

In Reply Refer To: MS 5231

January 13, 1994

Samedan Oil Corporation  
Attention: Mr. Roger B. Souders  
350 Glenborough, Suite 240  
Houston, Texas 77067-3299

Gentlemen:

Reference is made to the following plan received December 30, 1993:

Type Plan - Initial Plan of Exploration  
Lease - OCS-G 12898  
Block - 158  
Area - South Marsh Island  
Activities Proposed - Wells A, B, and C

In accordance with 30 CFR 250.33, this plan is hereby deemed submitted and is now being considered for approval.

Your control number is N-4678 and should be referenced in your communication and correspondence concerning this plan.

Sincerely,

(Orig. Sgd.) Kent E. Stauffer

D. J. Bourgeois  
Regional Supervisor  
Field Operations

bcc: Lease OCS-G 12898 POD File (MS 5032)  
MS 5034 w/public info. copy of the plan  
and accomp. info.

MTolbert:cic:01/03/94:POECOM

NOTED  
STAFF

JAN 18 3 47 PM '94

RECEIVED

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PLAN OF EXPLORATION



OCS-G 12898

SOUTH MARSH ISLAND BLOCK 158

OFFSHORE LOUISIANA

SAMEDAN OIL CORPORATION

Date of Preparation: December 27, 1993

CONTACT

Mr. J. M. Ables  
Samedan Oil Corporation  
350 Glenborough, Suite 240  
Houston, Texas 77067  
Tel. (713) 876-6223

**PUBLIC**

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A. DESCRIPTION

1. General

Lease OCS-G 12898, South Marsh Island Block 158 in the Gulf of Mexico was acquired in OCS Lease Sale 131, in March 1991 by Samedan Oil Corporation for a bonus amount of \$147,453.00.

The search for and possible production of hydrocarbon minerals from this area is part of Samedan's overall program in the search for oil and gas in the Gulf of Mexico. Manpower requirements will be covered with the existing Samedan organization. Onshore support required for the offshore operations in the block will be from Freshwater City, Louisiana and the staff of Samedan's Houston Offshore Office.

Samedan requests MMS approval to drill up to three wells in OCS-G 12898 under this plan.

WELL NO. A

Surface Location: 6900' FSL & 4200' FWL of Block 158  
Proposed Bottomhole Location: \*  
Proposed True Vertical Depth: \*  
Water Depth: \*

WELL NO. B

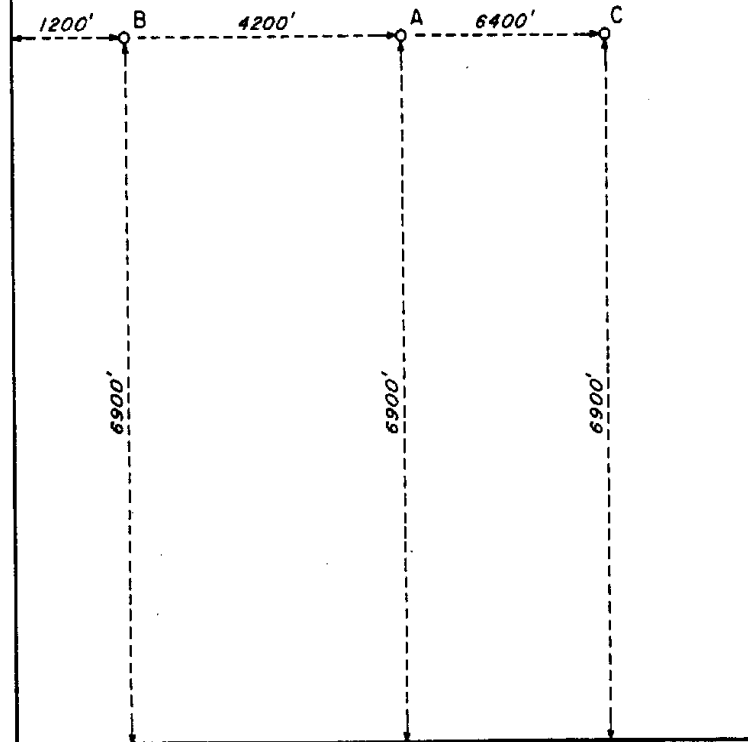
Surface Location: 6900' FSL & 1200' FWL of Block 158  
Proposed Bottomhole Location: \*  
Proposed True Vertical Depth: \*  
Water Depth: \*

WELL NO. C

Surface Location: 6900' FSL & 6400' FWL of Block 158  
Proposed Bottomhole Location: \*  
Proposed True Vertical Depth: \*  
Water Depth: \*

\*(Samedan considers this information confidential and exempt from public disclosure.) Actual exploration activities carried out in the well bore will be decided during the drilling program depending on the findings.

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**PUBLIC**

POE

**SAMEDAN OIL CORP.**

**SOUTH MARSH ISLAND 158  
LOCATION PLAT**

HORIZON: \_\_\_\_\_

CONTOUR INT.: \_\_\_\_\_ SCALE: 1" = 2000'

GEOLOGIST: \_\_\_\_\_ STAFF \_\_\_\_\_ DATE: 10/26/93

GRAPHIC SCALE



2. Exploration Activities and Geophysical Equipment Utilized

Samedan has reviewed the seismic data available at present and plans to drill up to three exploratory wells under this plan to gain more detailed and specific information on the geology of the lease areas.

Samedan's drilling operations are contracted out. The work will be done with a jack-up drilling unit (Section F.5).

Logging Program

- a. ISF-Sonic with SP/GR
- b. FDC-CNL/GR/Caliper
- c. High Resolution Dipmeter
- d. Well Velocity Survey at T.D.
- e. Repeat Formation Tester
- f. Thermal Decay Log

Drill Stem Test  
Coring and Sidewall Cores  
Well Samples  
Mud Log

B. SCHEDULE

Spud OCS-G 12898 Well No. "A" approximately March 1, 1994  
drilling for approximately 30 days.  
Spud OCS-G 12898 Well No. "B" approximately April 1, 1994  
drilling for approximately 30 days.  
Spud OCS-G 12898 Well No. "C" approximately May 1, 1994  
drilling for approximately 30 days.

C. GEOLOGICAL AND GEOPHYSICAL INFORMATION

1. Shallow Hazards Report

Samedan's geophysicists have reviewed surveys of the area  
and have noted precautions for the proposed activities.  
Attached are Shallow Hazards Reports.

2. Archaeological Survey

Archaeological Survey Reports are not required for this  
block.



**SAMEDAN OIL CORPORATION  
SHALLOW HAZARDS REPORT**

**DATE:** October 21, 1993  
**AREA/BLOCK:** South Marsh Island 158 OCS-G-12898  
**WELL:** "A" Location  
**SURFACE LOCATION:** 6900' FSL; 4200' FWL  
**WATER DEPTH:** 260'

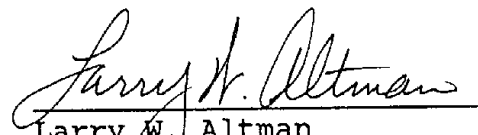
**DATA REVIEWED:**

**HAZARD SURVEY:** Geophysical Survey Reports of South Marsh Island Block 158, Offshore Louisiana, acquired by Kinsella, Cook & Associates, Inc. for Samedan Oil Corporation in April, 1993. Survey data include records acquired by magnetometer, side scan sonar, echo sounder, subbottom profiler, and high resolution seismic. The survey grid was 300 x 900 meters. Hazard survey lines used for this evaluation were 7 and 106.

**OTHER DATA:** Speculative seismic lines 5073-2 and 7060 acquired by TGS.

**CONCLUSION:** I have examined the above mentioned data over the A location and have found no major hazards to drilling. The well may encounter some shallow gas at depths of 675'-725' subsea, but it should not pose a hazard.

**RECOMMENDATION:** Normal precautions should be observed during drilling with special attention being given to drilling between 625' - 775' subsea.

  
Larry W. Altman  
Geophysicist-Offshore

CC: Drilling Dept.

LWA/jm

**SAMEDAN OIL CORPORATION  
SHALLOW HAZARDS REPORT**

**DATE:** October 21, 1993  
**AREA/BLOCK:** South Marsh Island 158 OCS-G-12898  
**WELL:** "B" Location  
**SURFACE LOCATION:** 6900' FSL; 1200' FWL  
**WATER DEPTH:** 260'

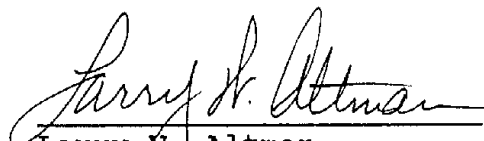
**DATA REVIEWED:**

**HAZARD SURVEY:** Geophysical Survey Reports of South Marsh Island Block 158, Offshore Louisiana, acquired by Kinsella, Cook & Associates, Inc. for Samedan Oil Corporation in April, 1993. Survey data include records acquired by magnetometer, side scan sonar, echo sounder, subbottom profiler, and high resolution seismic. The survey grid was 300 x 900 meters. Hazard survey lines used for this evaluation were 4 and 106.

**OTHER DATA:** Speculative seismic lines 5073-2 and 216-015 acquired by TGS.

**CONCLUSION:** I have examined the above mentioned data over the B location and have found no major hazards to drilling. The well may encounter some shallow gas at depths of 650'-700' subsea, but it should not pose a hazard.

**RECOMMENDATION:** Normal precautions should be observed during drilling with special attention being given to drilling between 600' - 750' subsea.

  
Larry W. Altman  
Geophysicist-Offshore

CC: Drilling Dept.

LWA/jm

**SAMEDAN OIL CORPORATION  
SHALLOW HAZARDS REPORT**

**DATE:** October 21, 1993  
**AREA/BLOCK:** South Marsh Island 158 OCS-G-12898  
**WELL:** "C" Location  
**SURFACE LOCATION:** 6900' FSL; 6400' FWL  
**WATER DEPTH:** 260'

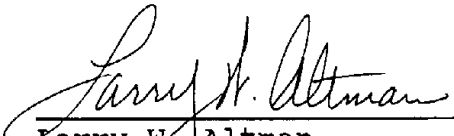
**DATA REVIEWED:**

**HAZARD SURVEY:** Geophysical Survey Reports of South Marsh Island Block 158, Offshore Louisiana, acquired by Kinsella, Cook & Associates, Inc. for Samedan Oil Corporation in April, 1993. Survey data include records acquired by magnetometer, side scan sonar, echo sounder, subbottom profiler, and high resolution seismic. The survey grid was 300 x 900 meters. Hazard survey lines used for this evaluation were 9 and 106.

**OTHER DATA:** Speculative seismic lines 5073-2 and 220-015 acquired by TGS.

**CONCLUSION:** I have examined the above mentioned data over the C location and have found no major hazards to drilling. The well may encounter some shallow gas at depths of 675'-725' subsea, but it should not pose a hazard. A NNW-SSE trending fault offsets the seafloor 600' NE of location C. This fault plane dips to the NE and will not intersect this well.

**RECOMMENDATION:** Normal precautions should be observed during drilling with special attention being given to drilling between 625' - 775' subsea.

  
Larry W. Altman  
Geophysicist-Offshore

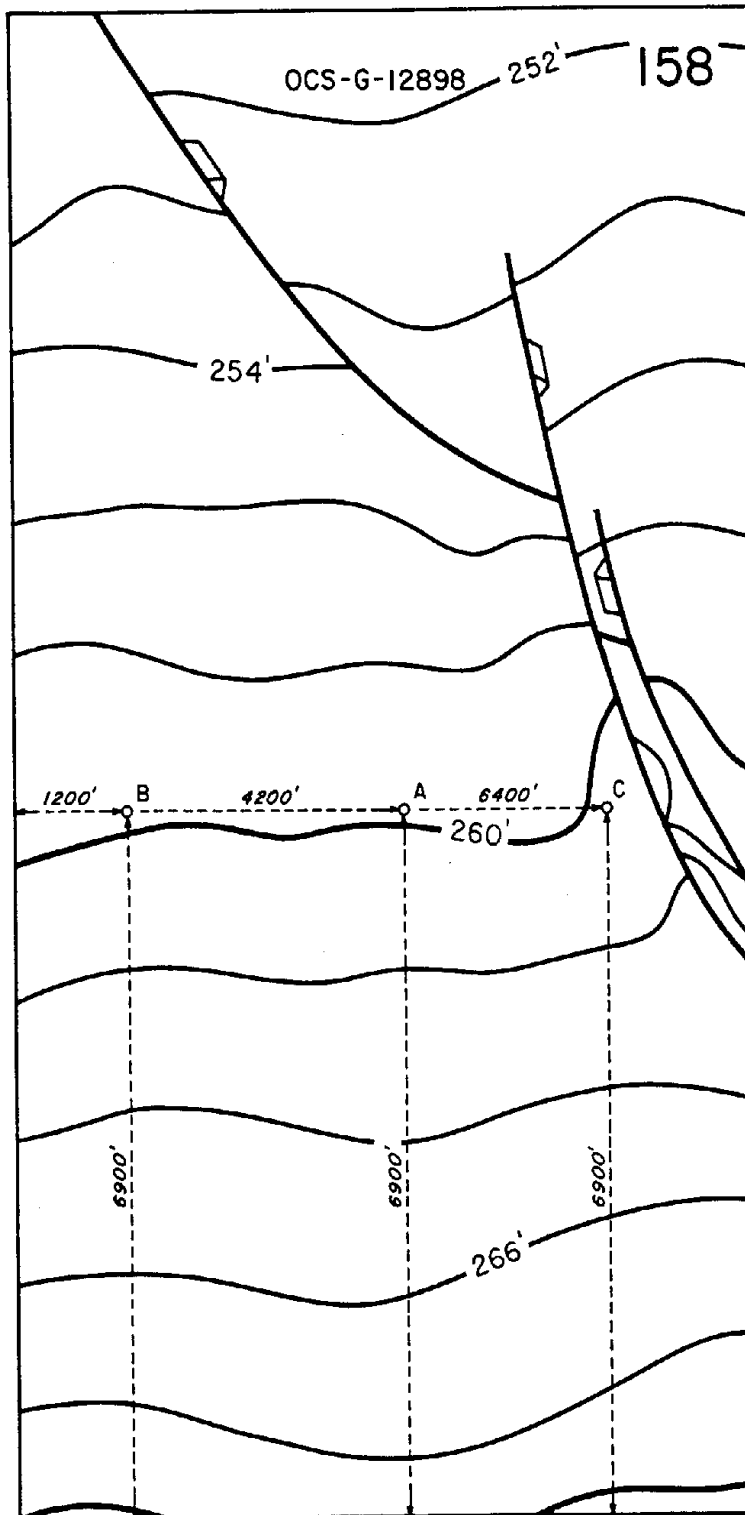
CC: Drilling Dept.

