In Reply Refer To: MS 5231

October 4, 1995

Chevron U.S.A. Inc.
Attention: Ms. S. M. Bergeron
935 Gravier Street
New Orleans, Louisiana 70112

Gentlemen:

Reference is made to the following plan received July 11, 1995:

Type Plan - Supplemental Plan of Exploration
Lease - OCS-G 6876
Block - 161
Area - Viosca Knoll
Activities Proposed - Well A

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

Your control number is S-3715 and should be referenced in your communication and correspondence concerning this plan.

Sincerely,

(Orig. Sgd.) Kent E. Stauffer

Donald C. Howard
Regional Supervisor
Field Operations

bcc: Lease OCS-G 6876 POD File (MS 5032)
MS 5034 w/public info. copy of the plan
and accomp. info.

DTrocquet:cic:10/04/95:POECOM

NOTED-SCHEXNAILDRE

S3715

Chevron

Chevron U.S.A. Inc.
935 Gravier Street
New Orleans, LA 70112

June 28, 1995

Sandy M. Bergeron
Permit Specialist
(504)592-6635

Regional Supervisor
U.S. Department of the Interior
Minerals Management Service
1201 Elmwood Park Blvd.
New Orleans, LA 70123-2394

Supplemental Plan of Exploration
Lease OCS-G-6876
Viosca Knoll Block 161
Offshore, Alabama

Gentlemen:

Pursuant to 30 CFR 250.34, Chevron USA Inc. submits for approval this Supplemental Plan of Exploration for Viosca Knoll Block 161, Lease OCS-G-6876.

We have enclosed ten (10) copies of the POE, 5 Proprietary and 5 Public Information.

Chevron believes that the structure map submitted with this proposed POE is exempt from disclosure under the Freedom of Information Act, and should therefore not be made available to the public or provided to any affected state or to the executive of any local government. Please call me should you have any questions or need additional information.

Please contact me should you have any questions or need additional information.

Sincerely,

S. M. Bergeron
Environmental and Safety

Enclosure

SUPPLEMENTAL
PLAN OF EXPLORATION

(POE)

CHEVRON USA INC
VIOSCA KNOLL BLOCK 161
(OCS-G-6876)
OFFSHORE, ALABAMA

In compliance with 30 CFR 250.33, the following information is submitted for this proposed Supplemental Plan of Exploration.

1. HISTORY

Viosca Knoll Block 161 is located off the Alabama Coast in the Central Gulf of Mexico. A vicinity map showing the location of the block relative to the Alabama Coast is shown as Attachment #1

2. PROPOSED LOCATION

Chevron wishes to supplement the plan to include the drilling of one (1) well, OCS-G-6876 "A" in Viosca Knoll Block 161. A geophysical vertical seismic survey may be run at total depth in the well. An airgun energy source and an inhole geophone receiver will be utilized. The surface location, proposed bottom-hole location and proposed total depths of the well is as follows. A location plat is included as Attachment #2.

Surface Location:	500' FNL and 7100' FEL of Viosca Knoll Block 161
Proposed Total Depth:	
Water Depth:	115'

3. DRILLING SCHEDULE

WELL	START DATE	DRILLING DAYS	FINISH DATE
OCS-G-6876 "A"	10-01-95	60	11-29-95

4. GEOLOGICAL AND GEOPHYSICAL DATA

A Shallow Hazard and Archaeological Survey was performed by Intersea Research in July of 1984 over Block 161. No prehistoric archaeological sites were identified. Several shallow subsurface channel deposits were mapped, and two potential shallow gas accumulations which could be be drilling hazards were detected. The drill site is located away from channel margins and shallow gas zones as was recommended in the survey report.

Attached is a Structure Map (Attachment #3), Schematic Cross-Section Map (Attachment #4), Bathymetry Map (Attachment #5) and Shallow Drilling Hazard Report (Attachment #6). Attachments 3, 4 and 6 have been eliminated from the Public Information copies of this Plan of Exploration.

5. ONSHORE SUPPORT BASE

Chevron USA Inc. will use an existing onshore facility located in Pascagoula, Mississippi to support the proposed activity. The base serves the following purposes; 1)loading point for tools, equipment and machinery to be delivered to the offshore location; 2) crew change and transportation base; and 3) temporary storage for material and equipment. The base is equipped with the necessary loading docks and cranes for convenient and safe operations and has been used in previous Chevron drilling operations in the area.

6. OIL SPILL CONTINGENCY PLAN

The requirement that Chevron USA Inc. have pollution containment and removal equipment available should be satisfied by Chevron's Oil Spill Contingency Plan Revision approved by the Minerals Management Service on August 13, 1993. Chevron is also a member of Clean Gulf Associates, which maintains standby oil spill containment and cleanup equipment through a contract with Halliburton Services.

To support the proposed activity in Block 161, a Fast Response Unit (FRU) will be directed to any oil spill by Chevron with sufficient personnel, equipment and materials to handle both minor and major spills as deemed necessary:

1.	Procure and boat in the Main Pass Field and deploy to Theodore Base	5 hours
2.	Load CGA Oil Spill Containment Equipment at Venice Base	1 hour
3.	Travel time to lease site	4 - 3/4 hours
4.	Total time to respond to a spill in Block 161	10-3/4 hours

The most current final Minerals Management Service Gulf of Mexico Environmental Impact Statement for Gulf of Mexico identified zones that may be impacted by an oil spill. According to the most recent oil spill launch area map, the probable projected landfall of an oil spill (within 10 days) Gulf of Mexico Sale 142/143 from the Main Pass Area is as follows:

AREA	LAND SEGMENT CONTACT	PERCENT (%)
19	Plaquemines Parish, Louisiana	1
20	St. Bernard, Orleans, St. Charles, St. John, Livingston, Tangipahoa, and St. Tammany Parishes	2
21	Hancock, Harrison & Jackson Parishes	4
22	Mobile, Alabama	5
23	Baldwin, Alabama	3

A copy of the Probability Table (Attachment #7) and Spill Area Map (Attachment #8) is included. If a spill should occur from the proposed locations, Chevron would immediately activate its Oil Spill Response Team, which would determine from current conditions the probable location and time of land fall. Then using the Clean Gulf Manual, Volume II, Louisiana Maps 7 and 8, and Mafla Maps

9 and 10, identify the biologically sensitive areas and determine the appropriate response mode. Upon activation of the proper equipment, Chevron would deploy said equipment as suggested by Volume II, Section VI of the Clean Gulf Manual or as appropriate to effectively respond to the site specific circumstances.

7. DESCRIPTION OF DRILLING RIG AND POLLUTION PREVENTION EQUIPMENT

Chevron USA Inc. plans to use Dual Drilling Company's jack-up drilling rig "Dual Rig 91" or a similar type rig to drill the well in Viosca Knoll Block 161. The drilling unit utilizes drip pans and drain lines to a sump system to collect all liquid machinery wastes. These pollutants are periodically collected and transported to shore for disposal. The rig will be monitored daily by a Chevron drilling representative and any waste oil or fuel resulting in pollution of the Gulf Waters will be reported to the representative in charge for immediate isolation and correction of the problem. Any spill will be reported to governmental agencies. Chevron will comply with all MMS Regulations during the course of the activities. The Oil Spill Contingency Plan is discussed in Section 6. Safety features and environmental safeguards are discussed in Section 14. A description of the drilling rig "Dual Rig 91" is given in Appendix A.

8. DISCHARGES

All drilling discharges are regulated by the General NPDES Permit GMG 290000 for the Gulf of Mexico. They include the following type and estimated volumes.

1. Drilling Fluids

Although drilling mud is generally recycled, excess mud is sometimes discharged overboard. The volume and rate of discharge depend upon downhole conditions. Volume is estimated from either pump rate and length of time, or from tank capacity if a bulk discharge occurs. We estimate approximately 17,000 barrels of mud will be discharged for the well. In no case will the discharge rate exceed 1,000 barrels per hour. Constituents of the mud are described in the list of mud additives.

2. Drill Cuttings

The drill cuttings are separated from the mud through the use of solids control equipment. Cuttings discharge rates and volumes will vary during the duration of the wells, and are measured by estimating the volume of hole drilled. Constituents of drill cuttings include sand, shale and limestone from the wellbore. The volume of drill cuttings discharged is estimated 3,000 barrels for the well.

3. Excess Cement

Occasionally, excess slurry will be generated while cementing casing strings. The volume of cement discharges is calculated by subtracting the volume inside the well from the total volume pumped downhole.

4. Well Treatment, Completion or Workover Fluids

These fluids (primarily seawater that has been circulated downhole) are sometimes discharged when in excess. The volume is calculated as for excess cement.

5. Sanitary and Domestic Waste

The rate of discharge from the marine sanitation unit is approximately 25 gallons/man/day. An equal amount of domestic waste (from sinks, galleys, showers and laundries) is normally discharged.

6. Deck Drainage

Consisting of rain water and wash water with no free oil, the volume of deck drainage is calculated by multiplying average rainfall by exposed deck area.

7. Uncontaminated Water

This includes non-contact cooling water, discharges from the firewater system, and freshwater maker blowdown. Ballast water, which is sometimes used to maintain the stability of a drilling rig, might also be discharged. Volumes and rates of discharge are not normally monitored.

8. Produced Water

This discharge would occur only in the instance that a production test is conducted after drilling the wells. The test would typically last 24 hours and much of the produced water would be vaporized as the hydrocarbon is burned. Excess water would be processed in a gravity separator and discharged in accordance with the limitations and conditions of the applicable NPDES Discharge Permit.

Wastes which cannot be discharged overboard will be transported to an appropriate treatment or disposal site, in accordance with all Federal, State and Local rules and regulations.

9. MUD ADDITIVES

Chevron will maintain strict compliance with the EPA General NPDES Permit GMG 290000 during drilling activities. A list of mud additives proposed for the activities is included in this document as Attachment #9.

10. HYDROGEN-SULFIDE (H_2S)

Chevron will be in complete compliance with the requirements of 30 CFR 250.67 regarding drilling operations in the Gulf of Mexico in zones known to contain H2S. Based on the drilling of a previous well in the area, the presence of H2S has been confirmed. A site specific H2S Contingency Plan will be submitted concurrently with the Application for Permit to Drill the proposed well.

11. AIR EMISSIONS

As per Air Quality Regulations, tables in the attached Air Emissions Report (Appendix B) list the projected emissions during the proposed activity. Emissions from the facility area are estimated using the EPA Publications referenced in the tables. All calculations are based on worst possible situations. Actual emissions are expected to be considerably below those estimated here.

12. ENVIRONMENTAL REPORT

An Environmental Report accompanies this Supplemental POE as a separate document. The report has been prepared with consideration for the policy aims and guidelines of the Alabama Coastal Zone Management Program and the Minerals Management Service and is intended to comply with the regulations in 30 CFR 250, Notice to Lessees and Operators, and all federal and state environmental documents.

13. CZM CONSISTENCY

The Coastal Zone Management Consistency Certification is included in this document as Attachment #10. To the best of our knowledge, the set of findings included in the Environmental Report and Plan of Exploration indicate that the proposed activity, their associated facilities and effects, are consistent, comply with and will be conducted in a manner consistent with the provisions and guidelines of the Alabama and Mississippi's Coastal Management Programs.

