONSHORE SOURCES:

These should be approximately the same as minor sources. No  
additional facilities are planned at this time.

EMISSION EXEMPTION DETERMINATION:

For CO:  \[ E = 3400D^{2/3} = 3400(25)^{2/3} = 29,070 \text{ tons/year} \]

For NOX, VOC, TSP, & SO2:  \[ E = 33.3D = 33.3(25) = 833 \text{ T/yr} \]

As per MMS regulations, this facility is exempt from further air  
quality review as it has been determined that its operations will  
not have significant adverse environmental impact on air quality.
EUGENE ISLAND 89 FIELD

COASTAL ZONE MANAGEMENT

CONSISTENCY CERTIFICATION

AND PUBLIC NOTICE CERTIFICATION STATEMENT

The proposed activities described in detail in this Supplemental (DOCD) comply with Louisiana's approved Coastal Management Program and will be conducted in a manner consistent with such program.

I certify that arrangements have been made to place a public notice of Gulfstream Resources, Inc.'s Proposed Development Operations Coordination Document for Eugene Island 89 Field, Leases OCS-0228 and OCS-0229, in the Baton Rouge Times no later than May 13, 1994.

This request was sent to:

Baton Rouge State Times
Legal Ad Department
525 Lafayette Street
Baton Rouge, Louisiana 70804

Additionally, arrangements have been made with the Franklin Banner, St. Mary Parish, to publish a notice of the proposed Supplemental (DOCD) no later than May 13, 1994.

GULFSTREAM RESOURCES, INC.

[Signature]
Certifying Official

[Signature]
Date 4/27/94
April 27, 1994

State Times
Legal Ad Department
525 Lafayette Street
Baton Rouge, Louisiana 70802

Attention: Ms. Vicky Thompson

Dear Ms. Thompson:

Please publish the attached notice as a legal ad, no later than May 13, 1994. A copy of the published notice and bill should be submitted to my attention at the following address:

Mr. J.C. Garrett
Vice President - Engineering
3850 North Causeway Boulevard, Suite 830
Metairie, Louisiana 70002

If you have any questions, please contact the undersigned.

Very truly yours,

GULFSTREAM RESOURCES, INC.

[Signature]

J.C. Garrett
Vice President - Engineering

JCG/sb
April 27, 1994

The Franklin Banner Tribune
Post Office Box 566
Franklin, Louisiana 70538

Attention: Ms. Geri Williams

Dear Ms. Williams:

Please publish the attached notice as a legal ad, no later than May 13, 1994. A copy of the published notice and bill should be submitted to my attention at the following address:

Mr. J.C. Garrett
Vice President - Engineering
3850 North Causeway Boulevard, Suite 830
Metairie, Louisiana 70002

If you have any questions, please contact the undersigned.

Very truly yours,

J.C. Garrett
Vice President - Engineering

JCG/sb

3850 North Causeway Boulevard, Suite 830
Metairie, Louisiana 70002
(504) 837-1715  Fax: (504) 837-1718
Public Notice of Federal Consistency Review of a Proposed Supplemental Development Operations Coordination Document by the Coastal Management Division/Louisiana Department of Natural Resources for the Plan's Consistency with the Louisiana Coastal Resources Program.

Applicant: Gulfstream Resources, Inc.  
3850 North Causeway Boulevard, Suite 830  
Metairie, Louisiana 70002

Location: Eugene Island Area, Block 89 Field, OCS-0228 and OCS-0229

Description: Proposed Supplemental Development Operations Coordination Document for the above area provides for the development of oil and gas. Development activities shall include drilling from a jack-up rig and transport of drilling crews and equipment by helicopter and/or cargo vessel from an onshore base location at Amelia, Louisiana. No ecologically sensitive species or habitats are expected to be located near or affected by these activities.