3. Structure Map

The appropriate structure map is attached indicating well locations. Samedan considers this information CONFIDENTIAL, and exempt from disclosure. This information is included in the five (5) Minerals Management Service copies of the Plan of Exploration only.

4. Bathymetry Map, Surface Location

A bathymetry map showing well surface location for the wells is attached.



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**SAMEDAN OIL CORP.**

**SOUTH MARSH ISLAND 158  
BATHYMETRY PLAT**

HORIZON: \_\_\_\_\_

CONTOUR INT: 2' SCALE: 1" = 2000'

GEOLOGIST: STAFF DATE: 10/26/93



5. Discussion of H<sub>2</sub>S

Pursuant to 30 CFR 250.67 Samedan Oil Corporation's determination is that the proposed wells under this Plan will be drilled only into "zones where the absence of H<sub>2</sub>S has been confirmed".

The basis for this determination are wells which were previously drilled for similar geologic zones encountering no H<sub>2</sub>S.

In accordance with 30 CFR 250.67, Samedan requests from the MMS a determination as to whether the proposed operations in this plan will be in an area classified as "zones known to contain H<sub>2</sub>S", "zones where the presence of H<sub>2</sub>S is unknown" or "zones where the absence of H<sub>2</sub>S has been confirmed".

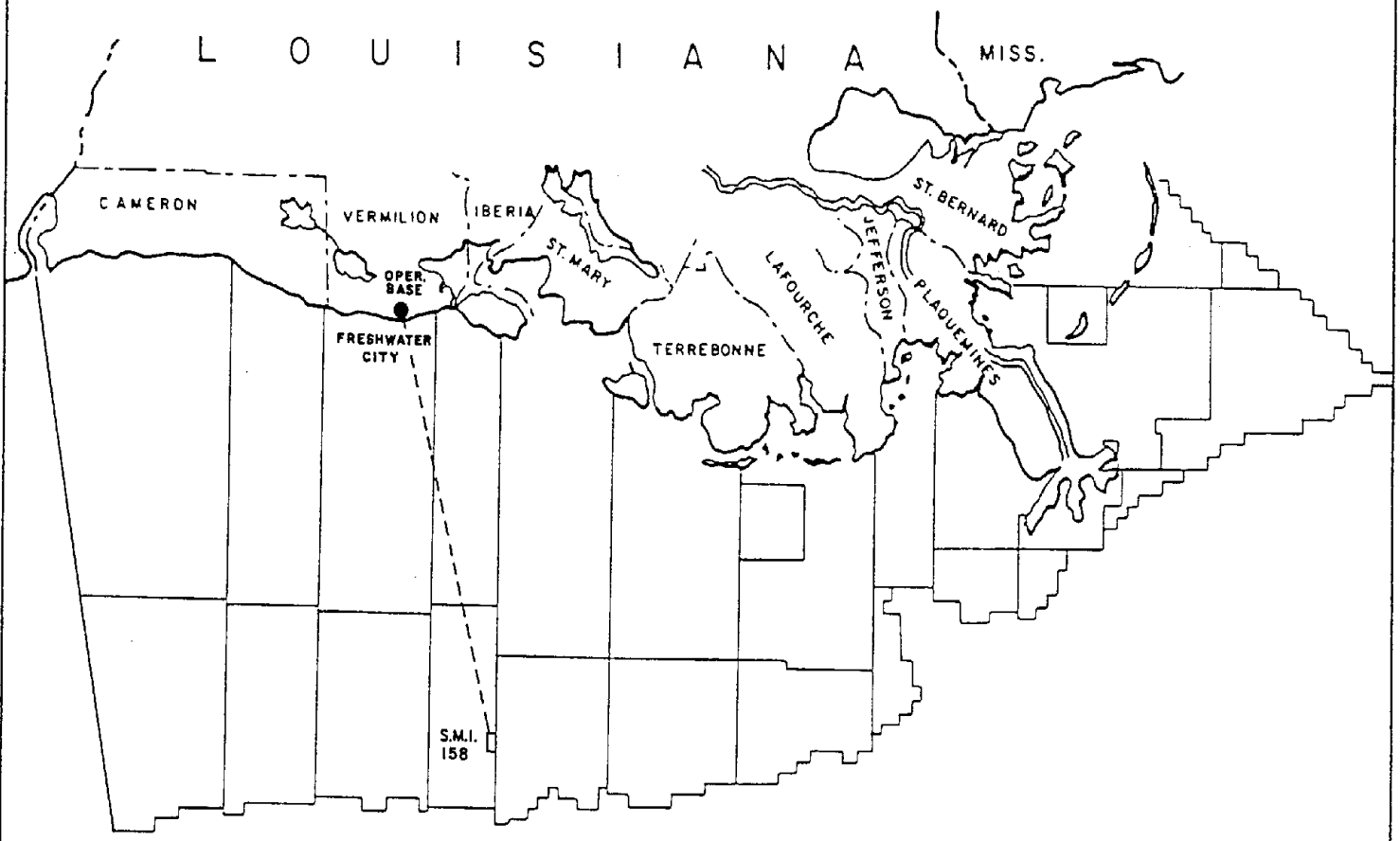
D. LOCATION

1. Vicinity Map (Lease Block)

A location map showing the lease block relative to the shoreline and operations base is attached.



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SAMEDAN OIL CORPORATION
SOUTH MARSH ISLAND AREA OFFSHORE LOUISIANA
BLOCK: 158 VICINITY MAP

2. Description of Onshore Support Base Facility

Onshore support for Samedan's offshore drilling operations will be provided from Freshwater City, Louisiana where transportation of supplies and personnel will be coordinated. Technical and operational support for the drilling operations will be provided by Samedan's Houston Offshore Division. The supporting staff in the Houston office consists of approximately 45 persons covering all disciplines for conducting oil and gas operations; exploration, drilling, production, construction and administration.

3. Surface Location of Proposed Wells

The surface locations of the proposed wells are as shown on the map referenced in Section C.4 of this Plan.

E. Oil Spill Clean-Up Information

1. Oil Spill Plan

Samedan has an Oil Spill Contingency Plan which has been approved by the Regional Supervisor of the Minerals Management Service. The plan describes procedures for action in dealing with any major disasters, such as oil spills, fires, blowouts, etc. It describes in detail:

Duties to be performed when a disaster occurs, with an indication of priority Assignment of duty and a designation of authority. Communication and reporting requirements (company and outside agencies).

Attached is the Minerals Management Service approval for Samedan Oil Corporation's Oil Spill Contingency Plan.



# United States Department of the Interior



MINERALS MANAGEMENT SERVICE  
GULF OF MEXICO OCS REGION  
1201 ELMWOOD PARK BOULEVARD  
NEW ORLEANS, LOUISIANA 70123-2394

In Reply Refer To: MS 5231

March 16, 1993

Samedan Oil Coporation  
Attention: Ms. Annalisa Taylor  
350 Glenborough, Suite 240  
Houston, Texas 77067-3299

Gentlemen:

In accordance with the requirements of 30 CFR 254.4 and 30 CFR 254.5(a), your letter dated February 12, 1993, transmitted modifications to your approved regional Oil Spill Contingency Plan (OSCP) for the Gulf of Mexico. These modifications amend your OSCP to (1) provide for testing of spill response equipment, (2) provide for participation in periodic spill response drills, and (3) include coverage of all of your facilities located in offshore State waters in the Gulf of Mexico. Pursuant to 30 CFR 250.42, these modifications are hereby approved and incorporated into your regional OSCP. However, approval of these modifications to your OSCP does not preempt any agreements or relieve you of any obligations you may have to a Gulf of Mexico coastal State regarding oil spill response activities.

Your regional OSCP, as modified, now covers all of your offshore facilities (see 30 CFR 254.1 for definitions of "facilities" and "offshore") in State waters in the Gulf of Mexico and all such facilities which may be installed in the future. Please be advised, however, that your regional OSCP does not cover any facilities you may operate which are located in onshore areas or in waters landward of the offshore boundary. For these facilities, you may be required to submit oil spill response plans to the Federal agency having jurisdiction.

Please be reminded that you should conduct the next annual review of your regional OSCP, as required by 30 CFR 250.42, no later than September 30, 1993. Three copies of the findings of the review including right-of-way pipeline information and any resulting updates must be submitted to this office for approval.

Sincerely,

D. J. Bourgeois  
Regional Supervisor  
Field Operations

2. Trajectory Analyses

Samedan Oil Corporation has identified the zones that appropriate and available trajectory analyses indicate may be impacted by an oil spill on South Marsh Island Block 154. As a source document for this analysis, we have used the Final Environmental Impact Study for Sales 142 and 143 (Book #92-0007). Listed below are the results of the analysis:

There is less than a 0.5% chance of an oil spill hitting any land segment.

If an oil spill should occur on South Marsh Island Block 158, Samedan would do its best to respond in accordance with its Oil Spill Contingency Plan which was approved on March 16, 1993 by the Minerals Management Service. Additionally, Samedan would do its best to notify appropriate agencies, identify biologically sensitive areas, and initiate the appropriate response modes to quickly and effectively reduce damage to property and the environment.

3. Response Base and Response Time

The primary response base for an oil spill in this area is Intercoastal City, Louisiana, which is approximately 115 miles from South Marsh Island 158. The estimated response time for mobilization, transportation and deployment onsite of the fast response skimmer system is 18.0 hours, calculated as follows:

Procurement of equipment, transportation of vessel and personnel to load out and operate equipment	2.0 hours
Load out fast response unit and oil spill containment equipment	2.0 hours
Travel time to lease (includes inland time)	13.0 hours
Equipment deployment	<u>1.0 hours</u>
Estimated Total Time	18.0 hours

4. Clean Gulf Associates

As a member of the Clean Gulf Associates, Samedan has access to the various area of the Gulf of Mexico. An inventory of the available equipment along with response time is attached.

## CLEAN GULF ASSOCIATES

Clean Gulf Associates is a non-profit organization formed by companies operating in the Outer Continental Shelf. Their purpose is to provide a stock pile of oil spill containment and clean-up equipment for use by member (and non-member) companies. Clean Gulf Associates contracted with Halliburton Services in Harvey, Louisiana, to supply equipment, materials and personnel needed to contain and clean-up spills in the Gulf of Mexico. At the present time clean-up systems are maintained at five bases located at Grand Isle, Venice, Intra-coastal City, Cameron, and Morgan City. These systems include: fast response open sea/bay, high volume open sea, shallow water and auxiliary shallow water skimmer systems, beach cleanup equipment, and helicopter spray systems. Also available are waterfowl rehabilitation units, bird scarers, and communication systems. In addition, offshore operators from the upper Texas Coast to the Mississippi Delta region, maintain a large inventory of 177 boats, 64 helicopters and 103 fixed-wing aircraft that can be put to use on short notice.

A more detailed inventory of available equipment and materials follows.