14. SAFETY FEATURES AND ENVIRONMENTAL SAFEGUARDS

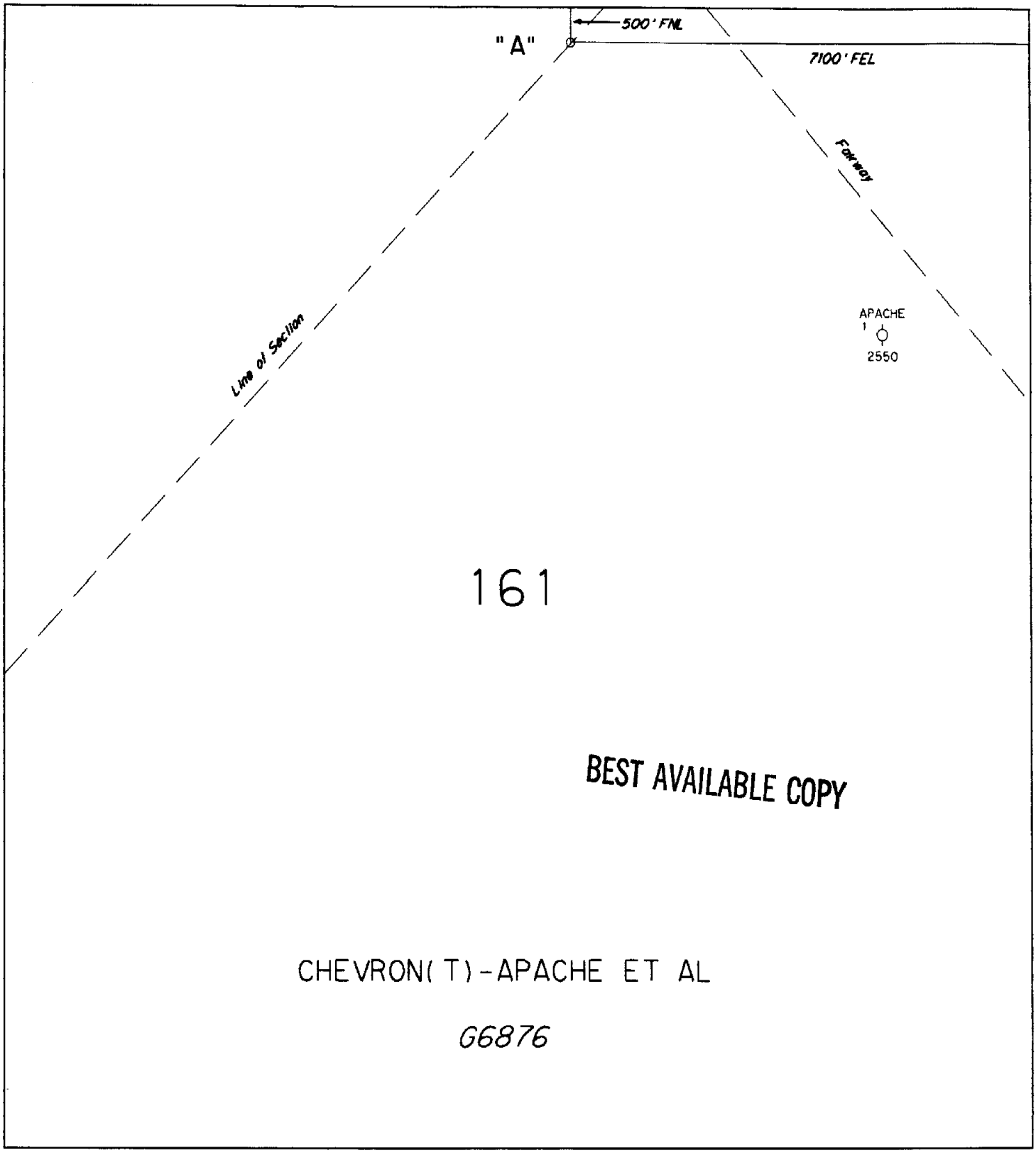
Chevron will comply with all pertinent regulations in 30 CFR 250.34, NTL's, and all federal and state documents to ensure that all of the proposed activities are safe and that there is minimal impact on the environment. Chevron will maintain full compliance with the EPA NPDES Permit and lease agreement during all activities in Viosca Knoll Block 161.

15. BOND REQUIREMENTS

The activity proposed in this DOCD is covered by Chevron's $300,000.00 area wide bond as supplemented by a $2,700,000.00 rider filed with the MMS on November 19, 1993 pursuant to direction from the MMS Office of Adjudication.

16. LEASE STIPULATIONS

Chevron acknowledges that OCS-G-6876 contains Lease Stipulation #1, Cultural Resource, #3 Live Bottom and #4 Military Warning Area W-453 respectively. All operations shall be conducted in compliance with said stipulations.



BEST AVAILABLE COPY

CHEVRON(T)-APACHE ET AL

G6876

ALL COORDINATES REFER TO THE UTM COORDINATE SYSTEM (ZONE 16) NAD27.

ATTACHMENT #2

/plot/vk6876o.loc2

Chevron

Gulf of Mexico Business Unit

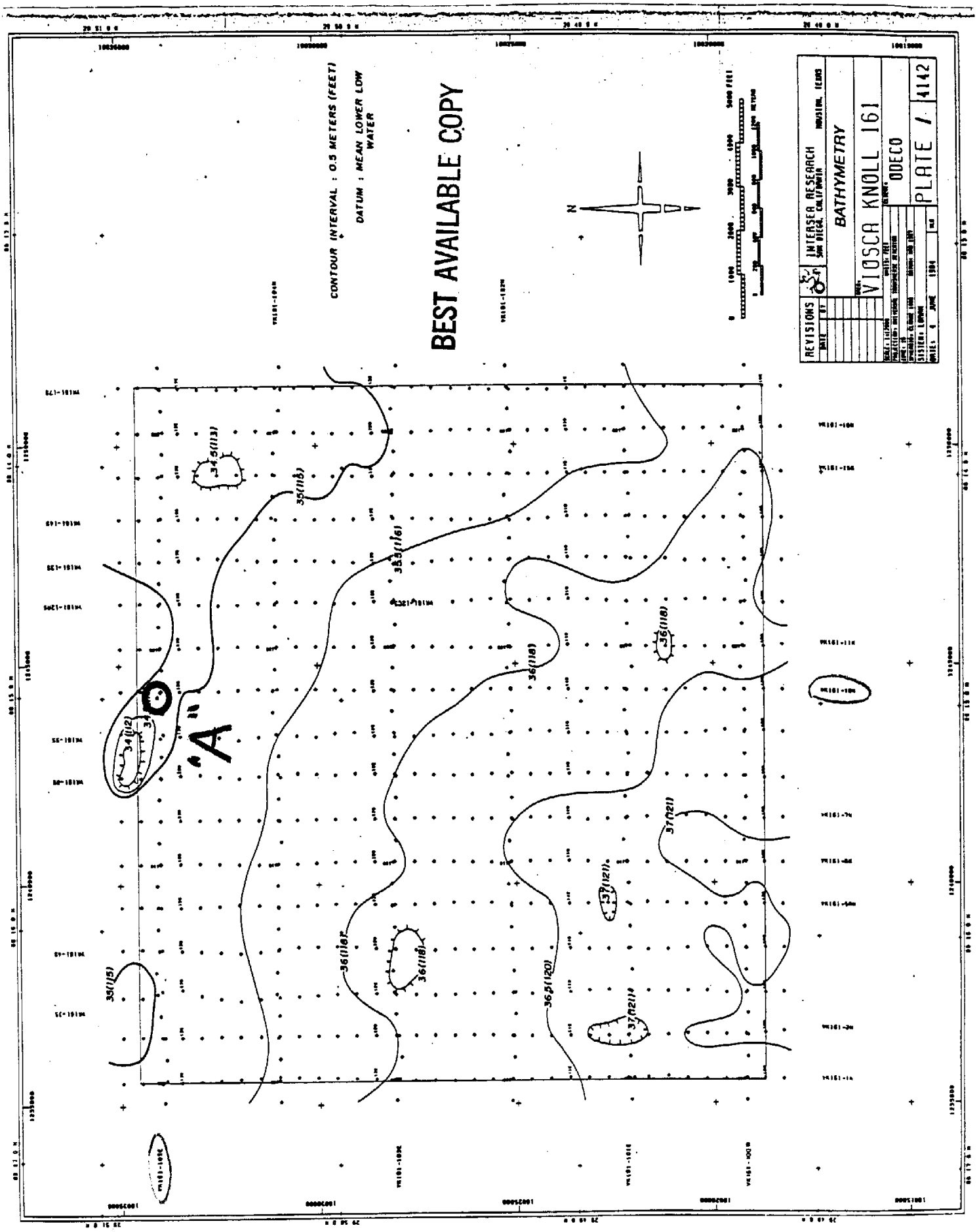
VIOSCA KNOLL BLOCK 161

Offshore Alabama

LOCATION PLAT

OCSG-6876 "A"

SCALE: 1" = 2000' DATE: 06-08-95



ATTACHMENT #5

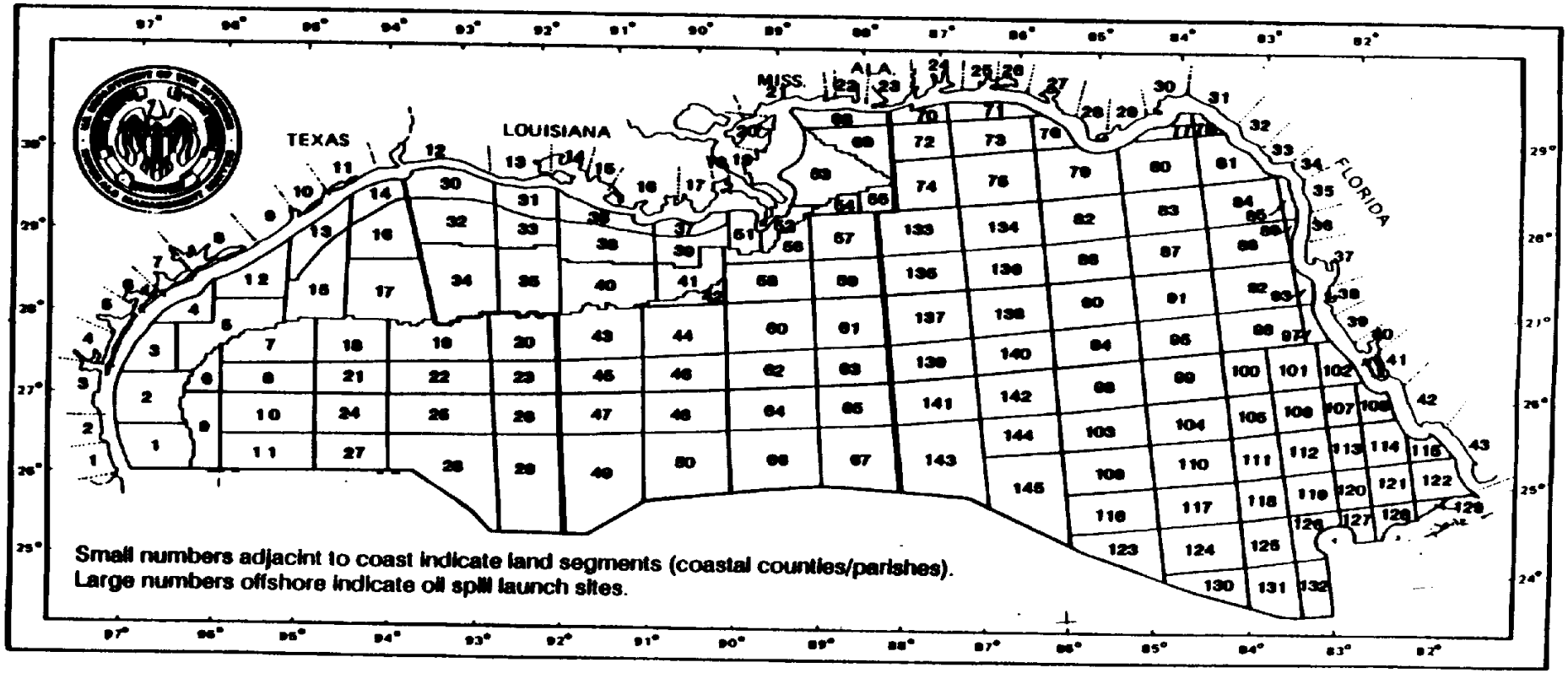


Figure IV-3: Land segments and launch sites used in OSRA.

Table (Continued) -- Probabilities (expressed as percent chance) that an oil spill starting at a particular location will contact a certain land segment within 10 days, Gulf of Mexico Sale 139/141.