A copy of the plan described above is available for inspection at the Coastal Management Division Office located on the 10th floor of the State Lands and Natural Resources Building, 625 North 4th Street, Baton Rouge, Louisiana. Office hours: 8 a.m. to 5:00 p.m., Monday through Friday. The public is requested to submit comments to the Coastal Management Division, Attention: OCS Plans, P.O. Box 44487, Baton Rouge, Louisiana, 70804-4487. Comments must be received within 15 days of the date of this notice or 15 days after the Coastal Management Division obtains a copy of the plan and it is available for public inspection. This public notice is provided to meet the requirements of the NOAA Regulations on Federal Consistency with approved Coastal Management Programs.
ENVIRONMENT REPORT

OCS-0228 AND OCS-0229

EUGENE ISLAND BLOCK 89 FIELD

OFFSHORE, LOUISIANA

Prepared By

Gulfstream Resources, Inc.

(GRI)
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   B. ONSHORE SUPPORT BASE 1
   C. NEW OR UNUSUAL TECHNOLOGY 1
   D. VICINITY MAP 1

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I. DESCRIPTION OF PROPOSED ACTION

Gulfstream Resources, Inc. (GRI) plans to conduct drilling and development activities on Eugene Island Blocks 90, (OCS-0229) and 93 (OCS-0228). As proposed, the Supplemental Development Operations Coordination Document (DOCD) will include the drilling of three (3) wells. At this time, the planned commencement date for the proposed activities is on or about July 1, 1994.

A. DESCRIPTION OF PROPOSED TRAVEL MODES, ROUTES AND FREQUENCY

A crew boat and supply boat will be dispatched from a support base located in Amelia, Louisiana. The boat will normally move to the block via the most direct route from Amelia, Louisiana, however, boats operating in the field may travel from other facilities nearby. Following is an estimate of trips to the proposed operation.

<table>
<thead>
<tr>
<th>Drilling Operations</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Crew Boat</td>
<td>4 trips per week</td>
</tr>
<tr>
<td>Supply Boat</td>
<td>4 trips per week</td>
</tr>
<tr>
<td>Helicopter</td>
<td>7 trips per week</td>
</tr>
</tbody>
</table>

B. ONSHORE SUPPORT BASE

The proposed activities will utilize a support base located at Amelia, Louisiana. This base provides 24-hour service, a radio tower with phone patch, dock space, office space, parking lot, equipment and supply storage space, drinking and drill water, etc. at its present level of activity. No expansion of the physical facilities or the creation of new jobs is expected to result from the work planned in conjunction with this block.

The first socioeconomic data base report will be submitted when the MMS and the states of Alabama, Louisiana, and Mississippi identify the specific parameters to be addressed in these semi-annual reports.

C. NEW OR UNUSUAL TECHNOLOGY

No new or unusual technology will be required for this operation.

D. VICINITY MAP

Eugene Island Blocks 90 and 93 are located approximately 25 miles south of the Louisiana coastline. The average water depth is approximately 18 feet.
II. DESCRIPTION OF AFFECTED ENVIRONMENT

A. COMMERCIAL FISHING

The Gulf of Mexico provides 38% of the commercial fish landings and one-third of the recreational fishing activities in the continental United States. Commercial landings of all fisheries in the gulf during 1990 totaled nearly 1.6 billion pounds landed, valued at $640 million.

Menhaden, with landings of 1.1 billion, valued at $54.4 million, represents the most important Gulf species in quantity landed during 1990. Other significant Gulf commercial fisheries include shrimp, oysters, blue crabs, and an assortment of finfish.

Louisiana is the most productive state in the Gulf of Mexico in terms of commercial fisheries because of its extensive estuaries, coastal marshes, and nutrient input from the Mississippi and Atchafalaya Rivers. Coastal Louisiana contains approximately 60% of the estuaries and marshes in the Gulf of Mexico. The 1990 Gulf oyster fishery accounted for 36% of the national total with landings of 10.6 million pounds of meat, valued at about $34 million. The Gulf blue crab fishery accounted for 18% of the national total with landings of 45.5 million pounds, valued at $17 million (USDOC, NMFS, 1991a).