CLEAN GULF ASSOCIATES

Available Equipment and Materials

		<u>Response Time</u>
1. Barge-Mounted, High Volume, Open Sea Skimmer System (HOSS Barge)	Grand Isle	3 days
2. Fast Response, Skid-Mounted Skimmer System	Venice, Intracoastal City, Galveston, Cameron, Rockport, Grand Isle	12 hours
3. 50 bbl. Oil Storage Barge	Venice, Grand Isle, Intracoastal City	24 hours
4. 36' Bennett or Uniroyal Boom per 100' with Baskets and Anchoring Systems	Venice, Grand Isle, Intracoastal City, Galveston, Rockport	24 hours
5. Mini Fast Response, Skid-Mounted Skimmer System (for stand-by on platforms and drilling vessels) whether skimming or not.		24 hours
6. Saucer Type Skimmer	Venice, Grand Isle, Intracoastal City	24 hours
7. 200 GPM Centrifugal, Portable Pump 3"	Venice, Grand Isle, Intracoastal City	12 hours
8. 100 GPM Air Diaphragm Pump 2"	Venice, Grand Isle, Intracoastal City	12 hours
9. Helicopter Spray System	Venice, Grand Isle, Intracoastal City	3 hours
10. Bird Scarers - Set of 24	Venice, Grand Isle,	3 hours
11. Waterfowl Rehabilitation Station w/20 kw Generator	Grand Isle	applicable only to Shallow water
12. 20 kw Generator	Grand Isle	12 hours
13. Polyurethane Foam Generation	Venice, Grand Isle, Intracoastal City	12 hours



14. 175 CFM Air Compressor	Grand Isle	12 hours
15. 40 CFM Air Compressor	Venice, Grand Isle, Intracoastal City	12 hours
16. Foam pad Forms - Set of 4	Venice, Grand Isle, Intracoastal City	12 hours
17. Hand Skimmers - Set of 5 w/ Manifold	Grand Isle, Venice Intracoastal City, Rockport, Galveston	12 hours
18. Sorbent Recovery System, Wringer with Compression Skids	Intracoastal City, Venice, Grand Isle	12 hours
19. Boat Sprayer System	Grand Isle, Rockport Galveston	12 hours
20. Sorbent Pads (7-10 bales per location)	Grand Isle, Venice, Intracoastal City, Rockport, Galveston	12 hours
21. Radio System	New Orleans (Gretna)	
22. Chemical - Collectant	Grand Isle, Venice Intracoastal City, Galveston, Rockport	12 hours
23. Chemical - Dispersant with 550 gallon tanks	Galveston, Rockport	12 hours

F. ADDITIONAL INFORMATION

1. Lease Stipulations

Lease Stipulation 1 applies to OCS-G 12898.

Stipulation No. 1 - Protection of Archaeological Resources

2. Wastes and Pollutants

All discharges associated with the drilling of the proposed wells shall be in accordance with the permit limitations in the Environmental Protection Agency NPDES General Permit for the Gulf of Mexico.

The drilling unit is built to prevent pollution of the Gulf of Mexico by utilizing a system of curbs, gutters and surface drains which direct all fluids to a containment system. This system recovers hydrocarbons before water is discharged into the Gulf of Mexico.

Liquid waste material, including sewage from the living quarters will be treated in a Minerals Management Service approved sewage plant on the drilling unit prior to discharge into the ocean. Solid waste materials are compacted and transported to shore for disposal.

Drilling operations are monitored by the Samedan representative on board. Mud and drill cuttings will be treated to remove oil prior to discharge into the Gulf of Mexico. Drilling mud is sampled and tested for toxicity according to EPA LC<sub>50</sub> standards. Items that cannot be treated properly will be transported to shore for disposal.

3. List of Mud Additives

A list of commonly used mud additives utilized by Samedan is attached. Particular care is exercised by Samedan to minimize disruption of the environment. These drilling mud additives are selected to prevent a lasting impact on the surrounding area.

## COMMONLY USED MUD ADDITIVES

### Drilling Mud Components That May Be Utilized Offshore

	<u>Product Trade Name</u>	<u>Common Name</u>	<u>Chemical Trade Name</u>
I.	Weight Materials and Viscosifiers		
	MIL-BARR	barite	barium sulfate
	MILGELR	bentonite	bentonite
	SALT WATER GEL <sup>R</sup>	attapulgitite	attapulgitite clay
II.	Dispersants (Thinners)		
	UNI-CAL <sup>R</sup>	lignosulfonate	sodium lignosulfonate
III.	Filtration Control Additives		
	LIGCON <sup>R</sup>	causticized lignite	NaOH treated lignite
	CHEMITROL <sup>R</sup> X	polymer-treated lignite	polymer-treated lignite
IV.	Chemicals		
	Caustic Soda	caustic	sodium hydroxide
	Soda Ash	soda ash	sodium carbonate
	Bicarb of Soda	bicarb	sodium bicarbonate
	MIL-LIME	lime	calcium hydroxide
V.	Specialty Additives		
	LD-8 <sup>R</sup>	defoamer	non-hydrocarbon defoamer
	Aluminum Stearate	defoamer	aluminum stearate
	NOXYGEN <sup>TM</sup>	oxygen scavenger	catalyzed, sodium sulfite pwd
	NOXYGEN <sup>TM</sup> L	oxygen scavenger	catalyzed ammonium biosulfite solution
	LUBRI-SAL <sup>TM</sup>	lubricant	biodegradable, non-polluting vegetable oil

<u>Product Trade Name</u>	<u>Common Name</u>	<u>Chemical Trade Name</u>
SUPER SHALE-TROL <sup>R202</sup>	Shale-Trol	Aluminum organic acid complex
MILCHEM <sup>RMD</sup>	drilling detergent	drilling fluid detergent

VI. Loss of Circulation Additives

MIL-PLUG <sup>R</sup>	LCM	ground nut shells
MILMICA <sup>R</sup>	LCM	flake mica
Kwik-Seal	LCM	combination of granules, flakes, and fibers

4. Water Depth: 260'

The water depth in South Marsh Island Block 158 is 260 feet.

5. Description of Drilling Rig

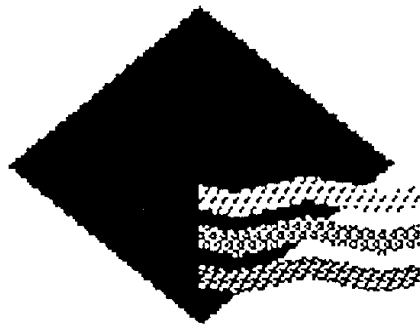
A. General

Drilling operations will be conducted by a contractor under supervision of the staff of Samedan's Houston Offshore Division. The contractor will supply the personnel required for the operations and a self-contained jack-up drilling unit, complete with living quarters. The drilling contract requires the contractor to perform the operations in accordance with Samedan's standards for safety and protection of the environment. A Samedan representative will supervise all activities.

The general arrangement of a jack-up drilling unit and complete inventory of equipment provided by the contractor are attached.

# *OCEAN NUGGET*

*LEVINGSTON CLASS 111C  
INDEPENDENT LEG CANTILEVERED  
JACKUP DRILLING UNIT*



**D I A M O N D**  
**O F F S H O R E**

15415 Katy Freeway  
Houston, Texas 77094

Telephone: (713) 492-5300  
Telex: 462-0052 DIAMDRL  
Fax: (713) 492-5310

OCEAN NUGGET

GENERAL DESCRIPTION AND EQUIPMENT LIST

A. GENERAL DESCRIPTION

The OCEAN NUGGET is a Levingston Class 111C cantilevered, independent leg jackup drilling unit designed to operate in water depths from twenty ft. (20') to three hundred ft. (300'), drill to a nominal well depth of 30,000 ft. and has the capability to "skid off."

PRINCIPAL CHARACTERISTICS AND DIMENSIONS:

Length overall	208' 0"
Length overall with heliport	269' 0"
Width of hull	178' 0"
Depth of hull	23' 0"
Number of legs	3
Overall length of legs and spud cans	410' 0"
Longitudinal leg centers	112' 5"
Transverse leg centers	130' 0"
Spud tank diameter	48' 0"
Spud tank height	6' plus mud slide above
Spud can load at preload	10,365 kips
Spud can area (projected)	1,810 ft <sup>2</sup>
Preload Bearing Pressure	5.72 kips/ft <sup>2</sup>
Loadline draft	12' 0"
Jack house leg length requirement	54' 0"
Water tower length (flange to bottom)	96' 0"
Top of rotary table to bottom of barge	62' 0"

NOMINAL VARIABLE DECK LOAD:

Nominal Operating variable deck load (maximum)	4,000 kips
Storm nominal variable deck load (maximum)	3,000 kips
Jacking variable deck load	3,000 kips
Transit variable deck load - Field Move	3,000 kips
- Shallow Water Move	2,400 kips

WATER DEPTH RATING:

Minimum (depending on Loading)	20' 0"
Maximum (depending on leg penetration)	300' 0"
- Non-hurricane Season	
- Hurricane Season	
	Bottom of footing to bottom of platform must not exceed 356'



**DRILLING AREA:**

Cantilever out (maximum aft of hull)	45' 0"
Cantilever out (minimum aft of hull)	7' 6"
Traverse skidding either side of center	12' 0"

The subbase can move longitudinally on top of cantilever beams allowing for skidding subbase and substructure onto platform.

**MAXIMUM CAISSON OD THAT IS DRIVABLE:**

Maximum outside diameter caisson that can be driven with the rotary skid and pollution pan removed:

- No other modifications (max.)	36"
- Minor modifications such as unpin or remove rotary beams etc. (max.)	48"
- Removal of BOP tracks, guide dolly tracks, some welding, etc. as controlled by main structural beams in drill floor (max.)	84"

**AIR GAP:**

Hurricane season (under 100' WD)	40' to 50'
Hurricane season (over 100' WD)	45' to 48'
Non-hurricane season (under 100' WD)	35' to 38'
Non-hurricane season (over 100' WD)	35'
Maximum as controlled by (water tower 96') with 10' submerged and lifeboats (100')	63'

**NOMINAL TOW SPEED:**

With tugs having 125 ST Bollard Pull	2.6 - 3.6 kts.
--------------------------------------	----------------

**CAPACITIES:**

Bulk mud	3,000 cu. ft.
Bulk Cement	3,000 cu. ft.
Liquid Mud (main pits)	1,591 BBLS
Diesel Fuel	4,132 BBLS
Potable Water	903 BBLS
Drill Water	8,665 BBLS
Sack Material	2,000 sacks

O. Nugget

**QUARTERS:**

Accommodations are provided for fifty-three (53) men, complete with all normal living facilities, with a sick bay for four (4) men.

**DRILLING LOADS:**

The substructure and associated structural components will accept the following maximum loads:

Setback load	600 kips
Rotary load	1,300 kips
Hook load	1,000 kips
Combined hook, rotary & set back	1,600 kips

**HELIDECK**

66' x 62' diameter cantilevered helicopter landing area on forward end of drilling unit designated to accommodate Sikorsky 5-6' helicopter & has a gross wt. of 19,000 lbs.

**JACKING:**

Twelve (12) motors power the movement of each of the three (3) legs. Each of the motors are 600 volt, 60 cycle AC induction type. Power for the AC motors is provided by main AC generators operated at one central console.

The jacking system is capable of jacking the barge at a rate of 1' per minute.

**CLASS:**

ABS Maltese Cross A1 Self Elevating Mobile Drilling Unit.

**DESIGN:**

Livingston Class 111 modified cantilever independent leg self-elevating mobile drilling unit.

**COMMISSIONED:**

1976 commission with cantilever conversion @ AMFELS, Brownsville, Texas in 1990.

**DOCUMENTATION:**

U. S. Coastwise with USCG Certificate of Inspection.

O. Nugget

B. DRILL FLOOR EQUIPMENT

1. Drawworks: Oilwell E-3000 driven by two EMD D79 DC motors. Drawworks complete with drum grooved for 1-1/2" drill line, makeup & breakout catheads (Kelco model 16), crown-o-matic device and master control.
  - One (1) Elmago Model 7838 electric brake
2. Mast: Continental Emsco 30' x 30' x 160' extended derrick rated 1,400,000 lb. gross nominal cap. (1,000,000 lbs. static hookload) modified to accept Varco B.J. Sidedrive, January 1990.
  - The ranking board to accommodate 220 stds of 5" drill pipe & bottom hole assembly, complete with safe catwalk.
  - Oilwell traveling block type B650.
  - One adjustable casing stabbing platform (26' to 46' above derrick floor) complete with air hoist & safety lines.
  - Crown safety platform complete with safe handrails.
  - Mast is complete with waterproof fluorescent fixtures with safety cables.
3. Traveling equipment consisting of:
  - One (1) Oilwell 760 crown block w/7-60" sheaves, (600 ton capacity) grooved for 1-1/2" drill line, complete with sandline sheave grooved for 9/16" sandline.
  - One (1) Oilwell B650 traveling block (650 ton capacity) 6-60" sheaves grooved for 1-1/2" drill line.
  - One (1) B.J. Hughes 5500 Dynaplex hook (500 tons).
  - One (1) Oilwell PC 650 swivel (650 tons) static.
  - One (1) Varco B.J. SOS-1 Sidedrive (500 ton) with a rotary adapter assembly, 90 degree power takeoff assembly, drive shaft assembly and upper chain case assembly. One (1) remotely controlled 10,000 psi. WP safety valve, one 10,000 psi WP safety valve, two (2) easy break saver subs, one (1) set 180" long 350 ton links.
4. One (1) Hercules Model 120 drill line anchor rated for 120,000 deadline pull.
5. Rotary: One Oilwell A 37-1/2" rotary table driven by a EMD-D79.

(Load Capacity = 650 Tons)

  - One (1) oilwell FT 2010D two speed transmission.
  - Low gear ratio = 1.767:1 max torque 33,678 ft. lb.
  - High gear ratio = 1:1.28 max torque 16,895 ft. lb.
  - One (1) power takeoff assembly transferring power to either rotary or Varco B.J. sidedrive system.
  - Complete w/Varco MSPC master bushings.
6. One (1) Mathey wireline measuring unit with 20,000' of .092 wireline, line guard, depth indicator. Driven by a hydraulic motor.
7. One (1) Eastman Go Devil deviation recorder complete with one recording instrument 0° to 6° and one 0° to 16°.