Land Segment	Hypothetical Spill Location																								
	C51	C52	C53	C54	C55	C56	C57	C58	C59	C60	C61	C62	C63	C64	C65	C66	C67	C68	C69	E70	E71	E72	E73	E74	E75
17	3	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
18	6	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
19	34	65	32	5	n	29	1	12	1	2	n	n	n	n	n	n	n	n	1	n	n	n	n	n	n
20	n	n	10	1	n	n	n	n	n	n	n	n	n	n	n	n	n	4	2	n	n	n	n	n	n
21	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	23	4	n	n	n	n	n	n
22	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	17	5	1	n	n	n	n	n
23	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	9	3	17	n	3	n	n	n
24	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	25	7	3	n	n	n
25	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	1	11	n	1	n	n
26	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	10	n	1	n	n
27	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	5	n	1	n	n

Land Segment	Hypothetical Spill Location																								
	E76	E77	E78	E79	E80	E81	E82	E83	E84	E85	E86	E87	E88	E89	E90	E91	E92	E93	E94	E95	E96	E97	E98	E99	E100
27	9	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
28	6	n	n	1	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
29	2	22	2	3	3	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
30	n	11	9	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
31	n	1	17	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
32	n	n	4	n	n	4	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
33	n	n	n	n	n	2	n	n	n	4	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
34	n	n	n	n	n	n	n	n	n	5	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
35	n	n	n	n	n	n	n	n	n	5	n	n	n	1	n	n	n	n	n	n	n	n	n	n	n
36	n	n	n	n	n	n	n	n	n	1	n	n	n	5	n	n	n	n	n	n	n	n	n	n	n
37	n	n	n	n	n	n	n	n	n	n	n	n	n	3	n	n	n	7	n	n	n	n	n	n	n
38	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	1	n	n	n	1	n	n	n
39	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	3	n	n	n

Notes: n = less than 0.5 percent.
Rows with all values less than 0.5 percent are not shown.

ATTACHMENT #8

DRILLING FLUIDS COMPOSITION

Fresh Water, Salt Water, Bentonite ,Kaolin , Sepiolite,or Attapulgite Clays, Barite, & Chemicals

Various amoumts and concentrations of salt and fresh waters, clays, barites, and chemicals may be used.

CHEMICALS & ADDITIVES

Acrylamide - AMPS (Alkali Metal Salt of Acrylamido Alkyl Sulfonated Acid) Copolymer
Asphalt-Polypropiene Glycol Blend
Calcium Lignosulfonate
Calcium Sulfate
Carboxy Methylcellulose
Caustic Potash (Potassium Hydroxide)
Caustic Soda (Sodium Hydroxide)
Causticized Leonardite
Chrome Lignosulfonate
Corn Starch
Defoamer (Non-Ionic Surfactant)
Fatty Acid Salt in Alkoxylated Alcohol Dispersion
Gilsonite (Asphaltite)
Glass or Plastic Beads
Hematite
High Molecular Weight Glycol
Lignite (Leonardite)
Lignite-Sulfonated Apyrene-Maleic Anhydride Copolymer
Lime (Calcium Hydroxide)
Modified Corn Starch
Modified HEC
Partially Hydrollyzed Polyacrylamide
Polyacrylamides & Vinyl Sulfonated-Vinylamide Copolymers
Polyanionic Cellulose
Potassium Chloride
Potassium Lignite
Potato Starch
Quartenary Amine Salt (Cationic Polymer Suspension)
Salt of Carboxylic Acid Polymer
Soda Ash (Sodium Carbonate Anhydrous)
Sodium Acid Pyrophosphate (SAAP)
Sodium Bicarbonate
Sodium Carboxymethyl Cellulose
Sodium Chloride
Sodium Polyacrylate Copolymer
Sulfonated Asphalt
Surfactant Blends for Wetting Gilsonite
Xantham Gum
Zinc Oxide

LOST CIRCULATION MATERIALS

Mica
Walnut Shells
Cellophane Flakes
Fiber Products
Thermoset Plastic Laminate

STUCK PIPE

Lime - Calcium Hydroxide
Sodium Chloride
Polyalphaolephin & Food Grade Emulsifiers
Carbonous Grind (Black Powder)

OIL BASED MUD

If the use of oil-based mud is indicated in the attached Drilling Program, or by subsequent Sundry Notice, there will be no discharge of mud or cuttings overboard.

All mud and cuttings and residue will be disposed of at an approved 29-B Facility.

COASTAL ZONE MANAGEMENT

CONSISTENCY CERTIFICATION

TYPE OF PLAN: PLAN OF EXPLORATION (POE)

AREA AND BLOCK: VIOSCA KNOLL BLOCK 161

LEASE NUMBER: OCS-G-6876

The proposed activity described in this Plan is in compliance with Alabama and Mississippi's approved Coastal Management Programs and will be conducted in a manner consistent with such program.

CHEVRON USA INC.
LESSEE AND OPERATOR

D. L. Farr

June 28, 1995

APPENDIX "A"
RIG SPECIFICATIONS
"DUAL RIG 91"

DUA

DUAL RIG 91
F&G L780 MOD II
TECHNICAL SPECIFICATIONS

Designed by Friede & Goldman, Ltd. and constructed by Ingalls Shipbuilding in 1982 in accordance with the rules of the American Bureau of Shipping. The unit is ABS classed as a Maltese Cross A-1 self-elevating Mobile Drilling Unit. The rig is rated for water depths to 300 feet and drilling depths to 25,000 feet.

PRINCIPAL CHARACTERISTICS

A. Dimensions and Specifics

Length Overall	180'
Breadth	175'
Hull depth	25'
Leg length	395'
Spud Tank Diameter	39'8"
Helideck Diameter	62'0"

(Designed for Sikorsky S61 Helicopter)

B. Hull Draft and Displacement

Lightship Draft - Minimum	10' - 10-1/4"
Loadline Draft - Maximum	14' - 11-3/4"
Lightship Displacement	13,345 kips
Loadline Displacement	18,627 kips

C. Design Criteria

Water Depth	Wave height	Wind Velocity
150'	59'	100 knots
200'	57'	100 knots
250'	54'	100 knots
300'	50'	100 knots

DUAL RIG 91

LIST OF EQUIPMENT

A. Drawworks - Continental Emsco C-2 type II, nominal depth rating 24,000 ft., driven by two (2) 900 MB DC electric motors rated 1,000 HP each, with Elmagco Model 7838 Eddy Current Auxiliary Brake.

B. Mud Pumps - Two (2) Continental Emsco FB 1600 triplex pumps, rated 1,600 HP input, driven by two (2) 900 MB DC electric motors, with 5,000 psi fluid end, and 7" liners.

C. Auxiliary Pumps - Six (6) Mission Magnum 5 x 6 centrifugal pumps for charging, mixing and solids control.

D. Derrick - Continental Emsco Model 20RD, 147' x 30' base, with a 1,400,000 lb. gross nominal rating, designed for 100mph wind with full pipe setback.

E. Substructure - 50' x 40' x 25' substructure, with a 10' x 40' rig floor.

F. Hoisting Equipment - Continental Emsco RA 52-6 Traveling Block, 500 ton, with six 52" diameter sheaves grooved for 1-1/2" drill line.

Continental Emsco Ra-52-7 Crown Block, 500 ton rating with seven 52" diameter sheaves grooved for 1-1/2" drill line.

B-J 5750 Dynaplex Hook with positioner, 750 ton.

G. Rotary - Independent Rotary Drive, Continental Emsco Model T-3750, 37-1/2" Clear opening with one (1) 900 MB DC electric motor.

H. Power - Three (3) EMD MD12E8 Diesel Engines coupled KATO generators 600 VAC, 1,050 ABS rating. 1650 hp max.

Den-con 2700-3 Master Bushing and VARCO 27 HDP, 5-1/4" API Kelly Bushing.

One (1) Hex Kelly - 4-1/4" x 2-13/16" ID, 40' long.

I. Air Compressors - Two (2) 100 HP Rotary Compressors, Ingersoll Rand, each rated 400 CFM at 125 psi.

One (1) Refrigerated Air Dryer, Exall, 800 CFM.

One (1) Cold-Start Compressor, Ingersoll Rand, 45 CFM, with Lister Diesel Engine.

One (1) 11 BPD, 45 CFM Cold-Start Compressor. Reserved for Rig Floor emergencies.

J. BOP and Controls - Diverter Assembly, consisting of:

One (1) NL Shaffer, 21-1/4" Spherical Preventer, 2000 psi WP, H2S service.

One (1) Diverter Spool 21-1/4", H2S service.

One (1) 12" Diverter with two (2) 12" WKM remote operated valves.

One (1) Drilling Spool with two (2) 3-1/16" 10,000# flanged outlets.

One (1) Cameron Type "D" 13-5/8" Spherical Preventer, 5,000# WP with 5,000# WP studded top and 10,000 WP hub bottom connection, H2S service.

Two (2) Cameron Type "U" 13-5/8" Double, ram preventers, 10,000 psi WP with four (4) 3-1/16" 10,000 psi side outlets, three (3) sets of 5" rams and one (1) set of blind rams.

Hubbed top and bottom, H2S service.

One (1) Choke Manifold, 10,000# WP, 3-1/16" valves, with two (2) adjustable chokes, provision for super-choke, H2S service.

BOP Control Unit, Ross Hill Controls Model C180-2E10-2AG, twelve (12) 15 gal. accumulators, two (2) GW35 air pumps, two (2) 20 HP triplex pumps, 374 gal. reservoir, and eight (8) station control manifold with remote electric operated station.

One (1) Gray Inside BOP, 5" X-Hole connections.

Two (2) Hydril 4-1/2" Kellyguards, 10,000# WP, 5" X-Hole connections

One (1) Omsco 5-1/4" Kelly Cock, 5,000# WP, 6-5/8" API Reg. L.H. Connections.

K. Solids Control - Two (2) Derrick Flo-Line Cleaners shale shakers.

One (1) Brandt Dual Mud Cleaner and Desilter with sixteen (16) 4" cones.

One (1) Brandt SR-8-6 Desander with eight (8) 6" cones.

Three (3) Brandt Mud Agitators, 20HP, 1200 rpm.

Two (2) Mud Gas Separators, 30" I.D.

One (1) Degasser Unit, Wellco,, Model 6200.

One (1) Shear Gun per pit.

Seven (7) 3" Demco Mud Guns.

Two (2) Mission Mud Hoppers.

L. Drilling Instrumentation - Indicators and/or recorders for:

String Weight, R.O.P., Pump Pressure and S.P.M., rotary RPM and Torque, Tong Torque, Pit Volume Totalizer with Gain Loss Alarm and Flow Show.

M. Drill String - 8,000' 5" OD Grade "E" Drill Pipe with 5" XH Connections.

7,000' 5" OD Grade "G" Drill Pipe with 5" XH Connections.

Twenty (20) joints 5" OD Hevi-Wate Drill Pipe with 5" X-Hole Connections.

Six (6) 6-1/4" to 6-1/2" OD Drill Collars with 4-1/2" H-90 Connections.

All necessary X-Over, Kelly, and Bit Subs for Contractor's Drill String.

N. Pipe Handling Equipment - One (1) EZ torque Unit for make up and break out of BHA.

One (1) Foster Model 77 Kelly Spinner, Elevators and Slips for drill collars and 5" drill pipe.

One (1) Pipe Spinner, Weatherford Lamb Spinner Hawk.

Rotary Tongs, Type DB, 3-1/2" - 17".

O. Wireline Unit - Mathey Surveyor Wireline Unit with 25,000' of .092" wireline.

P. Lifesaving Gear - Two (2) Whittaker 50-man survival capsules and all USCG required life and work vests, ring buoys, smoke and lighted signals.

Q. Cargo Gear - Two (2) FMC Link Belt, ABS/API-218A. Load rating 43 tons at 25' radius.

R. Communications - One (1) SSB Transceiver with 1000 watt linear amplifier.

One (1) VHF Aircraft Transceiver.