B. SHIPPING

The establishment of a series of safety fairways or traffic separation schemes (TSS's), and anchorage areas provide unobstructed approach for vessels using U.S. ports. Shipping safety fairways are lanes or corridors in which no fixed structure, whether temporary or permanent, is permitted. TSS's increase navigation safety by separating opposing lanes of vessel traffic. Fairway anchorage are areas contiguous to an associated with a fairway, in which fixed structures may be permitted within certain spacing limitations.

Fairways play an important role in the avoidance of collisions on the OCS, particularly in the case of the large oceangoing vessels, but not all vessels stay within the fairways. Many others, such as fishing boats and OCS support vessels, travel through areas with high concentration of fixed structures. In such cases the most important mitigation factor is the requirement for adequate marking and lighting of structures. After a structure has been in place for a while, it often becomes a landmark and an aid to navigation for vessels that operate in the area on a regular basis.
C. PLEASURE BOATING, SPORT FISHING AND RECREATION

The northern Gulf of Mexico coastal zone is one of the major recreational regions of the United States, particularly in connection with marine fishing and beach related activities. The coastal beaches, barrier islands, estuarine bays and sounds, river deltas, and tidal marshes are extensively and intensively utilized for recreational activity by residents of the Gulf South and tourists from throughout the Nation. Publicly owned and administered areas such as National seashores, parks, beaches, and wildlife lands, as well as specially designated preservation areas such as historic and natural sites and landmarks, wilderness areas, wildlife sanctuaries, and scenic rivers attract residents and visitors throughout the year. Commercial and private recreational facilities and establishments, such as resorts, marinas, amusement parks, and ornamental gardens, also serve as primary interest areas and support services for people who seek enjoyment from the recreational resources associated with the Gulf.

The two major recreational areas most directly associated with the offshore leasing and potentially affected by it are the offshore marine environment and the coastal shorefront of the adjoining states. The major recreational activity occurring on the OCS is offshore marine recreational fishing and diving. Major sport species sought and caught offshore include snappers, groupers, seatrout, croakers, mackerels, amberjack, cobia, dolphin, tarpon, and billfishes. Studies, reports, and conference proceedings published by MMS and others have documented a substantial recreational fishery including scuba diving, directly associated with oil and gas production platforms. The recreational fishing associated with oil and gas structures stems from their function as high profile artificial fishing reefs. A report on the 1984 Marine Recreational Fishery Statistics Surveys presented by MMS at the Sixth Annual Gulf of Mexico Information Transfer Meeting indicates a majority of the offshore recreational fishing in the Central and Western Gulf of Mexico is directly associated with the oil and gas structures. There are currently about 4,500 offshore oil and gas structures in the Central and Western Gulf of Mexico. Many other studies have demonstrated that when oil and gas structures are accessible to marine recreational fishermen and scuba divers they are a major attraction for marine recreational activities and a positive influence on tourism and coastal economics.
With the exception of Grand Isle and vicinity and a stretch of beach area in Cameron Parish, (Peveto/Constance/Ocean View Beaches, Holly Beach, Hackberry Beach) Louisiana has very limited beach area suitable for recreation. Most of it is very narrow, of poor recreational quality and generally inaccessible by automobile. Some of the highest quality beach areas in coastal Louisiana are found along the barrier islands chain off Terrebonne Parish. Several additional significant recreational resources are found along the Gulf Coast. Louisiana has ornamental gardens, scenic roads, rivers and trails.

D. POTENTIAL OR KNOWN CULTURAL RESOURCES

Archeological resources are any prehistoric or historic objects or features which are man-made or modified by human activity. Significant archeological resources are either historic or prehistoric and, as defined by 36 CFR 800 Sec 60.6, generally include properties greater than 50 years old which are associated with events that have made a significant contribution to the broad patterns of our history; are associated with the lives of persons significant in the past; embody the distinctive characteristics of a type, period, or method of construction; represent the work of a master; possess high artistic values; represent a significant and distinguishable entity whose components may lack individual distinction; or have yielded, or may likely to yield, information important in prehistory or history.