O. Nugget

8. Standard drill floor instrumentation, weight indicator, mud pump psi, SPM, mud pit volumes, mud flow sho, gain-loss and rotary torque.
  - One (1) Wildcat automatic driller.
  - Three (3) escape routes exiting port, standard windwalls and stairway along side of V-door.
9. Air winches consisting of:
  - Two (2) IRK64 - Two on drill floor (10,000 lbs. nominal rating)
  - Two (2) IRK64 - Two on cellar deck (10,000 lbs. nominal rating)
  - One (1) 2,000 lb. winch in derrick to act as mule.

D. MUD SYSTEM & EQUIPMENT

1. Two (2) Oilwell A-1700 PT Triplex mud pumps, each driven by two EMD D79 DC motors, 750 hp each. Each pump complete with Hydril PD45 pulsation dampeners and Demco 3" reset relief valve mud pump discharge lines 5" x 5,000 psi. W.P. valves run from mud pump to standpipe manifold. Pump normally equipped with 6-1/2" liners (max. 3,381 psi 90% = 3,042 psi).
2. Mud service pumps consisting of:
  - Two (2) Mission 5" x 6" centrifugal mud mixing pumps. Each driven by 75 hp. electric motors.
  - Two (2) Mission 6" x 8" centrifugal mud charging pumps. Each driven by Jack Shaft of mud pumps.
3. Mud cleaning equipment consisting of:
  - One (1) Brandt dual shale shaker with capacity at 1,200 gpm with 15.0 ppg. mud with 100 mesh screens.
  - Two (2) Derrick flo-line cleaners in a cascaded arrangement (downstream of) the Brandt dual tandem shale shakers (1,200 gpm capacity with 84 mesh screens & 30 cps plastic rig mud).
  - One (1) Double Life Flo-clamp V310 desander with 3 x 10" cones (1,040 gpm capacity).
  - One (1) Double Life Flo-clamp V514 desilter with 14 x 5" cones (1,220 gpm capacity).
4. One (1) mud/gas separator, 25' tall x 30" atmospheric type with 6" OD gas vent line extending to top of derrick with 8" liquid leg.
5. One (1) Welles 5,200 vacuum degasser (1,000 gpm capacity).
6. Liquid mud pits consisting of:

1 - active	384 BBLS
2 - active	384 BBLS
3 - reserve pits	396 BBLS

O. Nugget

1 - slugging pit	25 BBLs
5 - shale shaker sand traps	356 BBLs
1 - trip tank	<u>20 BBLs</u>
	1,591 BBLs

1 - chemical mixer, 50 gallon capacity with agitator

7. Three (3) Swaco Pit bull mud agitators driven by 20 hp electric motors, one per active & reserve mud tank.
8. Three (3) Demco 33-L.P. mud guns. One each pit.
9. Pneumatic bulk & cement storage transfer system consisting of:
  - Three (3) - 1,000 cu. ft. bulk mud storage P-tanks (3,000 cu. ft.).
  - Three (3) - 1,000 cu. ft. bulk cement storage P-tanks (3,000 cu. ft.) flow.
  - One (1) Halliburton 80 cu. ft. cap surge tank with sight glasses.
  - One (1) Westinghouse Model 3CD bulk air compressor, rated at 307 cfm @40psi.
  - One (1) backup low pressure bulk system air furnished by rig air compressor through a 125/40 psi regulating station.
10. Sack storage area located near the mud pits and mixing hoppers. Capacity approximately 2,000 sacks.
11. Two (2) Demco 612 low psi mud hoppers, one (1) sack fed and one (1) surge tank or sack fed. Approximately 600 lb./min. feed rate.
12. One (1) set basic mud testing equipment consisting of mud balance scale, viscosity funnel cup and sand content equipment.
13. One (1) 5" dual stand pipe manifold 5,000 psi WP with 4,063 ID standpipes, outlets for psi gauges, sensors and transducers.
14. Two (2) rotary hoses, 3" x 75' 5,000 psi WP with 4" Uni-bolt end connections (10,000 psi test).
15. One (1) Heitman mud Monitoring System that monitors pit volume & well return flow.
  - System totalizes pit volume and monitors flow and loss/gain. Control unit is located on drill floor with chart recorder and audible alarm. Remote display units are located in the company reps. office.
16. One (1) 40 BBL trip tank with continuous fill up.
17. One (1) lot of various length chicksan loops with 2" Weco No. 1502 end couplings (10,000 psi WP).
18. Mud system and rig is equipped to drill and complete with oil base mud with minimum modifications.

E. WELL CONTROL EQUIPMENT

1. Blowout preventers (H<sub>2</sub>S rated) consisting of:
  - One (1) Cameron Type "U" 13-5/8" x 10,000 psi double ram blowout preventer flanged top and bottom with four 4-1/16" 10M flanged outlets.
  - One (1) Cameron Type "U" 13-5/8" x 10,000 psi single ram blowout preventer flanged top and bottom with four 4-1/16" 10M flanged outlets.
  - One (1) Hydril GK 13-5/8" x 5,000 psi WP annular preventer with 10M flanged lower and 5M flanged upper.
  - One (1) 4-1/16" x 10M hydraulic operated gate valve (choke).
  - One (1) 4-1/16" x 10M manual gate valve (choke).
  - Two (2) 2-1/16" x 10M manual gate valves (kill).
  - One (1) 2-1/16" x 10M check valve (kill).
  - One (1) 3-1/16" x 10M Copper State flexible approved hose.
  
2. Diverter System consisting of:
  - One (1) 21-1/4" Hydril MSP 2,000 annular preventer.
  - One (1) 21-1/4" 2,000 psi WP diverter spool with two 12" flanged outlets.
  - Two (2) 12" Demco Series 300 hydraulically activated ball valves 720 psi WP.
  
3. One (1) main BOP and diverter control system consisting of:
  - One (1) Koomey Model T50160 3,000 psi WP.
  - One (1) rack of sixteen (16) 11 gallon accumulator bottles with a 176 gallon capacity.
  - One (1) 315 gallon reservoir tank.
  - Two (2) model 32S air pumps.
  - One (1) model T360-50-3 Triplex pump driven by a 20 hp electric motor.
  - One (1) Shaffer electric remote panel located on drill floor.
  - One (1) Koomey air remote panel with nitrogen back-up, regulated and plumbed into the rig air supply in case of loss of rig air.
  - Six (6) 1" four-way three position selection valves.
  - One (1) annular air regulator.
  - One (1) manifold (BOP) regulator.
  
4. One (1) 10,000 psi WP H<sub>2</sub>S trimmed choke manifold complete with:
  - Two (2) Cameron Type "F" 3-1/16" 10,000 psi gate valves.
  - Eleven (11) Cameron Type "F" 2-1/16" 10,000 psi gate valves.
  - One (1) Swaco 2-9/16" x 10,000 psi WP remote adjustable choke.
  - Two (2) 3-1/16" cameron adjustable chokes.

F. DRILL STRING AND HANDLING TOOLS

1. Drill pipe consisting of:
  - 9,000' of 5" OD, 19.50 lb./ft. Grade E range II drill pipe. Internal upset with 6-3/8" OD x 3-1/2" ID, 18° taper tool joints with 4-1/2" IF (NC 50) connections. Pipe internally coated.
  - 6,000' of 5" OD, 19.50 lb./ft. Grade G-105 range II drill pipe, Internal upset with 6-3/8" OD x 2-3/4" ID, 18° taper tool joints with 4-1/2" IF (NC 50) connections. Pipe internally coated.
2. Drill collars:
  - Fifteen (15) 8" OD x 2-13/16" ID x 31' long with 6-5/8" API Regulator connections, slip and elevator recesses.
  - Fifteen (15) 6-1/2" OD x 2-13/16" ID x 31' long with 4-1/2" IF (NC 50) connections

NOTE: Other sizes may be available upon request

3. Thirty (30) jts. of 5" Hevi-wate drill pipe with NC 50 connection, Range II, 6-1/2" OD x 3-1/2" ID tool joints and upsets.
4. Bit breakers for standard three cone drill bits 20" - 8-1/2".
5. Subs consisting of:
  - One (1) bit sub 6-5/8" Reg x 7-5/8" reg. Box D.C.
  - Two (2) bit subs 6-5/8" Reg x 6-3/8" reg. drill collar, bored for float.
  - Two (2) XO's, 4-1/2" IF x 6-5/8" reg.
  - Two (2) bit subs 4-1/2" IF x 4-1/2" reg.
  - One (1) pump in sub 4-1/2" IF box x 2" Weco.
  - One (1) side door pump in sub 4-1/2" IF x 4-1/2" IF x 2" Weco.
6. Drill pipe/casing protectors for 5" OD drill pipe for use in surface casing. Additional and/or replacement rubbers furnished by operator.
7. Drill stem valves consisting of:
  - Two (2) lower sidedrive valves (10,000) psi with 6-5/8" reg. connections (manual).
  - Two (2) upper sidedrive valves (10,000) psi with 6-5/8" reg. connections (auto).
  - Two (2) inside BOP valves (dart type) (10,000) psi with 4-1/2" IF connections.
  - Two (2) safety valves (10,000) psi with 4-1/2" IF connections.

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8. Fishing tools consisting of:
  - Overshots including accessories to catch contractors furnished drill pipe & drill collars.
9. Drill pipe and drill collar elevators consisting of:
  - Two (2) BLOHM VOSS drill pipe elevators (350 tow) for 5" OD/18° taper drill pipe.
  - One (1) BJ model TA-150 (150 tow) 7-3/4" D.C. elevators.
  - One (1) WTM 150 ton square shoulder 6-1/2" D.C. elevators.
10. Elevator links consisting of:
  - One (1) set of Varco 2-3/4" x 108" (350 ton)
  - One (1) set of Varco 3-1/2" x 180" (500 ton)
  - One (1) set of Varco 2-3/4" x 180" (350 ton)
11. Two (2) BJ type SDD manual tongs with lug jaw assemblies for pipe up to 12", torque rating 100,000 ft./lbs.  
  
Two (2) BJ type DB manual tongs with lug jaw assemblies for 4" to 13-5/8" - torque rating 60,000 ft./lbs.
12. One (1) hydraulic drill pipe spinner, spinmaster to handle pipe sizes 3-1/2" to 5".
  - One (1) drill pipe spinner, Varco Model SSW-10 to handle pipe sizes 3-1/2" to 5".
13. Slips consisting of:
  - Two (2) sets of Varco Type SDXL for 5" drill pipe
14. One (1) Varco Type "MPR" drill collar safety clamp for 7" drill collars.
15. One (1) mud saver bucket, OTECO mud guard.
16. Drill pipe wipers for 5" drill pipe inside casing.

G. AUXILIARY EQUIPMENT

1. Diesel electric rig power system consisting of:
  - Two (2) EMD-16-645E8 diesel engines, each driving one EMD 1,400 KW AC generators.
  - One (1) EMD-12-645E8 1650 hp diesel engine, driving one EMD 1,085 KW AC generator.



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- Four (4) Bay Baylor Model 2000 750V SCR system, two bays, 0-1600 amps, two bays 0-2500 amps.
  - One (1) GM-271 60 hp diesel engine driving a 20 KW AC generator.
2. Compressors consisting of:
- One (1) Ingersoll-Rand model H-75 rig air compressor. Rated capacity 500 cfm @ 125 psi.
  - One (1) Quincy model QSI 490 rig air compressor. Rated capacity 490 cfm @ 125 psi.
  - One (1) Airdyne model AD81D DTH desiccant air dryer, rated @ 500 cfm.
  - One (1) Ingersoll-Rand Type 30 cold start air compressor, powered by a 12 hp Lister diesel engine.
  - One (1) Westinghouse model 3CD bulk air compressor, rated @ 307 cfm @ 40 psi.
3. One (1) Branham Sea King Series 62 crane with a 100 ft. boom. Rated 92,600 lb. @ a 30 ft. radius.
- One (1) FMC Linkbelt ABS-218 with a 90 ft. boom. Rated 61,600 lb. capacity @ 30 ft. radius.
4. Two (2) personnel transfer nets.
5. One (1) lot of slings and bridles for loading & offloading rig.
6. One (1) set of supply mooring lines and cargo transfer hoses for loading and offloading rig.
7. Two (2) 400 amp Miller electric welding machines.
- Two (2) 600 amp Lincoln electric welding machines.
8. One (1) Alpha-Laval Model JWP-36-C100DE waste heat fresh water maker, rated @ 10,200 gpd.
- Ship service pumps consisting of:
- Two (2) drill water pumps, 2 x 3 mission driven by a marathon 30 hp, 1760 RPM electric motor.
  - Two (2) fire & salt water service pumps, 3 x 4' Harrisburg pumps driven by 40 hp 1,760 RPM electric motor.
  - Two (2) salt water Pluger 60 hp single stage submersible pumps, 3,000 gpm (total).
  - One bilge pump, Demco 5 x 6 driven by a Reliance 75 hp, 1,775 rpm electric motor.
  - Two (2) fuel oil pumps, Reliance driven by a 5 hp, 1,730 RPM electric motor
  - One (1) Fuel oil centrifuge, Alfa Laval model MAB 103-B-24 driven by a 1 hp motor.

O. Nugget

9. One (1) Gaitronics paging system with stations fixed throughout rig.
10. Communication equipment consisting of:
  - One (1) dedicated 490 MHZ radio telephone link, private line with fax and modem capability, through the Offshore Telephone Company's microwave system (DMO use only).
  - One (1) three watt transportable cellular radio telephone with fax capability for backup or emergency phone communication through Petrocom (DMO use only).
  - One (1) VHF radio in pilot house.