One (1) Multi-station Gaitronics Telephone and PA system.

DUAL DRILLING COMPANY

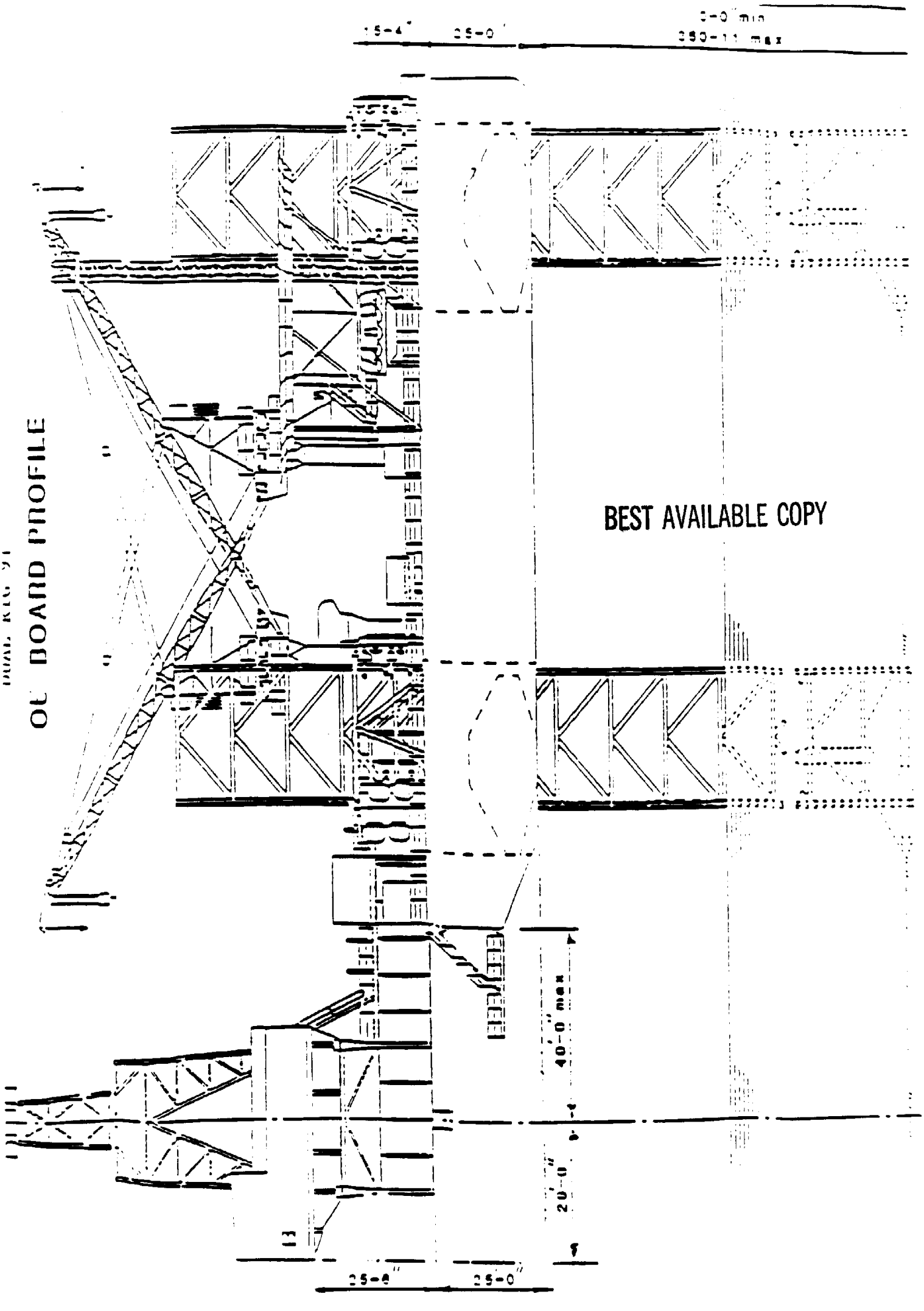
CREW COMPLEMENT

DUAL RIG 91

FOR

CHEVRON COMPANY, U.S.A.

POSITION	NUMBER ON BOARD
TOOLPUSHER	2
DRILLER	2
DERRICKMAN	2
ROUGHNECK	6
MOTORMAN	2
MECHANIC	1
ELECTRICIAN	1
CRANE OPERATOR	2
ROUSTABOUT	6
WELDER	1
SAFETY MAN	1
TOTAL	26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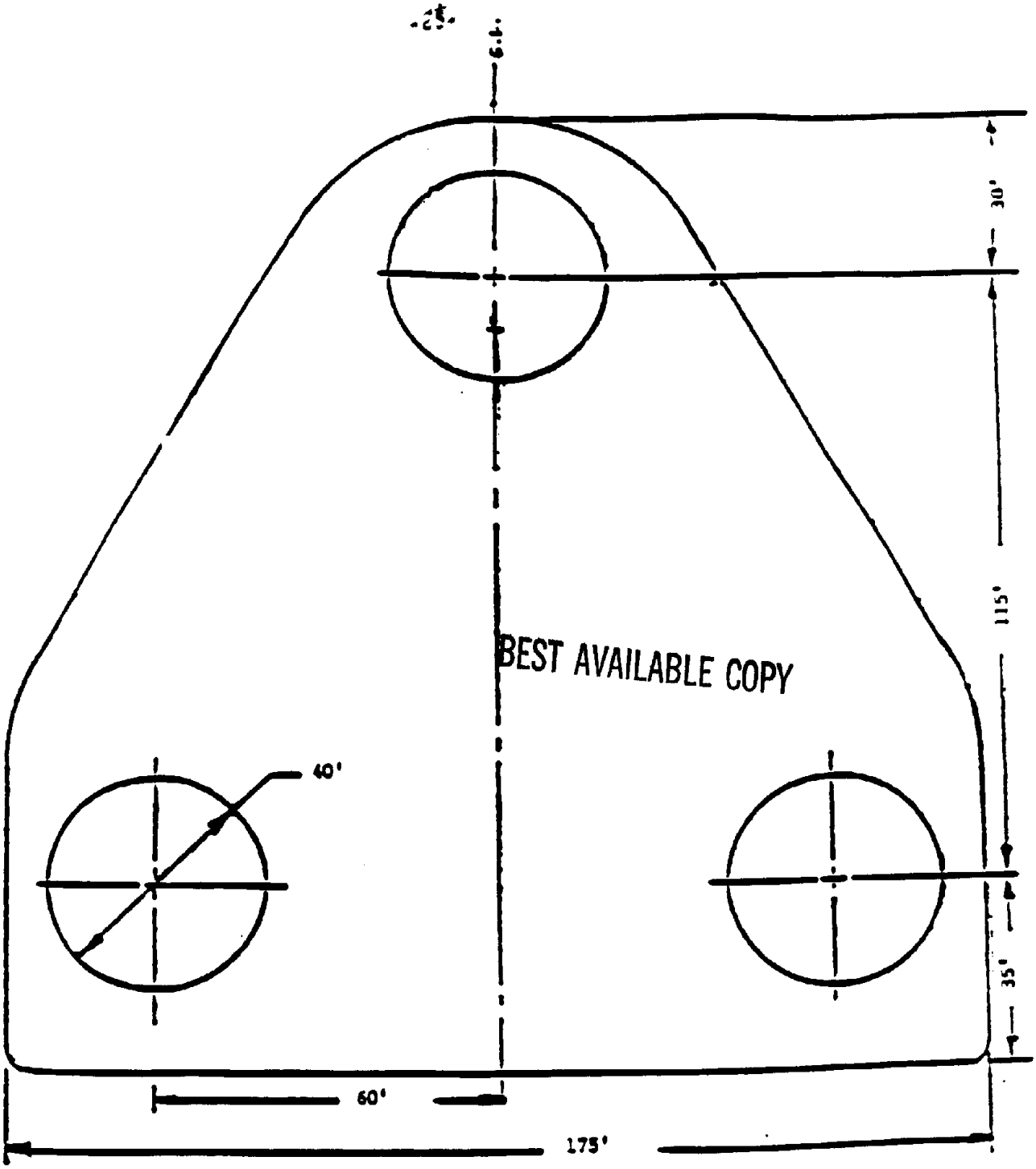
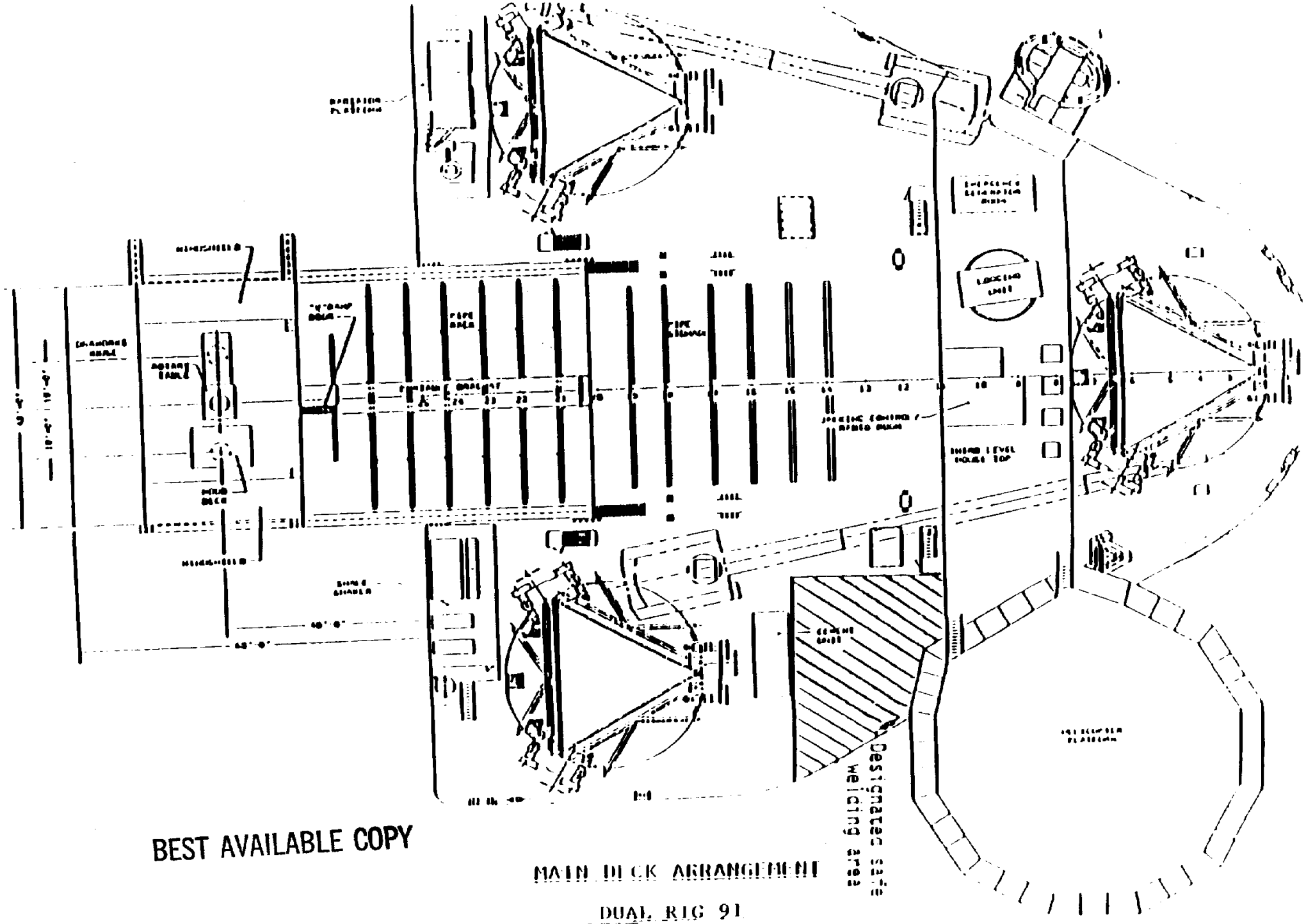