E. ECOLOGICALLY SENSITIVE FEATURES

Coastal barrier beaches are a common landform along the Gulf Coast and stretch in an irregular chain from Florida to Texas. These elongated, narrow landforms are composed of sand and other, loose sediments transported by waves, currents, storm surges, and wind. Barrier landforms are a young coastal feature. They began to form 5,000 to 6,000 years ago after the main mass of continental ice sheets had melted and the global rate of rise of sea level began to slow. The term "barrier" identifies the structure as one that direct impacts of the open ocean. By separating coastal waters from the ocean, barriers contribute to the amount of estuarine habitat along the coast. As much as two-thirds of the high value Atlantic and Gulf Coast species of fish are considered to be directly dependent during some stage of their life on conditions in these estuaries (Clark, 1976).

Another benefit of both the islands and their adjacent marshes and bays is that of providing habitats for a
large number of birds and other animals, including several threatened or endangered species, for example, the loggerhead turtle, the southern bald eagle, alligators, and brown pelicans.

Louisiana has the most rapidly retreating beaches in the nation. The average retreat for the Fourchon beach over the last 100 years has been in excess of 18 m/yr. The statewide average exceeds 3.6 m/yr (Dolan et al, 1982). Beaches along the deltaic plain in Louisiana fit into one of three categories, depending on the stage of the deltaic cycle that the landmass is experiencing. When a major distributor of the Mississippi River is abandoned, subidence results in a local sea level transgression that transforms the active delta into an erosional headland with flanking barriers. Fourchon Beach is an example of an eroding headland beach. With the increased age and subidence, the barrier shoreline evolves mainland by a lagoon. Isles Derniers is an example of this phenomenon. Eventually, with continued subidence and sediment deprivation, the island ceases to exist, its remnant forming a submarine inner-shelf shoal (Penland and Boyd, 1985).

The importance of coastal wetlands to the coastal environment has been well documented. Coastal wetlands are characterized by high organic productivity, high detritus production, and efficient nutrient recycling. They provide habitat for a great number and wide diversity of invertebrates, fish, herptiles, birds, and mammals. Wetlands are particularly important as nursery grounds for juvenile forms of many important fish species. The Louisiana coastal wetlands support over two-thirds of the Mississippi Flyway wintering waterfowl population and the largest fur harvest in North America (Olds, 1984).

Louisiana contains most of the Gulf coastal wetlands. The deterioration of coastal wetlands, particularly in Louisiana, is an issue of concern. In Louisiana, the annual rate of wetlands loss has been measured at 130 km² for the period 1955-1978.

A recent study funded by MMS entitled Causes of Wetland Loss in the Coastal Central Gulf of Mexico (Turner and Cahoon, 1987) examined coastal ecosystems of the Northern Gulf of Mexico region and how wetland habitats have changed as a result of natural processes and man's activities thereon. The study's primary focus was on assessing and quantifying the direct and indirect impacts of OCS-related activities on wetland areas since the 1950's. Canal construction for pipelines, and navigation
has been the major OCS-related impacting factor.

The shelf and shelf edge of the Central and Western Gulf are characterized by topographic features which are inhabited by benthic communities. The habitat created by the topographic features is important in several respects: they support hard-bottom communities of high biomass, high diversity, and high numbers of plant and animal species; they support, either as shelter, food, or both, large numbers of commercially and recreationally important fishes; they are unique to the extent that they are small isolated areas of communities in the vast Gulf of Mexico; they provide a relatively pristine area suitable for scientific research; and they have aesthetically attractive intrinsic value.

The Central Gulf of Mexico lists 16 topographic features. None of those listed will be affected by proposed operations in Eugene Island Blocks 90 and 93.

F. PIPELINES AND CABLES

There are numerous flowlines on Blocks 90 and 93 in the vicinity of the proposed activity. GRI, as a prudent operator, will avoid all pipelines and cables in these blocks during the drilling and development activities.