Firefighting & lifesaving equipment to meet ABS and USGS requirements which includes but not limited to:

- Hand portable fire extinguishers
- Individual life preservers for 125% of personnel capacity
- Fire extinguishers
- Station bill
- General alarms
- Identification signs
- Equipment guards
- Pollution pans
- Imperial exposure suits for 150% of drilling unit personnel capacity
- Two (2) 28 man Whitacker capsules with launch & recovery system
- Two (2) Viking 25 man davit launch life rafts
- One (1) 250 gallon light water extinguishing unit
- One (1) 2,500 lb. dry chemical unit
- One (1) 150 lb. dry chemical skid unit - heliport
- One (1) 150 lb. dry chemical wheel unit - heliport
- Four (4) complete fireman outfits
- Ring buoys according to USCG spec's (8+)
- Stokes letter to accommodate any size helicopter
- Fixed CO<sub>2</sub> system paint locker
- Six (6) self contained breathing apparatus

One (1) Omnipure sewage treatment plant model 8MS rated for 3,600 gpd.

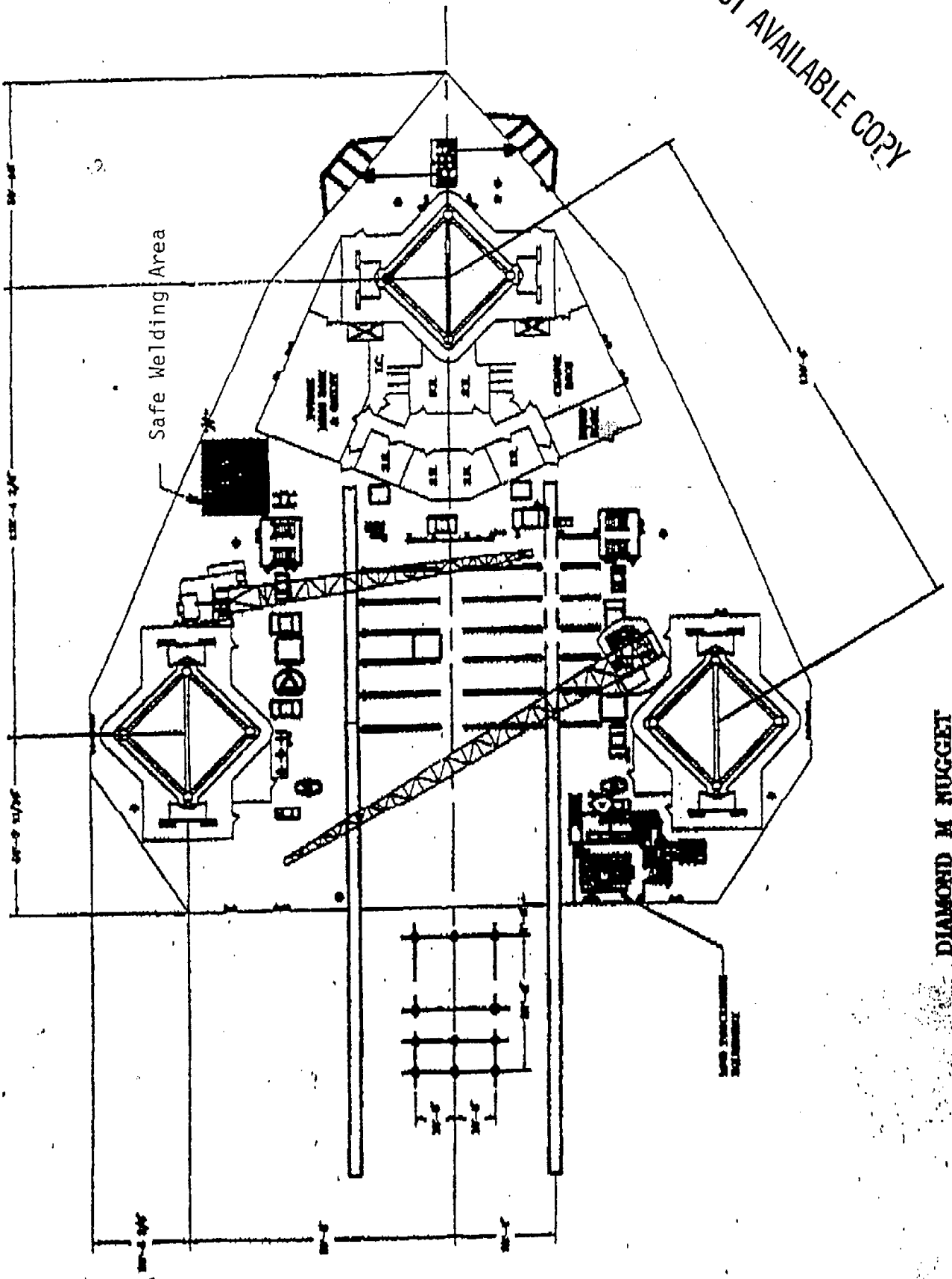
One (1) Gulf Gulp offshore food disposal unit model 500, 5 hp.

One (1) Rol-lift truck pallet fork, 5,500 lbs. capacity, 27" x 48" hydraulic.

H. THIRD PARTY EQUIPMENT

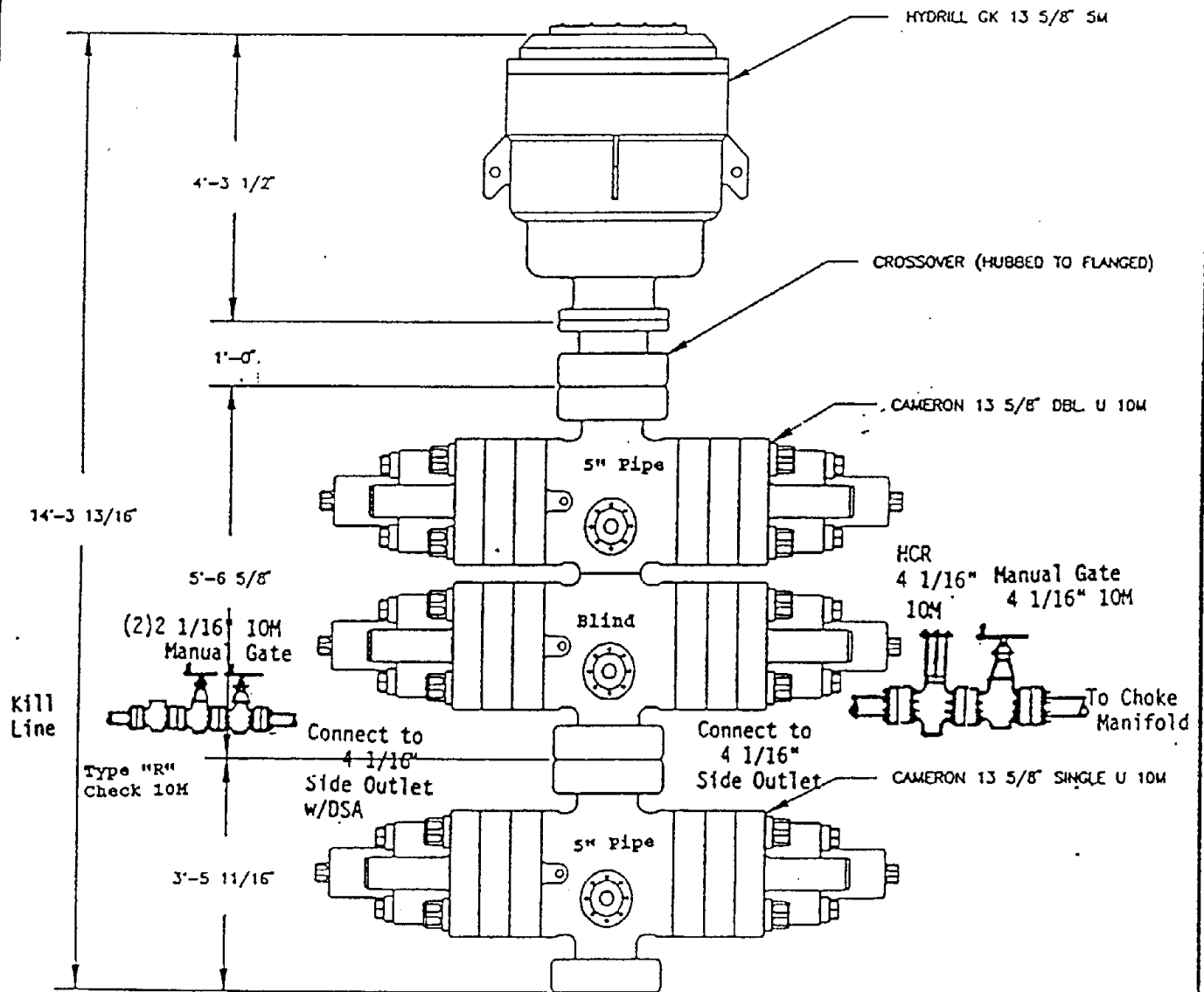
One (1) Halliburton SKD4/ADC Twin HT 400 Modular compact cementing unit, 15,000 psi WP powered by one GM 8V-71 diesel engine, with one 8 BBL RCM tank, one 20 BBL measuring tub and Compupac system (rental item).

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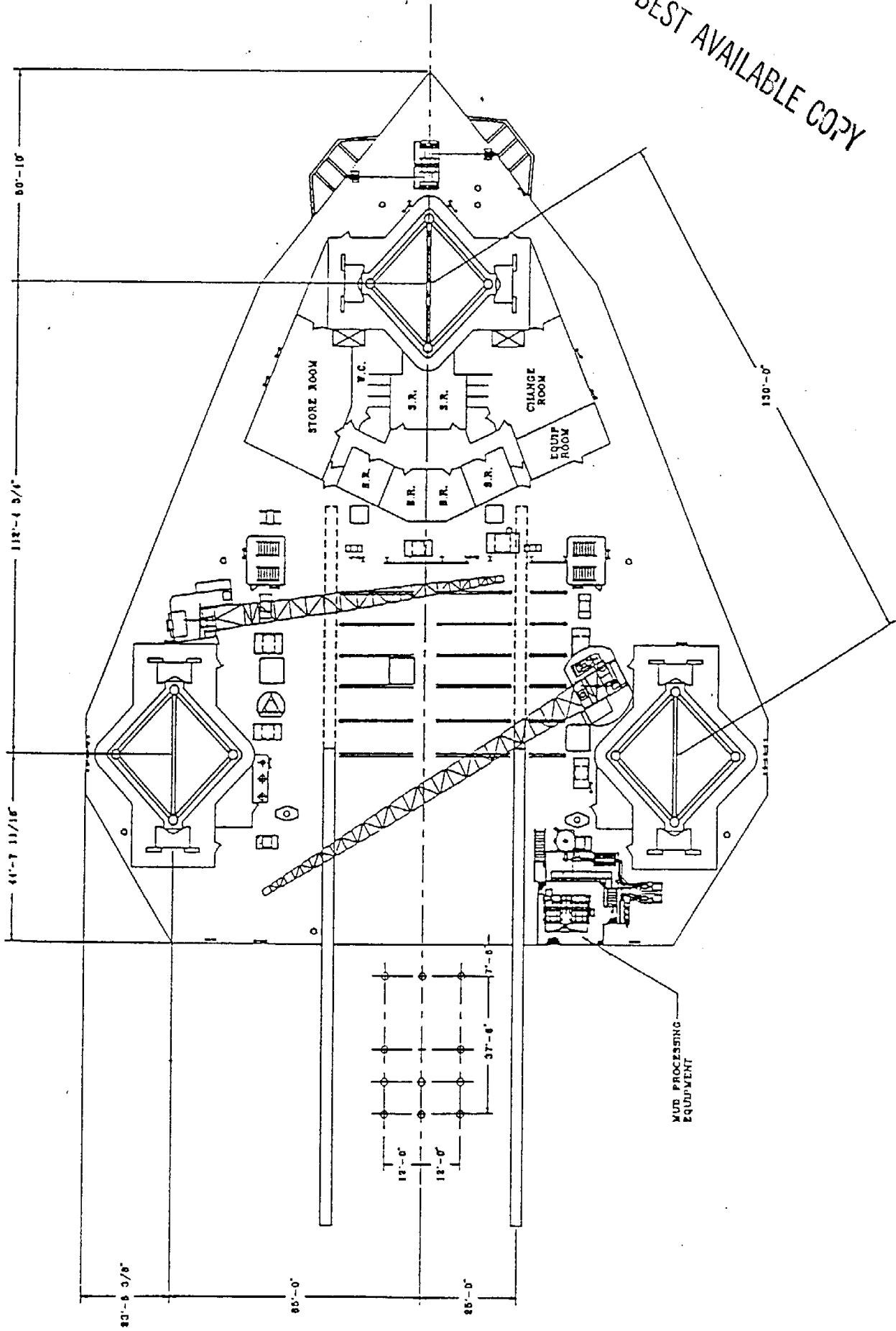
DIAMOND M NUGGET  
MAIN DECK ARRANGEMENT