DUAL RIG 91

FRIEDE & GOLDMAN L780 MOD II

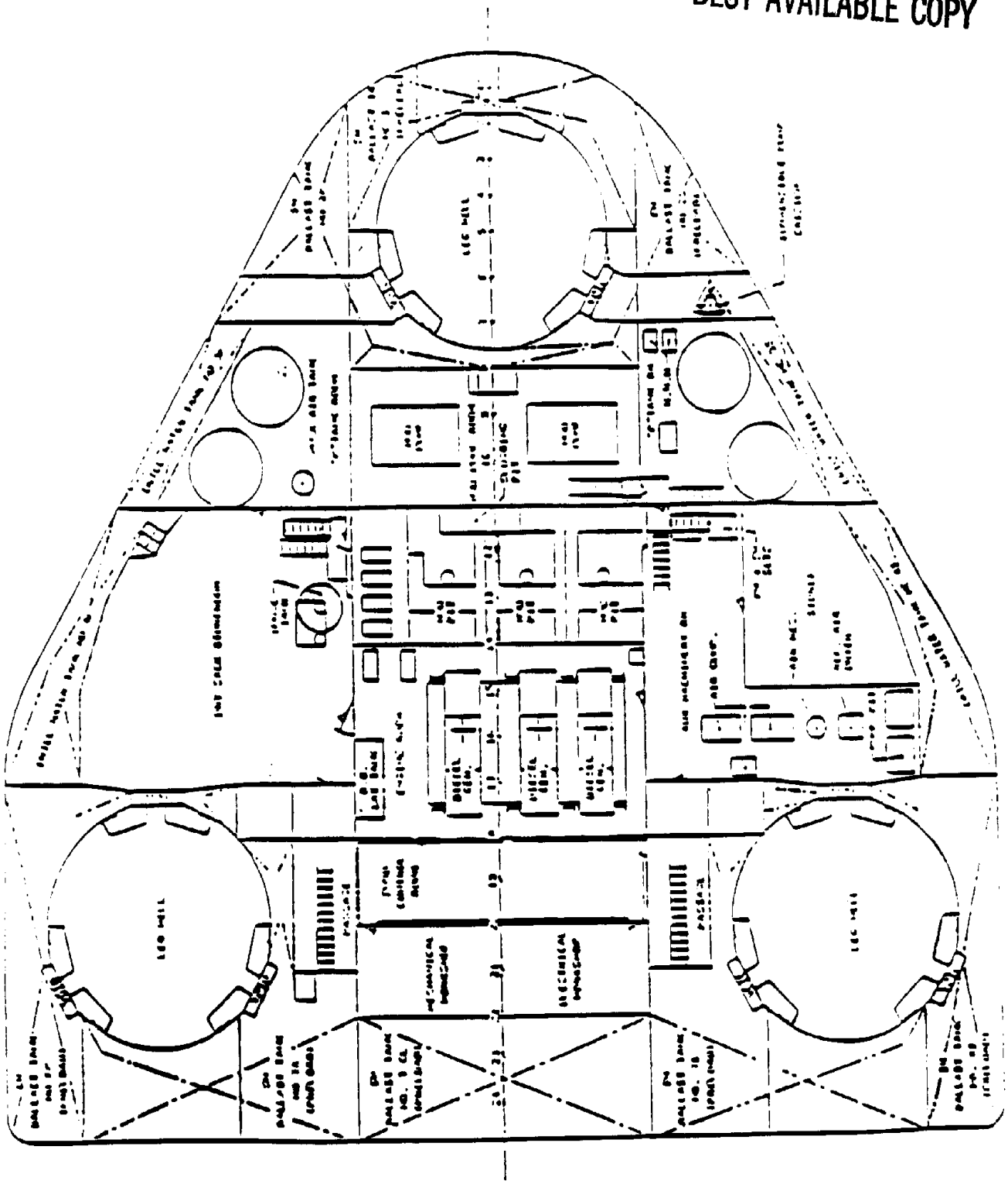


MAIN DECK ARRANGEMENT

DUAL RIG 91

DUAL RIG 91

MACHINERY DECK



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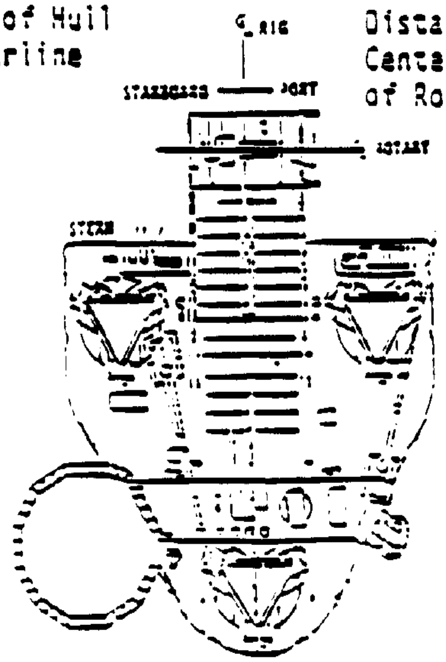
DUAL RIG 91

CANTILEVER BEAM LOAD CHART

300	385	470	555	640	725	640	555	470	385	300	40
440	519	598	677	756	835	756	677	598	519	440	38
580	653	726	799	872	945	872	799	726	653	580	36
720	776	832	888	944	1000	944	888	832	776	720	34
800	850	900	950	1000	1000	1000	950	900	850	800	32
900	933	967	1000	1000	1000	1000	1000	967	933	900	30
1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	28
1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	26
1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	25
1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	24
1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	22
1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	20
1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18
10.0	8.0	6.0	4.0	2.0	0.0	2.0	4.0	6.0	8.0	10.0	

Distance Starboard of Hull Centerline to Centerline of Rotary (feet)

Distance Port of Hull Centerline to Centerline of Rotary (feet)



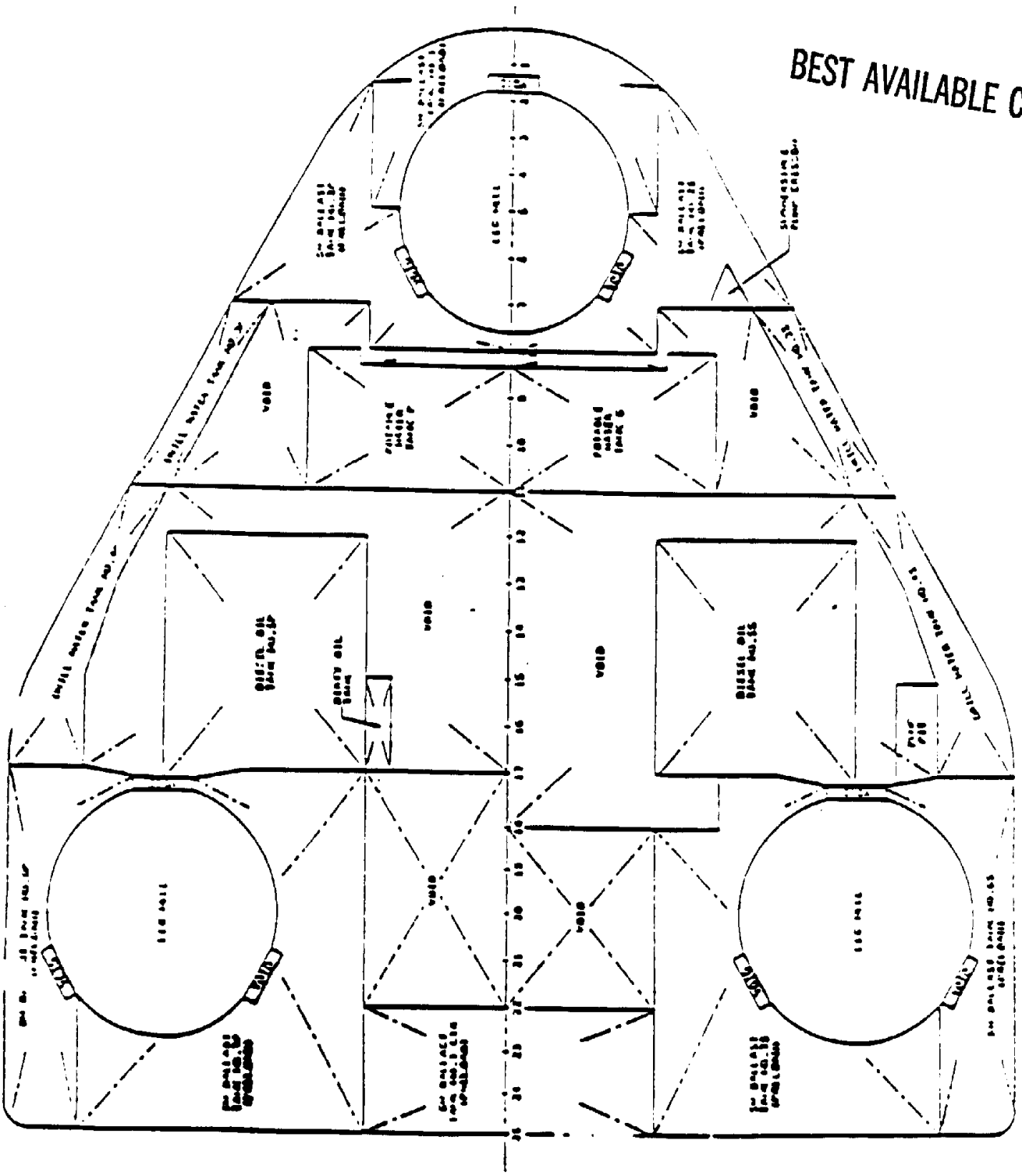
Weight is the combine allowable hook, rotary and setback (kips).

Maximum allowable individual loads as follows:

- o Hook 1000 kips
- o Rotary 1000 kips
- o Setback 450 kips

DUAL RIG P1

INNERBOTTOM TANK ARRANGEMENT



APPENDIX "B"
AIR EMISSIONS REPORT

COMPANY	CHEVRON USA INC.
AREA	VIOSCA KNOLL
BLOCK	161
LEASE	OCS-G-6876
PLATFORM	
WELL	"A"
LATITUDE	
LONGITUDE	
COMPANY CONTACT	SANDY M. BERGERON
TELEPHONE NO.	(504)592-6635
REMARKS	SUPPLEMENTAL POE

AIR EMISSION CALCULATIONS

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL	LATITUDE	LONGITUDE	CONTACT	PHONE	REMARKS
CHEVRON USA INC.	VIOSCA KNOLL	161	OCS-G-6676		"A"			SANDY M. BERGERON	(504)592-6635	SUPPLEMENTAL POE