G. OTHER MINERAL USES

The activities proposed for Eugene Island Blocks 90 and 93 will have no direct or indirect impact on other mineral uses.

H. OCEAN DUMPING

Ocean dumping of sewage sludge and industrial waste is prohibited in this area.

I. ENDANGERED AND THREATENED SPECIES AND CRITICAL HABITAT

Six Federally listed endangered baleen whale species may occur in the Gulf of Mexico (the blue, fin, humpback, northern right, sei, and minke and one species of toothed whales (sperm whales). Generally, these large cetaceans inhabit the continental slope and deep oceanic waters; occasionally, they are sighted near shore.

Federally listed endangered sea turtles (Kemp's ridley, green, hawksbill, leatherneck, and the loggerhead) occur in the Gulf of Mexico. The green turtle is listed as threatened in Louisiana. The Kemp's ridley turtle inhabits shallow coastal and estuarine waters and
commonly occur in shallow water areas from Marsh Island to the Mississippi Delta in Louisiana. The green turtle is found throughout the Gulf, where its favored habitats are lagoons and shoals providing an abundance of marine grass and algae on which it feeds. No recent green turtle nesting has been reported along Gulf beaches. The hawksbill turtle inhabits reefs, shallow coastal areas, and passes in water depth of less than 20 m. deep. Hawksbill nesting has not been reported along the coast of Louisiana. The leatherback turtle may be found near the continental shelf edge. Sightings have been reported. The loggerhead turtle occurs throughout the Gulf and has been observed as far as 500 miles out in the open sea. Infrequent nesting occurs on the Northern Gulf Coast. In addition to their usual habitat area, turtles are sometimes seen around offshore oil/gas platforms.

Endangered American and threatened artic peregrine falcons migrate along the Gulf Coast, and some peregrine falcons overwinter in Gulf coastal areas. The artic peregrine falcon migration route occurs along the entire Central and Eastern Gulf of Mexico coasts. The endangered piping plover's winter range is along the Gulf Coast.

Brown pelicans remain listed as endangered in Louisiana, Mississippi, and Texas. Three brown pelican rookeries (about 2,100 nests) occur on North Island (St. Bernard Parish) and Queen Bass Island (Jefferson Parish), and Raccoon Point (Terrebonne Parish), Louisiana (USDI, FWS, 1989). There is also a small active rookery (about 300 nesting pairs) on Pelican Island in Nueces County, Texas. The habitat of these colonial nesters is small coastal islands in salt and brackish water areas, rarely flying more than 32 km offshore.

These species may be affected by the development of coastal lands and/or the occurrence of oil spills which may affect the species directly or through their food sources. Since the proposed activities include no plans for the development of the coastal lands, the impact on endangered and threatened species is primarily based on the occurrence of oil spills.

GRI, as a prudent operator, will take all necessary measures to reduce the probability of oil spills. GRI's proposed development operations on Blocks 90 and 93 should not pose a threat to any endangered or threatened species.
J. **SOCIOECONOMIC**

The offshore oil exploration industry including oil companies, drilling contractors, and oilfield suppliers provide a major input to Louisiana's economy. A number of ports in the Central and Western Gulf have developed into important centers for offshore support. The most active of these in Louisiana are (from east to west) Venice, Morgan City, Intracoastal City, and Cameron, Louisiana. The onshore support base for operations in Eugene Island Blocks 90 and 93 is the L&L dock located in Amelia, Louisiana. This dock facility employs approximately 10 people and no new employee will be required for this project, either as drilling crews or in support functions.

III. **UNAVOIDABLE ADVERSE ENVIRONMENT EFFECTS**

A. **WATER QUALITY**

Several impact-producing factors may adversely affect offshore water quality.

Resuspension of bottom sediments may result from drilling operations, platform and pipeline installation, and platform removal operations. Some measures of water quality parameters may change from background levels with little effect to the users of the water, and then only very close to the source. The impact level from this factor is considered to be low.