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NUGGET BOP STACK

MAGFILE: NUGSTACK  
PGC/OJG - 6/6/90  
720-NUG-705



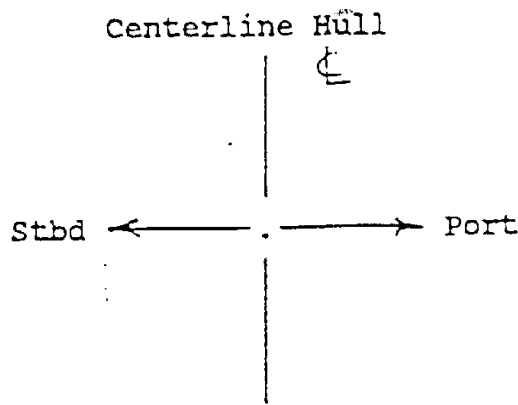
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DIAMOND M SUMMIT  
MAIN DECK ARRANGEMENT



99/NUGGET CANTILEVER LOAD CHART

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12'	10'	8'	6'	4'	2'	0	2'	4'	6'	8'	10'	12'	
500	570	650	720	820	910	1000	910	820	720	650	570	500	-45'
600	680	760	860	980	1090	1200	1090	980	860	760	680	600	-40'
730	835	930	1060	1150	1320	1475	1320	1150	1060	930	835	730	-35'
900	1025	1120	1240	1400	1550	1600	1550	1400	1240	1120	1025	900	-30'
1150	1250	1350	1480	1600	1600	1600	1600	1600	1480	1350	1250	1150	-25'
1320	1430	1600	1600	1600	1600	1600	1600	1600	1600	1600	1430	1320	-20'
1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	-15'
1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	-10'
1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	-7'-5"



Maximum combined hook, setback & rotary (Kips)

Maximum individual loads

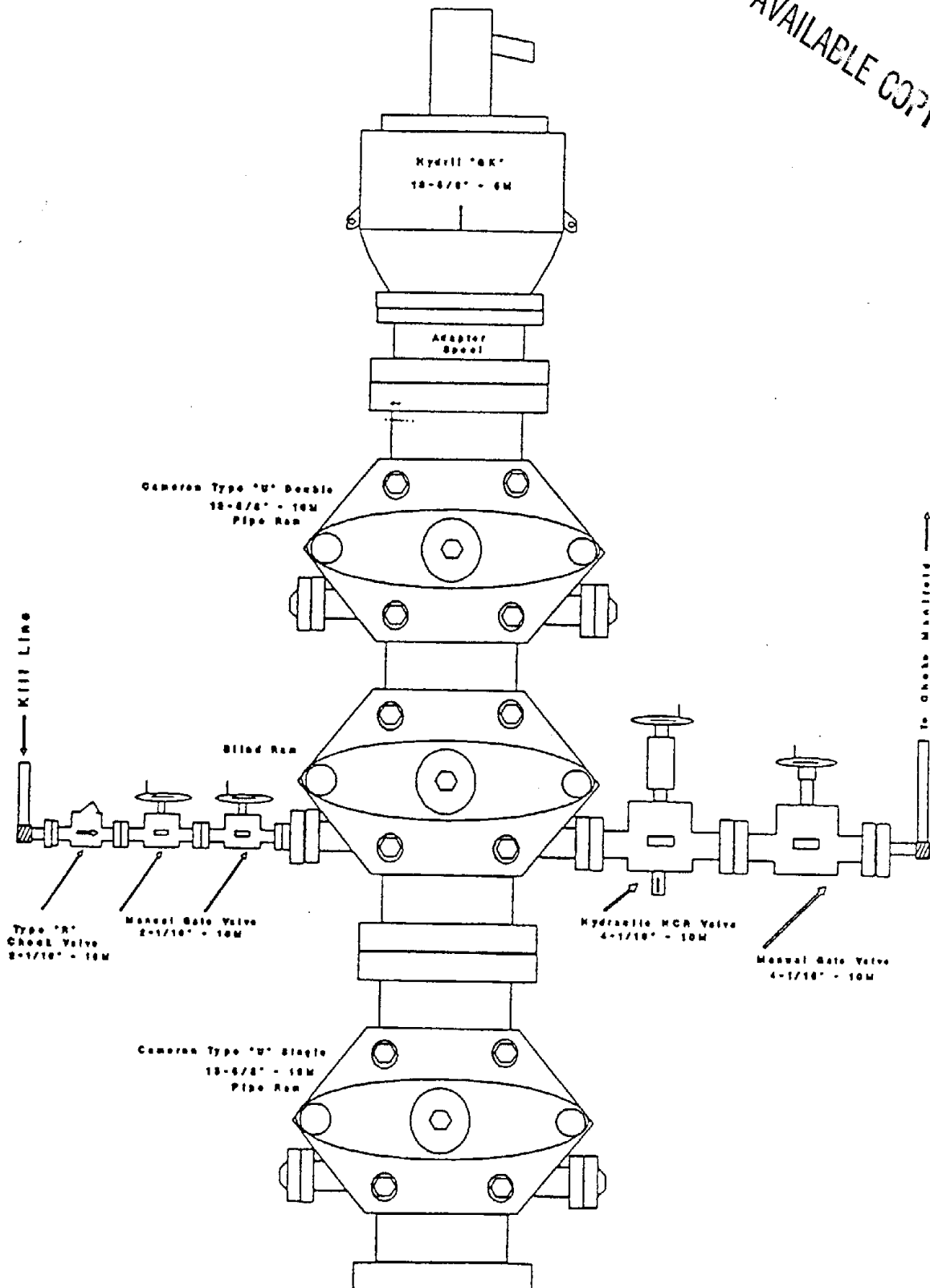
Hook load                      1000 Kips  
 Setback load                      600 Kips  
 Rotary load                      1000 Kips

\* Elevated Piperack              600 Kips

\* This is in addition to the max combined load.

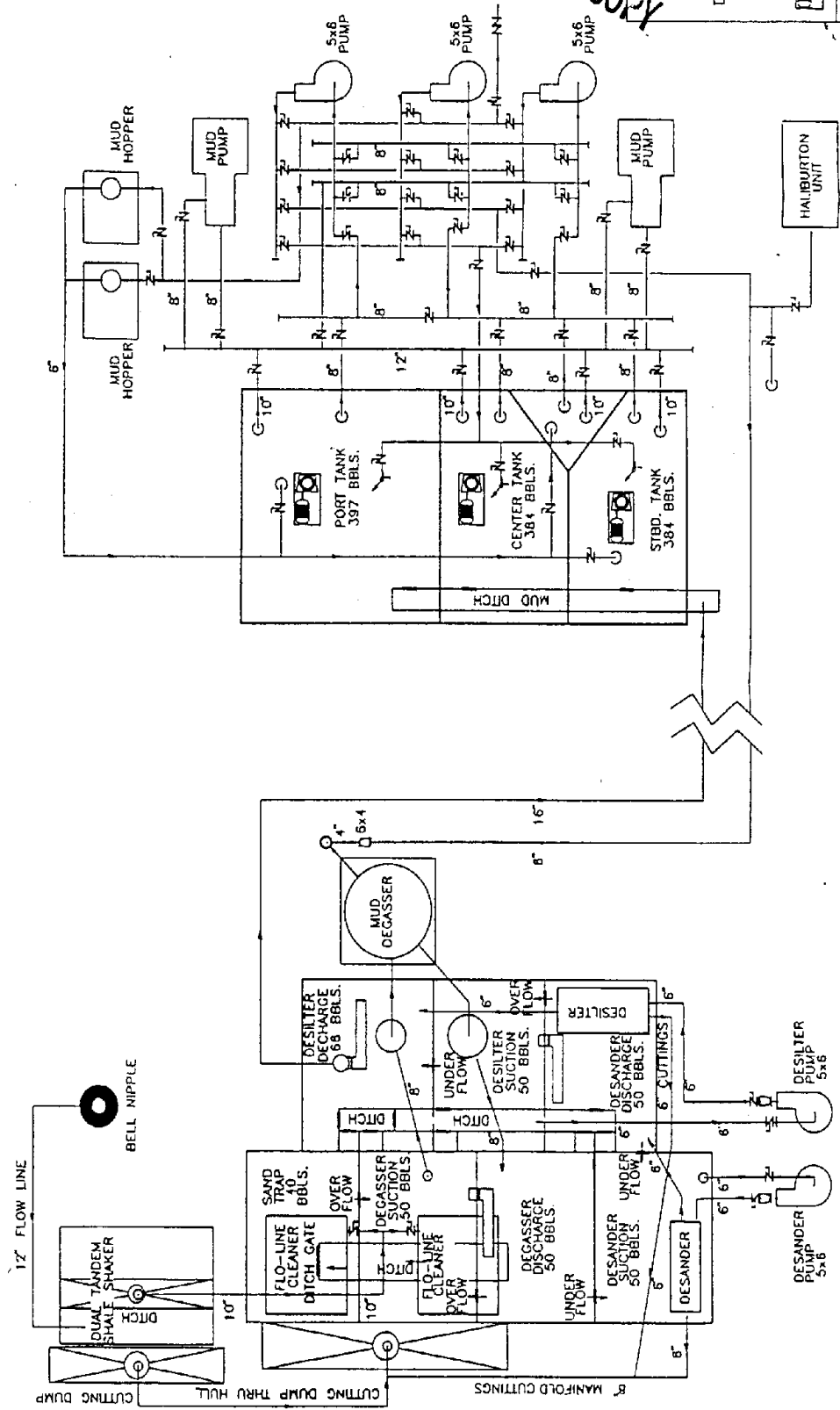
OCEAN NUGGET  
BOP Configuration

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DIAMOND M NUGGET - MUD PIT FLOW DIAGRAM



MUD MIXING/STORAGE TANKS  
LOCATED ON INNERBOTTOM DECK

MUD PROCESSING TANKS  
LOCATED ON MAIN DECK

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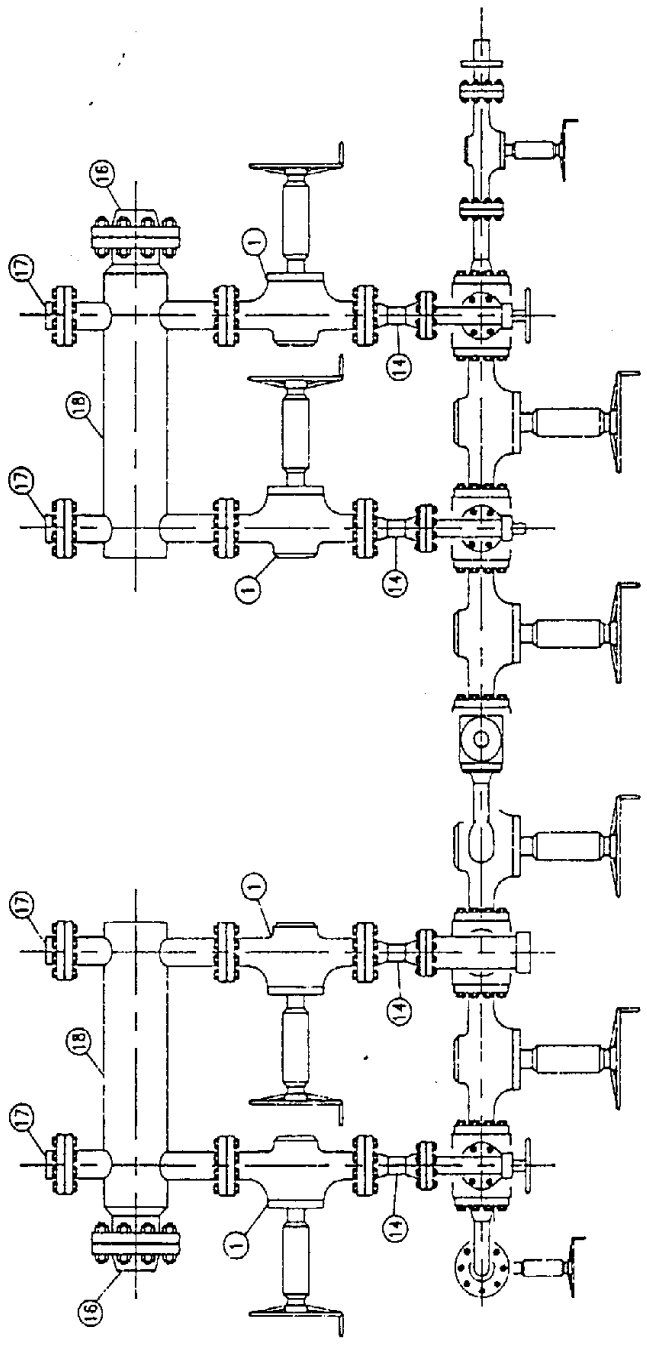
LEGEND