OPERATIONS	EQUIPMENT		MAX. FUEL	ACT. FUEL	RUN TIME		POUNDS PER HOUR					TONS PER YEAR				
	Diesel Engines	HP	GAL/HR	GAL/D												
	Nat. Gas Engines	HP	SCF/HR	SCF/D												
	Burners	MMBTU/HR	SCF/HR	SCF/D	HR/D	DAYS	TSP	SOx	NOx	VOC	CO	TSP	SOx	NOx	VOC	CO
DRILLING	PRIME MOVER>600hp diesel	1650	79.695	1912.68	24	60	0.87	5.42	25.44	1.20	8.72	0.63	3.90	18.32	0.86	6.28
	PRIME MOVER>600hp diesel	1650	79.695	1912.68	12	60	0.87	5.42	25.44	1.20	8.72	0.31	1.95	9.16	0.43	3.14
	PRIME MOVER>600hp diesel	1650	79.695	1912.68	12	60	0.87	5.42	25.44	1.20	8.72	0.31	1.95	9.16	0.43	3.14
	AUXILIARY EQUIP<600hp diesel	190	9.177	220.25	1	60	0.42	0.39	5.86	0.47	1.27	0.01	0.01	0.18	0.01	0.04
	VESSELS>600hp diesel-Crew	1500	72.45	1738.80	4	60	0.79	4.92	23.13	1.09	7.93	0.10	0.59	2.78	0.13	0.95
	VESSELS>600hp diesel-Supply	2000	96.6	2318.40	6	25	1.06	6.56	30.84	1.45	10.57	0.08	0.49	2.31	0.11	0.79
PIPELINE	PIPELINE LAY BARGE diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INSTALLATION	SUPPORT VESSEL diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	PIPELINE BURY BARGE diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SUPPORT VESSEL diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FACILITY	DERRICK BARGE diesel	5000	241.5	5796.00	24	3	2.64	16.41	77.09	3.63	26.43	0.10	0.59	2.78	0.13	0.95
INSTALLATION	MATERIAL TUG diesel	2500	120.75	2898.00	12	3	1.32	8.20	38.55	1.82	13.22	0.02	0.15	0.69	0.03	0.24
PRODUCTION	RECIP.<600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	RECIP.>600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SUPPORT VESSEL diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	TURBINE nat gas	0	0	0.00	0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	RECIP.2 cycle lean nat gas	0	0	0.00	0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	RECIP.4 cycle lean nat gas	0	0	0.00	0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	RECIP.4 cycle rich nat gas	0	0	0.00	0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	BURNER nat gas	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	MISC.	BPD	SCF/HR	COUNT												
	TANK-	0			0	0				0.00					0.00	
	FLARE-		0		0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	PROCESS VENT-		0		0	0				0.00					0.00	
	FUGITIVES-			0.0		0				0.00					0.00	
	GLYCOL STILL VENT-		0		0	0				0.00					0.00	
DRILLING	OIL BURN	0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WELL TEST	GAS FLARE		264000		13	7		451.89	18.85	15.92	102.56		20.56	0.86	0.72	4.67
1995	YEAR TOTAL						**8.85**	**504.63**	**270.63**	**27.98**	**188.15**	**1.56**	**30.19**	**46.23**	**2.87**	**20.20**
EXEMPTION CALCULATION	DISTANCE FROM LAND IN MILES											**882.45**	**882.45**	**882.45**	**882.45**	**30552.99**
	26.5															

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AIR EMISSION CALCULATIONS

Fuel Usage Conversion Factors	Natural Gas Turbines		Natural Gas Engines		Diesel Recip. Engine		REF.	DATE
	SCF/hp-hr	9.524	SCF/hp-hr	7.143	GAL/hp-hr	0.0483	AP42 3.2-1	4/76 & 8/84

Equipment/Emission Factors	units	TSP	SOx	NOx	VOC	CO	REF.	DATE
NG Turbines	gms/hp-hr		0.00247	1.3	0.01	0.83	AP42 3.2-2	4/93
NG 2-cycle lean	gms/hp-hr		0.00185	11	0.43	1.5	AP42 3.2-2	4/93
NG 4-cycle lean	gms/hp-hr		0.00185	12	0.72	1.6	AP42 3.2-2	4/93
NG 4-cycle rich	gms/hp-hr		0.00185	10	0.14	8.6	AP42 3.2-2	4/93
Diesel Recip. < 600 hp.	gms/hp-hr	1	0.931	14	1.12	3.03	AP42 3.3-1	4/93
Diesel Recip. > 600 hp.	gms/hp-hr	0.24	1.49	7	0.33	2.4	AP42 3.4-1	4/93
NG Heaters/Boilers/Burners	lbs/mmscf	5	0.6	140	2.8	35	AP42 1.4-1/2/3	4/93
NG Flares	lbs/mmscf		1711.7	71.4	60.3	388.5	AP42 11.5-1	9/91
Liquid Flaring	lbs/bbl	0.42	6.6	2.3	0.01	0.21	AP42 1.3-1	4/93
Tank Vapors	lbs/bbl				0.03		E&P Forum	1/93
Fugitives	lbs/hr/comp.				0.000025		API Study	12/93
Glycol Dehydrator Vent	lbs/mmscf				6.6		La. DEQ	1991
Gas Venting	lbs/scf				0.0034			

ENVIRONMENTAL REPORT

FOR

VIOSCA KNOLL BLOCK 161

OCS-G 6876

Gulf of Mexico
Offshore, Alabama

CHEVRON USA, INC.

935 Gravier St.
New Orleans, Louisiana 70112

JUNE 1995

Prepared By:

C. H. Fenstermaker & Associates, Inc.
Civil Engineers, Environmental Consultants & Land Surveyors
135 Regency Square, Lafayette, LA 70508
(318) 237-2200

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I. DESCRIPTION OF PROPOSED ACTION

Chevron USA, Inc. proposes to conduct exploratory activities within Viosca Knoll Block 161, Lease OCS-G 6876, Offshore Alabama.

As proposed, the Supplemental Plan of Exploration for Viosca Knoll Block 161 provides for the drilling of 1 (one) exploratory well utilizing a jackup rig.

At this time, the planned commencement date for the proposed activities is October 1, 1995.

A. DESCRIPTION OF PROPOSED TRAVEL MODES, ROUTES AND FREQUENCY

Support vessels will be dispatched from a support base located in Pascagoula, Mississippi. The boats will normally move to the block via the most direct route from Pascagoula, Mississippi, however, boats operating in the field may travel from other facilities nearby. Following is an estimate of trips to the proposed operation:

	DRILLING OPERATIONS
Supply Boat	3 trips per week
Crew Boat	7 trips per week
Helicopter	7 trips per week

B. ONSHORE SUPPORT BASE

The proposed activities will utilize a support base located at Pascagoula, Mississippi. 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. The proposed development activities will help to maintain this base 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

The location for the proposed activity is in Viosca Knoll Block 161 (OCS-6876), which is located approximately (26.5) statute miles from the nearest shoreline. The water depth at this location is approximately 115 feet. Figure 1 represents the location of the block in relation to the Gulf Coast, as well as the geographic relationship between other OCS lease areas and Viosca Knoll Block 161.

II. DESCRIPTION OF AFFECTED ENVIRONMENT

A. COMMERCIAL FISHING

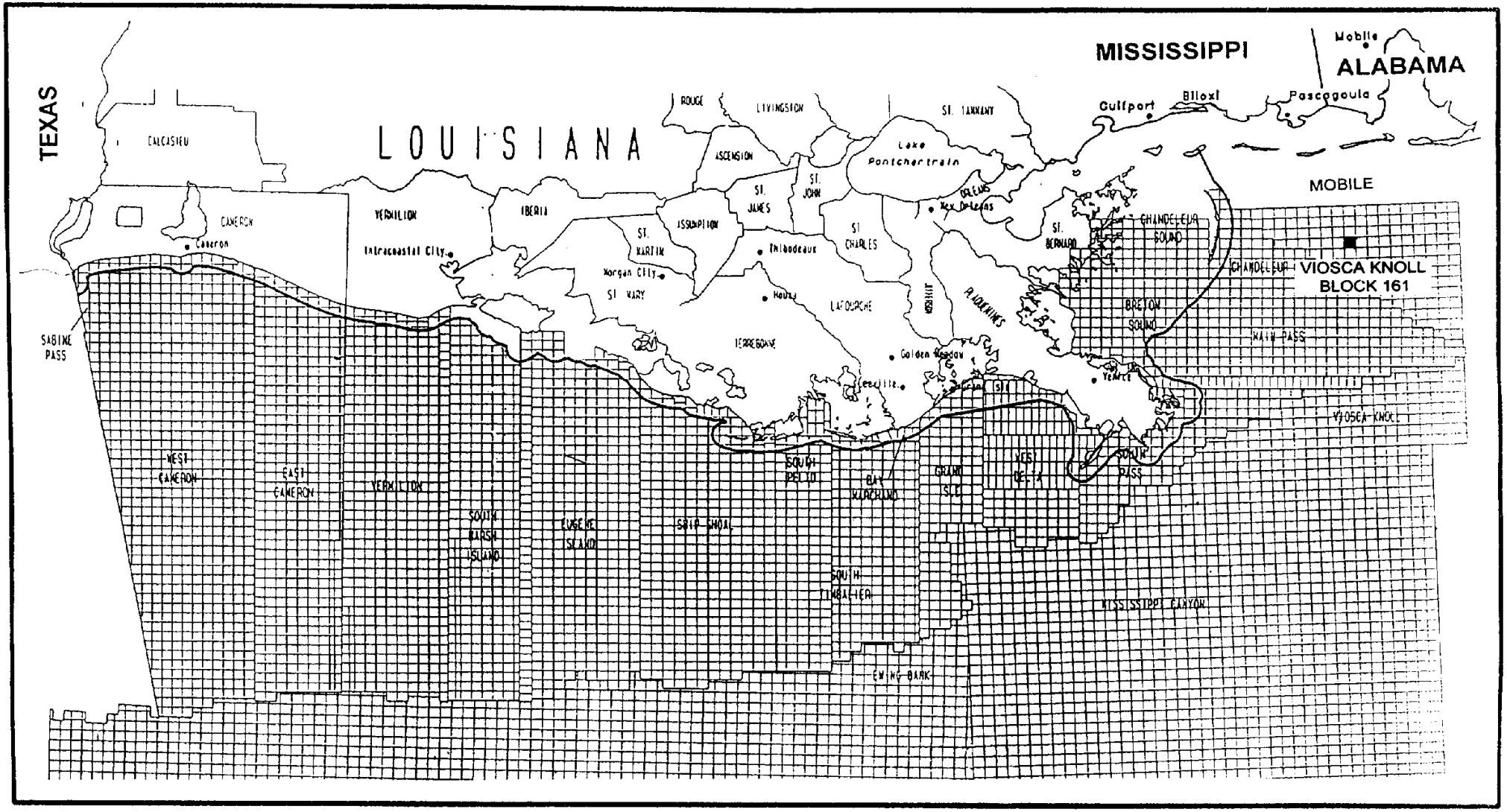
The Gulf of Mexico provides nearly 20% of the commercial fish landings in the continental United States. During 1992, commercial landings of all fisheries in the Gulf totaled nearly 1.4 billion pounds valued at about $634 million.

Menhaden, with landings of 0.8 billion pounds, valued at $42 million, was the most important Gulf species in quantity landed during 1992. Shrimp, with landings of 222 million pounds, valued at $389 million, was the most important Gulf species in value landed during 1992. The 1992 Gulf oyster fishery accounted for 51% of the national total with landings of 18.7 million pounds of meat, valued at about $40.5 million. The Gulf blue crab fishery accounted for 34% of the national total with landings of 66 million pounds, valued at $35.6 million.

Alabama ranked last among Central and Western Gulf states in total commercial landings for 1992 with 23.7 million pounds landed, valued at $35.6 million. Shrimp was the most important fishery landed, with 5.8 million pounds, valued at $12.8 million. In addition, during 1992, the following six species each accounted for landings valued at over $125,000: blue crab, shark, black mullet, red snapper, flounder, and the American oyster. Alabama had about 3470 and 2515 commercial saltwater, licensed fishermen during 1991 and 1992, respectively.

Mississippi ranked second among Central and Western Gulf states in total commercial fishery landings for 1992, with approximately 187.6 million pounds landed, valued at approximately $31.3 million. Shrimp was the most important fishery, with 10.1 million pounds landed, valued at about $19.8 million. In addition, during 1992, the following four species each accounted for landings valued at over $150,000: red snapper, blue crab, American oyster, and black mullet. Mississippi had about 3329 and 2515 commercial saltwater, licensed fishermen during 1991 and 1992, respectively.

Louisiana ranked first among Central and Western Gulf states in total commercial fishery landings for 1992, with nearly 0.98 billion pounds landed, valued at $276.4 million. Menhaden was the highest quantity finfish, with 0.79 billion pounds landed,



LAMBERT (1927-DATUM)

LOCATION APPROXIMATELY 26.5 MILES
TO THE NEAREST SHORELINE

FIGURE 1

CHEVRON USA, INC.