Operational discharges (drilling muds and cuttings, produced waters, deck drainage, and sanitary and domestic wastes) may degrade some measures of water quality, changing them from background levels, but with little effect to the users of the water, and then only very close to the source. The impact level from this factor is considered to be low.

Accidental oil spills (there is an estimated 16% chance of an oil spill greater than or equal to 1,000 bbl occurring in the Central Gulf) may degrade some measures of water quality, changing them from background levels, but with little effect to the users of the water, and then only in a very limited area close to the source. The impact level from this factor is considered to be low.

Activities resulting from this proposal all result in low impacts limited to very close to the source.
B. **MARINE MAMMALS**

Several impact-producing factors may have adverse impacts on the marine mammals.

Operational discharges (drilling muds and cuttings) may reduce the marine mammals' food sources by death or displacement resulting from sedimentation, turbidity, or ingestion. Such impacts are unlikely to occur and are primarily sublethal. The impact level of this factor is considered very low.

Maritime traffic associated with the proposed action could collide with or displace marine mammals. Such interactions could cause or be indirectly related to mortality. These interactions are estimated to occur once during the lease life. Recovery could be accomplished in less than one generation. The impact level from this factor is considered very low.

The removal of oil and gas structures with explosives could result in shock-wave-related injuries or displacement from preferred habitats. Marine mammals may be affected once during the lease. Recovery from such damage could take less than one generation. The impact level from this factor is considered low.

Contact with, ingestion of, or displacement by spilled oil resulting from the proposed action will have adverse impacts on marine mammals. Interactions between oil and marine mammal habitat may occur several times during the lease life, and any resultant population declines would be recoverable in one generation. The impact from this factor is considered low.

C. **COASTAL AND MARINE BIRDS**

Several impact-producing factors may threaten coastal and marine birds.

The CCS-related helicopter and service-vessel traffic results in displacement of birds from nesting and feeding habitats. A maximum of 1,000 service-vessel trips and 1 shuttle-tanker trip will occur per year through existing port areas. At worst, the effect of vessel or air traffic during any time of year is of a very short-term nature. The MMS regulates flight elevation to no lower than 1,000 ft. during the time of year of greatest concentration of coastal and marine birds (mid-October to mid-April). The impact level from this factor is considered to be very low. Pipeline landfalls and coastal facility construction result in possible
desertion of birds from nesting and feeding habitats. No new OCS-related pipeline landfalls or coastal construction are projected for the proposed action. The impact level from this factor is considered to be very low.

Entanglement or ingestion of OCS-related plastic debris may injure or kill coastal and marine birds. The MMS prohibits the disposal into offshore waters of any OCS-related materials, including plastics. In addition, MARPOL, Annex V, prohibits the disposal of any plastics at sea or in coastal waters. The impact level from this factor is considered to be very low.

Oil spills pose the greatest threat to coastal and marine birds by direct oiling, food source contamination, or nesting habitat pollution. It is assumed that one large oil spill (greater than or equal to 1,000 bbl) will occur during the 35 year lease life. The highest estimated probability of oiling, contamination, or pollution involving coastal and marine birds is 2 percent. The impact level from this factor is considered to be very low.

It follows that activities resulting from the proposed action have the potential to cause very low impacts to coastal and marine birds. There will be no discernible decline in a coastal or marine bird population to species, and no change in distribution or abundance. Any individuals experiencing sublethal effects will recover to pre-impact condition in less than one generation.

D. AIR QUALITY

The major impact producing factors in air quality from OCS-related activity are due to combustion, evaporation, or venting of hydrocarbons. The air quality at the lease site will be degraded temporarily during operations, as a result from support vessels (boats and helicopters) as well as from the drilling rig. Anticipated emissions are expected to be below MMS guideline limits and air quality should return to normal once operations are measurably completed. Offshore activities probably will not effect onshore air quality because of the distance between the drilling rig and shore. Air quality at the onshore base will be only insignificantly reduced by onshore activities. Any such effect will be temporary.
E. COMMERCIAL FISHING

The emplacement of one production platform eliminates approximately 2.0 ha (4.9 ac) of commercial trawling space. This represents an inconsequential amount of the total trawling area. The impact from this factor is considered to be very low.