- CENTRIFUGAL PUMP
- SWING EQUALIZER
- MUD GUN
- TROUGH GATE
- AGITATOR

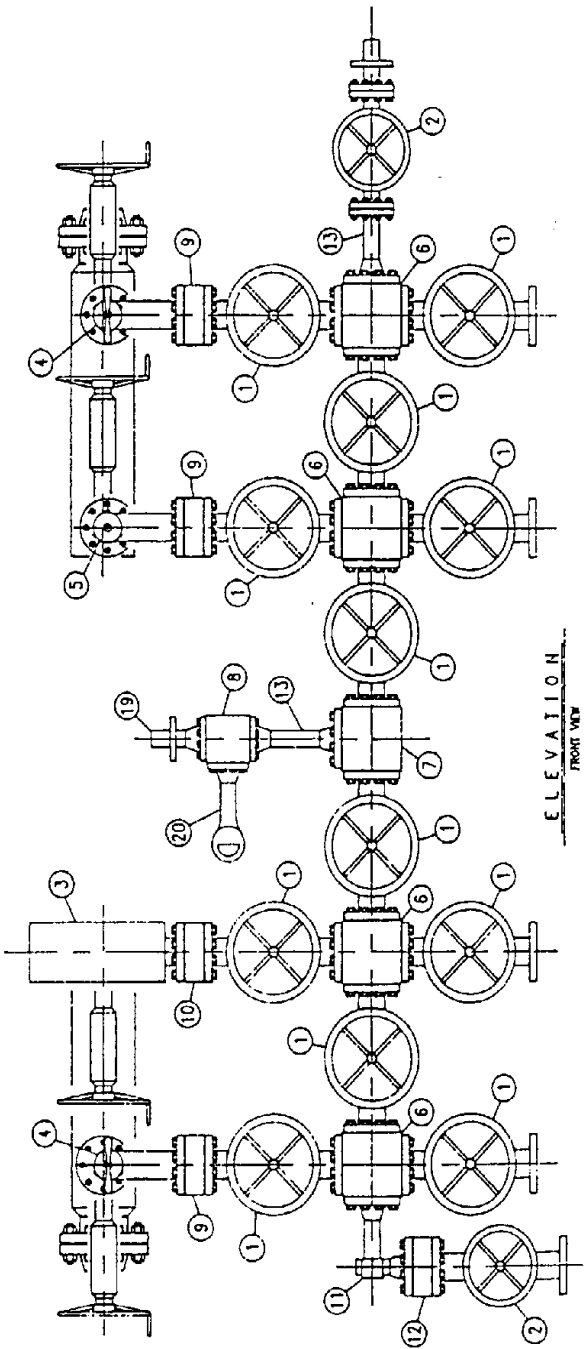
DIAMOND M NUGGET  
MUD PIT FLOW SCHEMATIC  
MAGFLE, NUGGET  
PCC - 6/19/96

**BILL OF MATERIAL**

ITEM	QTY.	DESCRIPTION
1	3	3 1/4" 10# CWI MANUAL GATE VALVE
2	2	2 1/4" 10# CWI MANUAL GATE VALVE
3	2	2 1/4" 10# CWI SUPER CHOKE
4	2	3 1/4" 10# CWI ADJUSTABLE CHOKE
5	1	3 1/4" 10# CWI POSITIVE CHOKE
6	1	3 1/4" 10# STUDDED CROSS
7	1	3 1/4" 10# STUDDED TEE
8	3	3 1/4" 10# DSA 13 1/4" LONG
9	1	3 1/4" 10# DSA 13 7/8" LONG
10	1	3 1/4" 10# DSA 13 7/8" LONG
11	1	3 1/4" 10# FLUID CUSHION BELL
12	1	3 1/4" 10# 13 7/8" 10# DSA 13" LONG
13	2	3 1/4" 10# FLANGED SPOOL 11 1/2" LONG
14	1	3 1/4" 10# 13 7/8" 10# DSA 13" LONG
15	1	3 1/4" 10# 13 7/8" 10# DSA 13" LONG
16	2	4 1/4" SW WELDNCK FLANGE
17	4	3 1/4" SW LEAD FILED TARGET FLANGE
18	2	BUTTER TANK 8 3/4" O.D. 30.5" WALL
19	2	2 1/4" 10# ADAPTER FLANGE - 7/8" BORE
20	1	2 1/4" 10# ADAPTER FLANGE - 7/8" BORE




PLAN VIEW



ELEVATION FRONT VIEW

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**DIAMOND M ODECO DRILLING INC.**  
 P. O. BOX 4358  
 HOUSTON, TEXAS 77210  
 OCEAN MURGET

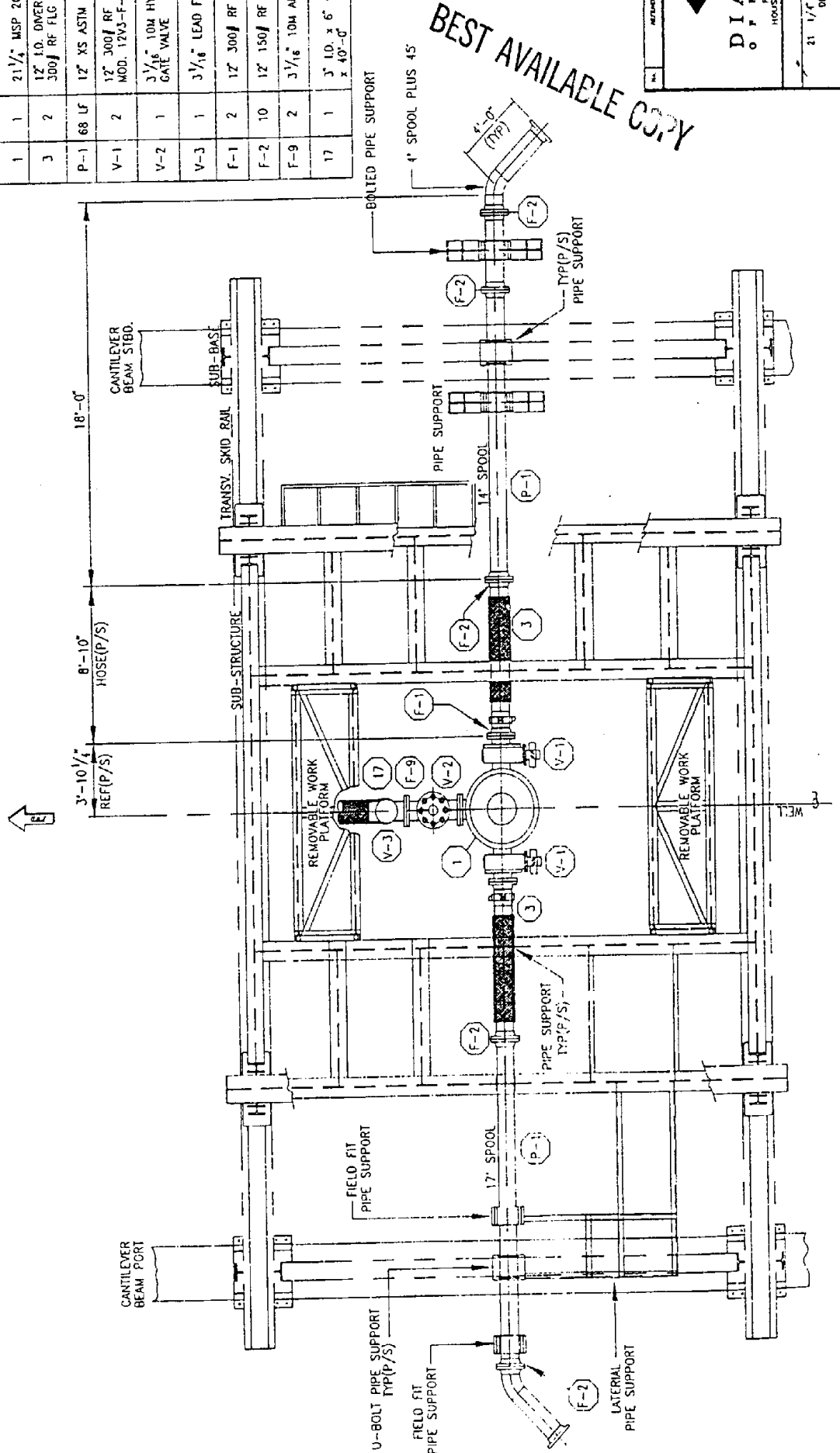
3 1/4" 10,000 PSI CHOKE MANIFOLD

DATE: \_\_\_\_\_ DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_

SCALE: 1" = 1'-0"

105 PO 0001-1  
 105P00003

BILL OF MATERIAL	
1	2 1/4" MSP 2000 DIVERTER
3	12" I.D. DIVERTER HOSE W/ 12" 300# RF FLG EA END
P-1	68 LF 12" XS ASTM A-53 GR.B BLK.
V-1	2 12" 300# RF BALL VALVE TYPE B MOD. 12V3-F-30-H10-HLP
V-2	1 3 1/4" 10M HYDRAULIC OPERATED GATE VALVE
V-3	1 3 1/4" LEAD FILL TARGET TEE
F-1	2 12" 300# RF WH FLG. BLK.
F-2	10 12" 150# RF WH FLG. BLK.
F-9	2 3 1/8" 10M API BX FKG. BLK.
17	1 3" I.D. x 6" O.D. 15M W.P. HOSE x 40'-0"



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DIAMOND  
O P P O R T S

P O BOX 4555  
HOUSTON, TEXAS 77210

OCEAN NUGGET  
DIVERTER PLAN

21 1/4" MSP 2000 DIVERTER

10SP0001  
10SP0001

DIVERTER PLAN  
NIS



B. Environmental Safeguards

(1) General

The goal of this Exploration Plan is the gathering of more information on the geology of the lease areas, in a safe manner, with minimal disruption of the environment. Various rules, regulations, codes, laws and practices have been developed over the years, which will assist the operator to conduct operations in this manner. 30 CFR 250 Subpart C specifically deals with the environmental safeguards and safety of the drilling and production operations. The regulations are strictly adhered to by Samedan.

Environmental safeguards are built into the operations in several ways: in the original design of equipment and system of operations, in the training of personnel, in the preparation of procedures for operations and also in the procedures and availability of equipment for remedial actions in cases of emergencies.

Operations will be conducted under the conditions described on the Application for Permit to Discharge on file with the Minerals Management Service. Samedan conducts monthly tests to ensure that liquid wastes discharged into the Gulf of Mexico comply with E.P.A. Regulations.

(2) Environmental Safeguards in the Design

The drilling unit is built to prevent pollution of the Gulf of Mexico by utilizing a system of curbs, gutters and surface drains which direct all fluids to a containment system. This system recovers hydrocarbons before water is discharged into the Gulf of Mexico.

Liquid waste material, including sewage from the living quarters, will be treated in a Minerals Management Service approved sewage plant on the drilling unit prior to discharge into the ocean. Solid waste materials are compacted and transported to shore for disposal.

Drilling operations are monitored by the Samedan representative on board. Mud and drill cuttings will be treated to remove oil prior to discharge into the Gulf of Mexico. Drilling mud is sampled and tested for toxicity according to EPA LC50 standards. Items that cannot be treated properly will be transported to shore for disposal.

### (3) Training of Personnel and Procedures

Regular training of operations personnel is a necessary complement to the pollution prevention features in the design of equipment and operations. Operator awareness is achieved by regular training and enforcement of procedures. The drilling unit is inspected daily. A procedure for the reporting of and dealing with oil spills has been established by Samedan in accordance with the requirements of 30 CFR 250 Subpart C, which is incorporated in Samedan's "Oil Spill Contingency Plan".

### C. Safety Features

As is the case with the environmental safeguards, safety aspects must be a combination of design, operator awareness and the availability of suitable emergency equipment. Over the years, the Oil Industry and the Federal Government has issued a considerable number of standards, recommended practices and laws governing minimum requirements. Design of equipment for Samedan's operations requires the application of all available standards in the strictest manner. The most important of these are listed below:

- ...OSHA
- ...OCS Orders of the Minerals Management Service
- ...API Standards and Recommended Practices
- ...ASME Codes
- ...ASTM Standards
- ...ANSI Standards
- ...AISC
- ...American Welding Society
- ...NFPA (NEC)

Safety systems are incorporated in the design of equipment and operational procedures as required by the OCS Orders of the Minerals Management Service. 30 CFR 250 Subpart D specifically provides detailed information on the drilling operations and Samedan adheres strictly to these rules and regulations.

Automatic gas and fire detection systems are incorporated in the unit to alarm operations personnel in case of emergencies. Equipment to deal with emergencies (life vests, rafts, buoys, fire extinguishing equipment, life boats, etc.) is located strategically on the drilling unit. Frequent training sessions are held to keep operations personnel alert and familiar with procedures and operating instructions for equipment.

## EMISSIONS REPORT

SOUTH MARSH ISLAND BLOCK 158

### A. General

Samedan Oil has filed an application for a "Permit to Discharge" in accordance with the requirements of the Environmental Protection Agency.

### B. Drilling Operations

Emissions discharged into the ocean will be primarily drilling fluid, washed well cuttings, cooling water and sewage effluent. All these wastes will be treated prior to discharge into the sea to ensure a minimal impact on the environment. In cases where satisfactory treating cannot be accomplished, wastes will be collected and brought to shore for disposal. The following figures show approximate quantities for wastes in this category:

Drill Cuttings	650 tons per well
Drilling Fluid	7,000 barrels per well
Sanitary/Sewage Effluent	4,000 gallons per day
Cooling Water	1,000,000 gallons per day

Emissions discharged into the air during the drilling phase will be primarily associated with power generation. The following table lists emissions during the drilling operations (based upon Table 3.3.3-1 of EPA Publication AP-42):

#### Emission Factor in g/hp-hr

NO <sub>x</sub>	SO <sub>x</sub>	HC	CO	Particulates
14.0	0.93	1.12	3.03	1.0

Total emissions can be found utilizing the formula presented in EPA Publication PB-272-268:

"Emission Rate = Emission Factor X Total Well Footage X 60  
hp-hr/ft"

Three wells are to be drilled in 1994 with total footage of approximately 10,500'. The following emissions estimate (ton/yr) applies for the drilling of the wells:

NO <sub>x</sub>	SO <sub>x</sub>	HC	CO	Particulates
9.72	.65	.78	2.10	.69



C. Exemption Test

The Rules and Regulations defined in the Federal Register 250.57 of March 7, 1980 require testing against the emission exemption amount as follows:

$$E = 3,400D^{2/3} \text{ for CO}$$

and

$$E = 33.3D \text{ for total suspended particulates}$$

For this location, a distance of 95 miles applies. This makes the exemption amount as follows:

$$E = 70,789.34 \text{ Tons/yr. for CO}$$

and

$$E = 3,164 \text{ Tons/yr. for SO}_x, \text{ NO}_x, \text{ HC and Particulates}$$

The calculated amounts for both CO and the total suspended particulates are below the exemption amount. Therefore, further air quality review is not required for the proposed exploration activities in the lease areas.