VICINITY MAP

Block 161, Viosca Knoll Area
Gulf of Mexico

40 0 40 80

Scale: 1" = 40 Miles

Prepared by: C.H. Fenstermaker & Associates, Inc., Lafayette & New Orleans, La.		
Revised:	Job No.: 954544	Date: 06/27/95
		Drawn By: SLE

valued at $40 million. Shrimp was the highest value shellfish, with 97.4 million pounds landed, valued at $144 million. In addition, during 1992, the following nine species each accounted for landings valued at over $1 million: king mackerel, red mullet roe, shark, red snapper, spotted sea trout, swordfish, yellowfin tuna, blue crab, and the American oyster. In 1991 and 1992, Louisiana had about 19,923 and 19,241 commercial saltwater, licensed fishermen, respectively.

Texas ranked third among Central and Western Gulf states in total commercial fishery landings for 1992 with nearly 92.1 million pounds landed, valued at $181.3 million. In quantity and value, shrimp ranked first, with about 85 million pounds, valued at $167 million. In addition, during 1992, the following five species each accounted for landings valued at over $500,000: red snapper, swordfish, yellowfin tuna, blue crab, and American oyster. In 1991 and 1992, respectively, Texas had about 17,483 and 14,519 commercial saltwater, licensed fishermen.

The Gulf of Mexico yielded the nation's second largest regional commercial fishery by weight in 1992. The Gulf fisheries landings were nearly 20% of the national total by weight and 20% by value. Most commercial species harvested from Federal waters of the Gulf of Mexico are considered to be at or near an overfished condition. Continued fishing at the present levels may result in rapid declines in commercial landings and eventual failure of certain fisheries. Commercial landings of traditional fisheries such as shrimp, red snapper and spiny lobster, have declined over the past decade despite substantial increases in fishing effort. Commercial landings of recent fisheries, such as shark, black drum, and tuna have increased exponentially over the past five years, and those fisheries are thought to be in need of conservation.

The Gulf of Mexico shrimp fishery is the most valuable in the United States accounting for 71.5% of the total domestic production. Three species of shrimp (brown, white and pink) dominate the landings. The status of the stock are as follows: (1) brown shrimp yields are at or near the maximum sustainable levels; (2) white shrimp yields are beyond maximum sustainable levels with signs of overfishing occurring; and (3) pink shrimp yields are at or beyond maximum sustainable levels.

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 anchorages are areas contiguous to and 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 larger oceangoing vessels, but not all vessels stay within the fairways. Many others, such as fishing boats and OCS support vessels, travel trough areas with high concentrations 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. Most oceangoing vessels are equipped with radar capable of aiding navigation in all weather conditions. This has contributed to safe navigation on the OCS.

A designated shipping fairway intersects the northeast corner of Viosca Knoll Block 161. It is likely that the marine vessels supporting drilling activities in this block will utilize this shipping fairway to gain access to the support base; however, it is unlikely that the marine vessels will have a significant effect on fairway traffic. The drilling rig and each of the marine vessels servicing these operations will be equipped with all U.S. Coast Guard required navigational safety aids to alert ships of their presence in all weather conditions.

Viosca Knoll Block 161 falls within the Military Warning Area W-453. Chevron USA, Inc. is aware of the stipulations to operating in these areas.

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 for marine fishing and beach activities. Gulf Coast shorelines offer a diversity of natural and developed landscapes and seascapes. Major recreational resources include coastal beaches, barrier islands, estuarine bays and sounds, river deltas, and tidal marshes. Other resources include publicly owned and administered areas such as national seashores, parks, beaches, and wildlife lands, as well as designated preservation areas, such as historic and natural sites, landmarks, wilderness areas, wildlife sanctuaries, and scenic rivers. Gulf Coastal residents and tourists from throughout the nation, as well as from foreign countries, use these resources extensively and intensively for recreation activity. Commercial and private recreational facilities and establishments such as resorts, marinas, amusement parks, and ornamental gardens also serve as primary-interest areas.

The two major recreational areas most directly associated with 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. 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 structures which stems from their function as high profile artificial fishing reefs.

The coastal shorelines of the Central and Western Planning Areas contain extensive public park and recreation areas, private resorts, and commercial lodging. Most of the outdoor recreational activity focused on the Gulf shorefront is associated with accessible beach areas. Beaches are a major inducement for coastal tourism, as well as a primary resource for resident recreational activity. However, recreational resources, activities, and expenditures are not constant along the Gulf of Mexico shorefront, but are focused where public beaches are close to major urban centers. Beach use is a major economic factor for many Gulf coastal communities, especially during peak-use seasons in the spring and summer.

D. POTENTIAL OR KNOWN ARCHAEOLOGICAL RESOURCES

Archaeological resources are any prehistoric or historic site, building, structure, object or feature that is manmade or modified by human activity. Significant archaeological resources are defined in 36 CFR 800, Section 60.6. The MMS has previously contacted the State Historic Preservation Officers for all Gulf Coast States and requested them to provide a list of those National Register of Historic Places that are in their State's coastal zones and that could potentially be affected by OCS leasing activities.

With the exception of the Ship Shoal Lighthouse, historic archaeological resources on the OCS consist of shipwrecks. Management of this resource was accomplished by establishing a high-probability zone for the occurrence of historic shipwrecks. An MMS-funded study updated the shipwreck database. Statistical analysis of over 4000 potential shipwrecks in the northern Gulf indicated that many of the OCS shipwrecks occur in clustered patterns related mainly to navigation hazards and port entrances. MMS redefined those blocks in the Gulf of Mexico that are considered to have a high probability for the occurrence of historic period shipwrecks. The number of blocks with a high probability for historic shipwrecks were reduced from 3,410 to 2,263. Remote sensing surveys required by MMS have recorded evidence of approximately 57 potential shipwrecks.

Viosca Knoll Block 161 falls within an area of high probability for historical resources (i.e. shipwrecks), however, no evidence of historic archaeological resources were identified from data collected in this block.

Geomorphic features that have a high probability for associated prehistoric archaeological resources in the Central and Western Gulf include barrier islands and back-barrier embayments, river channels and associated floodplains and terraces, and salt dome features. Remote sensing surveys have been very successful in identifying the geographic features that have a high probability for associated prehistoric sites. Though lease block surveys have identified many specific areas in the Gulf as having a high potential for prehistoric sites, oil and gas development has generally avoided rather than investigated these high-probability areas for archaeological content.

The probability of finding evidence of prehistoric archaeological resources in Viosca Knoll Block 161 is considered very low due to the scarcity of material remains and lack of well-defined geomorphic features.

E. ECOLOGICALLY SENSITIVE FEATURES

Coastal barriers of the Western and Central Gulf Coast consist of relatively low land masses that can be divided into several interrelated environments. The beach itself consists of the foreshore and backshore. The nonvegetated foreshore slopes up from the ocean to the beach berm-crest. The backshore may occasionally be absent due to storm activity. If present, the backshore is found between-the beach berm-crest and the dunes and may be sparsely vegetated. The dune zone of a barrier landform can consist of a single dune ridge, several parallel dune ridges, or a number of curving dune lines that are stabilized by vegetation. These elongated, narrow landforms are composed of sand and other unconsolidated, predominantly coarse sediments that have been transported and deposited by waves, currents, storm surges, and winds.

When Gulf water levels are elevated by storms, water will overwash a coastal barrier. This action will create overwash fans or terraces behind and between the dunes. With time, these terraces will be vegetated by opportunistic species. Along more stable barriers, the area behind the dunes consists of broad flats that support scrubby woody vegetation. Saline or freshwater ponds may be found among the dunes or landward flats. Landward, these flats may grade into wetlands and intertidal mud flats that fringe the shore of lagoons, islands, and embayments. In other areas, these barriers may grade into scrub or forest habitat of the mainland, with no bay or lagoon separating the two landforms. Habitats found among the coastal barrier landforms provide a variety of niches that support many avian, terrestrial, aquatic and amphibious species, some of which are endangered or threatened.

Stability of these habitats is primarily dependent upon the rates of geodynamic change for each coastal vicinity. The major sources of pressure that cause barrier landforms to change are storms, subsidence, delta abandonment, and human activity.

Barrier landforms of these coasts are continually adjusting their configuration in response to prevailing or changing environmental conditions. Landform changes can be seasonal and cyclical, such as seen with the transitional movement of sand onshore during the summer and the movement of sand offshore during the winter, due to winter storms. Changes In landforms can also be noncyclically progressive, such that landforms might move landward, seaward, or laterally along the coast.

From east to west, the barrier coasts of the Western and Central Gulf include Baldwin County Headland in Alabama, the barrier islands of Mississippi Sound, the Chandeleur Islands, the Modern Mississippi River Delta and its developing barrier islands, the Bayou Lafourche Headland and accompanying barrier islands, Isles Dernieres, the

Chenier Plain of Louisiana and Texas, Trinity River Delta, Brazos-Colorado River Delta and its accompanying barrier islands, barrier islands of Espiritu Santo Bay and Laguna Madre and the Rio Grande Delta.

Louisiana has the most rapidly retreating beaches in the nation. The statewide average for 1956-1978 was 8.29 m/yr. The sand beach formed between the Gulf and Bay Marchand retreated landward at rates of 18 to 23 m/yr. between 1887 and 1978. The average retreat rate for Fourchon Beach over the last 100 years has been 10 to 20 m/yr.

Beaches along the deltaic plain in Louisiana fit into one of three categories, depending on the stage of the deltaic cycle of the nearby landmass. When a major distributary of the Mississippi River is abandoned, submergence due to subsidence and sea-level rise transforms the abandoned delta into an erosional headland with flanking barriers. The Bayou Lafourche Headland is an example of an eroding and subsiding delta that transgressively generates a barrier island arc, the ends of which are separated from the mainland. Isles Dernieres is an example of a barrier arc of islands that separated from its headland due to subsidence. With continued subsidence and no source of sediment, Isles Dernieres will eventually submerge and form a submarine inner-shelf shoal.

The coast of the Chenier Plain is fronted by sand beaches and coastal mudflats. The source of the mud is the discharge of the Mississippi and Atchafalaya Rivers, which tends to drift westward due to prevailing winds and associated nearshore currents.

From the Texas-Louisiana border to Rollover Pass, Texas, the Texas coast is a physiographic continuation of the Chenier Plain. Here, thin accumulations of sand, shell, and caliche nodules make up beaches that are migrating landward over tidal marshes. These beaches are narrow and have numerous overwash features and local, poorly developed sand dunes.

The rest of the Texas coast is a continuous barrier shoreline. The barrier islands and spits were formed from sediments supplied from the three previously listed deltaic headlands: the Trinity delta, which is immediately west of the Sabine River in Jefferson County; the Brazos-Colorado Rivers delta complex in Brazoria and Matagorda Counties; and the Rio Grande delta in southernmost Cameron County.

The Central and Western Gulf Coast includes barrier islands that are part of the National Park System. These are the Padre Island National Seashore along the Texas coast and Gulf Islands National Seashore offshore Mississippi.

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, reptiles, 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.

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 km^2 for the period 1955-1978. A recent study has shown that the current rate of land loss on the Deltaic Plain area of the Louisiana coast has decreased to about 90 km^2 per year. Several factors contribute to wetlands loss in coastal Louisiana. Sediment deprivation is a result of a 50% decrease in the suspended-sediment load of the river since the 1950's, channelization of the river, and, the primary cause, which was levee construction. Subsidence and sea level rise have caused submergence of lower wetland areas. Construction of ring levees have allowed drainage and development of extensive wetlands. Development activities in low areas, outside leveed areas, have caused the filling in of wetlands. Construction of canals converts wetlands to open water and upland spoilbanks. Canals and subsidence have also contributed to increased tidal influence and salinities in freshwater and low-salinity wetlands, which in turn increase erosion and sediment export.

In Mississippi and Alabama, the mainland marshes behind Mississippi Sound occur as discontinuous wetlands associated with estuarine environments. The most extensive wetland areas in Mississippi occur east of the Pearl River delta near the western border of the state and the Pascagoula River delta area near the eastern border of the state. The wetlands of Mississippi seem to be more stable than those in Louisiana, perhaps reflecting the more stable substrate and more active sedimentation per unit of wetland area. Also, there have been only minor amounts of canal dredging in the Mississippi wetlands.