In addition to toxic trace elements and hydrocarbons in produced waters that are discharged into inshore and coastal waters, there are additional components and properties, such as hypersalinity and hypoxia, that adversely affect commercial fishing resources. The impact level to essential habitat proximate to the discharge site is considered to be high. The impact level to the commercial fishing industry is considered to be low.

Oil spills pose the greatest threat to the commercial fishing industry by direct contact with eggs, larvae, juveniles, or massed spawning adult finfish or shellfish; by contamination of essential estuarine nursery habitat; or by deterrence of commercial fishing activity. It is assumed that one large oil spill (greater than or equal to 1,000 bbl) will occur during the 35-year lease life. The highest estimated probability of contact and affect, contamination, or deterrence involving commercial fishing resources is 2 percent. The impact from this factor is considered to be low.

It follows that activities resulting from the proposed action have the potential to cause low level impacts to the commercial fishing industry. There will be little discernible decline in populations of commercial importance, in the quality of essential habitats, or in commercial fishing activity. Recruitment will return any affected population, habitat, or activity to pre-impact level and/or condition within one general.

F. SHIP NAVIGATION

Very little interference can be expected between the drilling rig and marine vessels utilized during drilling operations and ships that use established fairways. However, at night and during rough weather, fog, and heavy seas, ships not using established fairways could collide with the rig. Approved aids to navigation will be installed on the drilling rig and all marine vessels servicing these operations in accordance with USCG regulations.
G. CULTURAL RESOURCES

There is only a small probability that an unknown cultural resource exists in the lease area.

H. RECREATIONAL BEACH USE

Small oil spills are likely to affect portions of beaches, with little disruption of recreational activities. Marine debris loss from OCS operations associated with drilling new wells and producing oil and gas from new platforms throughout the area will occur from time-to-time; however, the impact from intermittent washup on Louisiana and Texas beaches should be very low.
IV. SUMMARY

The proposed activity will be carried out and completed with the guarantee of the following items:

A. The best available and safest technologies will be utilized throughout the project. This includes meeting all applicable requirements for equipment types, general project layout, safety systems, and equipment and monitoring systems.

B. All operations are covered by a Minerals Management Service approved Oil Spill Contingency Plan.

C. All applicable Federal State, and Local requirements regarding air emission and water quality and discharge for the proposed activities, as well as any other permit conditions will be complied with.

D. The proposed activities described in detail in the Supplemental Development Operations Coordination Document (DOCD) will comply with Louisiana's Coastal Management Program and will be conducted in a manner consistent with such Program.
REFERENCES

1. Final Environment Impact Statement, Proposed Oil and Gas Lease Sales 110 and 112, Gulf of Mexico OCS Region, OCS EIS, MMS 86-0087.

2. Final Environment Impact Statement, Proposed Oil and Gas Lease Sales 110 and 112, Gulf of Mexico OCS Region, OCS EIS, MMS 86-0087, Visuals.


4. Final Environment Impact Statement, Proposed Oil and Gas Lease Sales 118 and 122, Gulf of Mexico OCS Region, OCS EIS, MMS 88-0044.

5. Final Environment Impact Statement, Proposed Oil and Gas Lease Sales 123 and 125, Gulf of Mexico OCS Region, OCS EIS, MMS 89-0053.

6. Final Environment Impact Statement, Proposed Oil and Gas Lease Sales 131, 135, and 137, Gulf of Mexico Region, OCS EIS/EA 90-0042.

7. Final Environment Impact Statement, Proposed Oil and Gas Lease Sales 139 and 141, Gulf of Mexico Region, OCS EIS/EA 91-0054.

8. Final Environment Impact Statement, Proposed Oil and Gas Lease Sales 142 and 143, Gulf of Mexico Region, OCS EIS/EA 92-0054.
EXHIBIT 14