D. Transportation

Since transportation requirements are combined for Samedan's operations in the various blocks in the vicinity, it is difficult to quantify the exact contribution to the total emissions as a result of this exploration.

Typical figures for emission from crew boats and supply boats using approximately 1000 gallons of fuel per day are as follows (based on EPA Emission Factors):

	<u>Crew Boats</u>	<u>Supply Boats</u>
...NO	575 lbs/day	270 lbs/day
...SO	35 lbs/day	27 lbs/day
...CO	110 lbs/day	110 lbs/day
...HC	40 lbs/day	50 lbs/day
...Particulates	35 lbs/day	unknown

Typical fuel consumption for helicopters is as follows:

...Small Helicopter	30 gallons per hour flying 10 gallons per landing and take-off cycle
...Large Helicopter	100 gallons per hour flying 25 gallons per landing and take-off cycle
TOTAL	125 gallons

Assuming one landing and take-off cycle per hour of flying, the following emissions would result per hour:

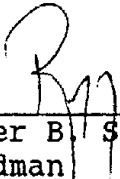
	<u>Small Helicopter</u>	<u>Large Helicopter</u>
...NO <sub>x</sub>	1 lb/hour	3 lbs/hour
...SO <sub>x</sub>	1.5 lbs/hour	5 lbs/hour
...CO	10 lbs/hour	30 lbs/hour
...HC	1 lb/hour	3 lbs/hour
...Particulates	5 lbs/hour	15 lbs/hour

COASTAL ZONE MANAGEMENT  
CONSISTENCY CERTIFICATION  
PLAN OF EXPLORATION  
SOUTH MARSH ISLAND BLOCK 158

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

Arrangements have been made with the State-Times in Baton Rouge, Louisiana and the Daily Iberian in New Iberia, Louisiana to publish a notice of the proposed activities on January 15, 1994.

SAMEDAN OIL CORPORATION

  
\_\_\_\_\_  
Roger B. Souders  
Landman

December 27, 1993

ENVIRONMENTAL REPORT

EXPLORATION PLAN

OCS-G 12898

SOUTH MARSH ISLAND BLOCK 158

SAMEDAN OIL CORPORATION

of Preparation: December 27, 1993

CONTENTS

- A. Title Page
- B. Description of Proposed Action
- C. Description of the Affected Environment
- D. Unavoidable Adverse Environmental Effects of the Proposed Action
- E. Guarantees
- F. Bibliography

B. DESCRIPTION OF PROPOSED ACTION

1. Modes, Routes and Frequency of Support Vessels/Helicopter

Helicopter, work boat and crew boat are the three modes of transportation which will be utilized to take personnel and supplies to the drilling rig area. Samedan will use a shore base in Freshwater City, Louisiana as the base of operation for all three modes of transportation.

A helicopter is expected to make one or two trips to the rig per day during the drilling. During production this frequency is expected to drop to one trip per month.

The route utilized by each mode will normally be in a straight line from the shore base to the platform location. Whenever possible, transportation of supplies and personnel will be combined with requirements of other activities in the area.

2. Onshore Support Base

Samedan plans to use an onshore base in Freshwater City, Louisiana from where transportation of personnel, equipment, and supplies is coordinated, as described in the Plan.

No expansion of this existing base is anticipated as a result of this activity.

3. New Support Facilities

The proposed action will use existing support facilities as described in the Plan. Addition of new support facilities will not result from this action.

4. New/Unusual Technology

No new or unusual technology will be used for the operations under this proposed Plan.

5. Map/Plats/Diagrams

A vicinity map showing location of the proposed action in relationship to the affected states is included with the Plan.

6. Means, Routes, Quantities and Destination of Production

If commercial quantities of hydrocarbons are found it is likely that they would be transported to shore through a connection to one of the nearby pipelines; pursuant to an approved Development Operations Coordination Document.

C. DESCRIPTION OF AFFECTED ENVIRONMENT

1. Physical and Environmental Parameters

a. Commercial Fishing

A representation of the coastal zone and offshore fisheries is shown on the Visuals of the Environmental Impact Statement prepared for OCS Sales 118 and 122. Commercial fishery resources are described in this Environmental Impact Statement.

Landings of all fisheries in the Gulf waters of the U.S. in 1985 accounted for 38% or 2.4 billion pounds and 26% or \$596 million of the total U.S. catch.

The Gulf fishery is dominated by the shell fisheries: shrimp, crabs, and oysters (with smaller amounts of clam and scallops), usually worth three or four times more than the much greater volume of finfish. The shrimp fishery in the Gulf area includes brown, white, and pink shrimp. These are taken almost exclusively by trawl fishing, in depths ranging from 2 to 73 meters. Other shrimp taken commercially are the sea bobs and royal reds.

Commercially important species of shrimp, the most common being brown shrimp and white shrimp, are taken in the vicinity of Vermilion Block 266. Landings of shrimp in the Gulf of Mexico average approximately 230 million pounds per year.

Finfish volume for the Gulf states is dominated by menhaden. It is number one in both volume and value for the Gulf States. Landings in 1985 were 1.9 billion pounds, valued at \$67 million.

On the Gulf coast as a whole, the usual ranking of the most important commercial fishes is as shown below:

By Volume:

Menhaden  
Mullet  
Croaker  
Groupers  
Spanish Mackerel  
Spotted Seatrout  
Red Drum  
Flounders  
Black Drum  
King Whiting  
White Seatrout  
Sheepshead

By Value:

Menhaden  
Red Snapper  
Mullet  
Croaker  
Groupers  
Pompano  
Spanish Mackerel  
Red Drum  
Flounders  
King Mackerel  
Black Drum  
White Seatrout  
Sheepshead

The proposed action will not affect commercial fishing in the area. A detailed discussion of commercial fishing and the impact of oil and gas activities is found in the FEIS for OCS Lease Sales 110 and in the FEIS for Sales 118 and 122.

b. Shipping

There are no fairways, transit zones, or anchorage areas in the vicinity of the proposed action.

c. Small Craft Pleasure Boating, Sport Fishing and Recreation

The proposed activity will take place approximately 98 miles from the shore. Aside from damage caused by oil spills, there is considerable evidence that oil and gas operations have a favorable impact on fishing activities since structures act as breeding grounds and artificial reefs. No long term effect, however, is expected from these exploratory activities. The proposed activity is not expected to positively or negatively affect small craft boating activities or recreational activities.

d. Archaeological Report

No Archaeological Report is required for South Marsh Island Block 158.

e. Ecologically Sensitive Areas

The lease area is not situated near an area of biological significance, as determined by inspection of Visual No. 4 of the Final Environmental Impact Statement for Lease Sales 118 and 122.



f. Existing Pipelines/Cables

Samedan is not aware of any existing pipelines/cables existing on South Marsh Island Block 158.

g. Other Mineral Uses

No other known mineral deposits of commercial importance occur within the lease area.

h. Other Dumping Grounds

No approved ocean dumping sites exist in the vicinity of the lease area.

i. Endangered/Threatened Species

Several federal listed endangered and threatened species inhabit the coastal and offshore area of the Gulf region. Six endangered marine mammals (five whales and the Florida manatee), the key deer, two threatened and three endangered marine turtles, the threatened alligator and endangered crocodile, and seven endangered species of birds were selected as representative of endangered and threatened species that could be affected by offshore or onshore activities resulting from OCS oil and gas development in the Gulf.

No federally listed endangered plant species are known to occur in the Central Gulf area.

The impact producing agents which could affect endangered species in the Central Gulf include OCS-related oil spills and disturbance from onshore construction. It is unlikely that OCS-related oil spills will impact endangered species or their habitat in the Central Gulf due to the low probability that a spill would contact endangered species habitat within ten days of an oil spill. No onshore construction is expected to occur near endangered species habitat as a result of this development. This development is expected to have a very low level of impact on endangered species and no significant effects on their populations or habitats in the Central Gulf.

Due to the location of the proposed action it is unlikely that threatened and endangered species will be affected. A detailed discussion of threatened and endangered species is found in the Final Environmental Impact Statement for the Gulf of Mexico, published by the Minerals Management Service for OCS Lease Sales 118 and 122.

j. Socio-Economic Parameters

As described in Section B.2 of this Environmental Report and in the Plan, no expansion of the existing shore base facility is expected as a result of this action. Therefore, no new employment is expected as a result of the proposed action.

D. UNAVOIDABLE ADVERSE ENVIRONMENTAL EFFECTS

The impacts on the various systems have been discussed in Section C of this Environmental Report. In general, it can be stated that all unavoidable adverse impacts which result from routine operations will be relatively localized and of short duration. These impacts, however, will be followed by unhindered natural recovery within a relatively short time period (EIS Lease Sales 118 and 122.)

These impacts include:

...Temporary reduction in water quality due to discharges during the drilling operations.

...Short term effect and possible killing of source plankton and benthos in the immediate vicinity of the platform.

...Temporary reduction in air quality during the drilling operations.

E. GUARANTEES

Samedan Oil Corporation will guarantee compliance with the following statements in carrying out the proposed activity.

1. The best available and safest technologies will be utilized throughout the project. This includes meeting all applicable requirements for equipment types, general project lay out, safety systems and equipment and monitoring systems.
2. All operations will be covered by a MMS approved Oil Spill Contingency Plan.
3. All applicable Federal, State and Local requirements regarding air emissions and water quality and discharge for the proposed activities, as well as any other permit condition, will be complied with.

F. BIBLIOGRAPHY OF REFERENCES

1. Environmental Impact Statement, EIS prepared for OCS Sale Nos. 72, 74 and 79, visuals and text.
2. Environmental Impact Statement, EIS prepared for OCS Sale No. 110, visuals and text.
3. Environmental Impact Statement, EIS prepared for OCS Sale Nos. 118 and 122, visuals and text.

**SAMEDAN OIL CORPORATION**

350 GLENBOROUGH, SUITE 240  
HOUSTON, TEXAS 77067-3299  
(713) 876-6250

December 27, 1993

Daily Iberian  
P. O. Box 9290  
New Iberia, Louisiana 70562-9290

Attn: Public Notice/Legal Ads Section

PUBLIC NOTICE OF PROPOSED  
ACTIVITIES  
SOUTH MARSH ISLAND BLOCK 158  
OCS-G 12898

Gentlemen:


In accordance with requirements of the U. S. Department of the Interior, Minerals Management Service and the State of Louisiana, please publish the enclosed public notice as a legal ad on or before January 15, 1994.

Please bill Samedan Oil Corporation, Attention: Land Department, at the letterhead address for the cost of publishing this notice.

Should you have any questions, please contact the undersigned at (713) 876-6286.

Very truly yours,

SAMEDAN OIL CORPORATION

  
Roger B. Souders, CPL  
Landman

RBS/nc

Enclosure

"Public Notice of Federal Consistency review of a Proposed Exploration Plan by the Coastal Management Section/Louisiana Department of Natural Resources for the plan's consistency with the Louisiana Coastal Resources Program.

Applicant: Samedan Oil Corporation  
350 Glenborough, Suite 240  
Houston, Texas 77067

Location: South Marsh Island Area, Lease OCS-G 12898  
Block 158  
Lease offering date March 27, 1991

Description: Proposed exploration plans for the above area provide for the exploration for oil and gas. Exploration Activities will include drilling from a jack-up rig and transport of drilling crews and equipment by helicopter and/or cargo vessel from an onshore base located at Freshwater City, 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 Section Office located on the 10th Floor of the State Lands and Natural Resource Building, 625 North 4th Street, Baton Rouge, Louisiana. Office hours: 8:00 AM to 4:30 PM, Monday through Friday. The public is requested to submit comments to the Coastal Management Section, Attention OCS Plans, P. O. Box 44396, Baton Rouge, Louisiana 70804. Comments must be received within 15 days of the date of this notice or 15 days after the Coastal Management Section 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."

**SAMEDAN OIL CORPORATION**

350 GLENBOROUGH, SUITE 240  
HOUSTON, TEXAS 77067-3299  
(713) 876-6250

December 27, 1993

The Morning Advocate  
(State-Times)  
P. O. Box 588  
Baton Rouge, Louisiana 70821-0588

Attn: Ms. Heather Allen

PUBLIC NOTICE OF PROPOSED  
ACTIVITIES  
SOUTH MARSH ISLAND BLOCK 158  
OCS-G 12898

Gentlemen:

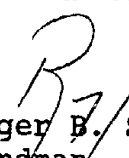
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