Most of the wetlands in Alabama occur on the Mobile River delta or along northern Mississippi Sound. Between 1955 and 1979, fresh marshes and estuarine marshes declined in these areas by 69% and 29%, respectively. Major causes of non-fresh wetland losses were industrial development and navigation, residential and commercial development, natural succession, and erosion/subsidence. The loss of fresh marsh was mainly attributable to commercial and residential development and silviculture.

In Texas, coastal marshes occur along the inshore side of barrier islands and bays and on river deltas. Salt marshes consisting primarily of smooth cordgrass occur at lower elevations and at higher salinities. Brackish marshes occur in transition areas landward of salt marshes on slightly higher elevations and at greater distances from saltwater bodies. Freshwater marshes of the region occur primarily along the major rivers and tributaries. Sparse bands of black mangroves are also found in the region. Broad expanses of emergent wetland vegetation do not commonly occur south of Baffin Bay at the northern edge of Kenedy County because of the arid climate and hypersaline

waters to the south. Dominant salt-marsh plants here include more salt tolerant species such as *Batis maritima* and *Salicornia sp.*

Wetland changes observed in Texas during the past several decades appear to be driven by subsidence and sea-level increases. Open-water areas are appearing in wetlands along their seaward margins, while new wetlands are encroaching onto previously non-wetland habitat along the landward margin of wetland areas on the mainland, on the back side of barrier islands, and onto spoil banks. In addition, wetlands are being affected by human activities including canal dredging, impoundments, and accelerated subsidence caused by fluid withdrawals. The magnitudes of these wetland acreage changes in most of Texas have not been determined at the present time. In the Freeport, Texas area, along the Louisiana border, wetlands loss is occurring at rates similar to those occurring in adjacent parts of the Louisiana Chenier Plain.

Offshore seagrasses are not conspicuous in the Central and Western Gulf; however, fairly extensive beds may be found in estuarine areas behind the barrier islands throughout the Gulf. Seagrasses would be continuous around the entire periphery of the Gulf if it were not for the adverse effects of turbidity and low salinity of the Mississippi effluent from the delta to Galveston. In general, the vast majority of the benthos of the Central and Western Gulf consists of soft, muddy bottom dominated by polychaetes. Benthic habitats that are at the most risk to potential impacts from oil and gas operations are those of the topographic features, and the pinnacle trend live bottom.

The term "sensitive offshore resources" refers both to the water column and the seafloor. Seafloor (benthic) habitats are the most likely to be adversely affected by offshore oil and gas operations, especially live-bottom areas, deep-water benthic communities, and topographic features. The northeastern portion of the Central Gulf of Mexico exhibits a region of topographic relief, the "pinnacle trend", found at the outer edge of the Mississippi-Alabama shelf between the Mississippi River and DeSoto Canyon. The pinnacles appear to be carbonate reefal structures in an intermediate stage between growth and fossilization. The region contains a variety of features from low to major pinnacles, as well as ridges, scraps, and relict patch reefs. The heavily indurated pinnacles provide a surprising amount of surface area for the growth of sessile invertebrates and attract large numbers of fish.

The pinnacles are found at the outer edge of the Mississippi-Alabama shelf between the Mississippi River and DeSoto Canyon. The bases of the pinnacles rise from the seafloor between 50 and 100 m with vertical relief in excess of 20 m. These features exist in turbid water and contain limited biotal coverage. Pinnacles photographed in 1985 showed biota similar to the transitional antipatharian-zone assemblage described by Rezak (CSA, 1985). These pinnacles may provide structural habitat for a variety of pelagic fish.

With the exception of the region defined as the pinnacle-trend areas, the substrate in waters shallower than 67 m of the Central Gulf is a mixture of mud and/or sand. The live-bottom surveys required by MMS and conducted in the eastern portions of the area have also revealed sand or mud substrate. These areas are not conducive to "live-bottom" community growth since a hard substrate is needed for epifaunal attachment. As the substrate grades to carbonate sand in the Eastern Gulf, the potential for "live-bottoms" increases.

Chemosynthetic clams, mussels, and tube worms similar to the hydrothermal vent communities of the eastern Pacific have been discovered in the deep waters of the Gulf. These cold-water communities are primarily associated with seismic wipe-out zones and hydrocarbon and H_2S seep areas in water depths greater than 400 m. Chemosynthetic communities have been a source of controversy over the past few years, in part because of the unusual environmental requirements and hypothesized sensitivity of the communities to oil and gas activities. The MMS requires site-specific surveys of bottom-disturbing actions in water depths greater than 400 m in order to judge the potential of the region for supporting chemosynthetic organisms.

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 because 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 an aesthetically attractive intrinsic value.

Seven distinct biotic zones on the banks of the Gulf have been identified. None of the banks contain all of the seven zones. The zones are divided into four categories dependent upon the degree of reef-building activity in each zone. The Central Gulf of Mexico lists 16 topographic features and the western Gulf of Mexico lists 23 topographic features. None of those listed are in or near the vicinity of the proposed operations in Viosca Knoll Block 161.

F. PIPELINES AND CABLES

As a prudent operator, Chevron USA, Inc. will conduct its operations in accordance with the provisions specified in Minerals Management Service Notice to Lessees 83-03 in order to avoid all pipelines and/or cables in the vicinity of the proposed operations.

G. OTHER MINERAL USES

The activities proposed for Viosca Knoll Block 161 will have no direct or indirect impact on other mineral uses.

H. OCEAN DUMPING

The Marine Pollution Research and Control Act of 1987 implements Annex V of the International Convention for the Prevention of Pollution from Ships. Most of the law's regulatory provisions became effective on December 31, 1988. Under provisions of the law, all ships and watercraft, including all commercial and recreational fishing vessels, are prohibited from dumping plastics at sea. The law also severely restricts the legality of dumping other vessel-generated garbage and solid waste items both at sea and in U.S. navigable waters. The USCG is responsible for enforcing the provisions of this law and has developed final rules for its implementation, calling for adequate trash reception facilities at all ports, docks, marinas, and boat launching facilities.

Interim final rules published May 2, 1990 explicitly stated that fixed and floating platforms and all drilling rigs, manned production platforms and support vessels operating under a Federal oil and gas lease are required to develop Waste Management Plans and to post placards reflecting MARPOL, Annex V dumping restrictions. Waste Management Plans will require oil and gas operators to describe procedures for collecting, processing, storing, and discharging garbage and to designate the person who is in charge of carrying out the plan. These rules ships of 40 ft. or more in length that are documented under the laws of the U.S. or numbered by a State and that are equipped with a galley and berthing. Placards noting discharge limitations and restrictions, as well as penalties for noncompliance, apply to all boats and ships 26 ft. or more in length. Furthermore, the Shore Protection Act of 1988 requires ships transporting garbage and refuse to assure that the garbage and refuse is properly contained on board so that it will not be lost in the water from inclement wind or water conditions.

The disposal of oil and gas operational wastes is managed by USEPA through regulations established under three Federal Acts. The Resource Conservation and Recovery Act (RCRA) provides a framework for the safe disposal of discarded materials, regulating the management of solid and hazardous wastes. The USEPA has exempted many oil and gas wastes from coverage under hazardous wastes regulations under Subtitle C of RCRA. If covered, such wastes would be more stringently regulated under hazardous waste rules; i.e., industry would be responsible for the wastes from their generation to their final disposal. Exempt wastes include those generally coming from an activity directly associated with the drilling, production, or processing of a hydrocarbon product. Nonexempt oil and gas wastes include those not unique to the oil and-gas industry and used in the maintenance of equipment.

The direct disposal of operational wastes into offshore waters is limited by USEPA under the authority of the Clean Water Act. And, when injected underground, oil and gas operational wastes are regulated by USEPA's third program, the Underground Injection Control program.

A general NPDES permit, based on effluent limitation guidelines, is required for direct disposal of operational wastes into offshore waters. The major discharges from offshore oil and gas exploration and production activities include produced water, drilling fluids and cuttings, ballast water, and storage displacement water. Minor discharges from the offshore oil and gas industry include drilling-waste chemicals, fracturing and acidizing fluids, and well completion and workover fluids; and from production operations, deck drainage, and miscellaneous well fluids (cement, BOP fluid); and other sanitary and domestic wastes, gas and oil processing wastes, and miscellaneous discharges. Produced sand is no longer allowed to be discharged under NPDES General Permit GMG290000.

I. ENDANGERED AND THREATENED SPECIES AND CRITICAL HABITAT

Twenty-nine species of cetaceans, one sirenian, and one exotic pinniped (California sea lion) have been sighted in the northern Gulf of Mexico. Seven species of baleen whales have been reported in the Gulf of Mexico. These include the northern right whale and six species of balaenopterid whales (blue, fin, sei, Bryde's, minke, and humpback). Sightings and strandings of these species in this area are uncommon; however, historical sightings and strandings census data suggest that they more often frequent the north-central Gulf region in comparison to the other areas of the Gulf. Twenty-two species of toothed whales and dolphins have been reported in the Gulf of Mexico. These include the great sperm whale, pygmy and dwarf sperm whales, four species of beaked whales (Cuvier's, Gervais', Blainville's and Sowerby's), killer whale, false and pygmy killer whale, short-finned pilot whale, grampus (Risso's dolphin), melon-headed whale, and nine other species of delphinid dolphins (bottlenose, Atlantic spotted, pantropical spotted, spinner, clymene, striped, common, Fraser's and rough-toothed). Many of these species are distributed in warm temperate to tropical waters throughout the world.

Five species of baleen whales (northern right, blue, fin, sei and humpback) and one species of toothed whale (great sperm whale) found within the Gulf of Mexico are currently listed as endangered species under the provisions of the Endangered Species Act of 1973. All are uncommon to rare in the Gulf except for the great sperm whale.

The Alabama, Choctawhatchee, and Perdido Key beach mice, subspecies of the old field mouse, occupy restricted habitats in the mature coastal dunes of Florida and Alabama. The beach mice feed nocturnally on the lee side of the dunes and remain in burrows during the day. Their diet consists mainly of beach grass and sea oats.

The green turtle population in the Gulf once supported a commercial harvest in Texas and Florida, but the population has not completely recovered since the collapse of the fishery around the turn of the century. Green turtles prefer depths of less than 20m, where seagrasses and algae are plentiful. Leatherbacks, the largest and most oceanic of the marine turtles, seasonally enter coastal and estuarine habitats where jellyfish are plentiful. Their nesting is concentrated on coarse-grain beaches in the tropical latitudes. The hawksbill is the least commonly reported marine turtle in the Gulf. Stranded turtles are regularly reported in Texas and, recently, in Louisiana these tend to be either hatchlings or yearlings. The Kemp's ridley sea turtle is the most imperiled of the world's marine turtles. Nesting primarily occurs on a stretch of beach in Rancho Nuevo, Vera Cruz, Mexico. Nesting in the United States occurs infrequently on Padre and Mustang Islands in south Texas from May to August. In the Gulf Kemp's ridleys appear to inhabit nearshore areas and congregations of Kemp's have been recorded off the mouth of the Mississippi River. The loggerhead sea turtle occurs worldwide in habitats ranging from estuaries to the continental shelf. In the Gulf or Mexico, recent surveys indicate that the Florida Panhandle accounts for approximately one-third of the nesting on the Florida Gulf Coast. In the Central Gulf, loggerhead nesting has been reported on Gulf Shores and Dauphin Island, Alabama; Ship Island, Mississippi; and the Chandeleur Islands, Louisiana. The banks off of the central Louisiana coast and near the Mississippi Delta are also important marine turtle feeding areas. Hatchlings have a pelagic phase followed by movement inshore.

The offshore waters, coastal beaches, and contiguous wetlands of the northern Gulf of Mexico are populated by both resident and migratory species of coastal and marine birds. They are herein separated into five major groups: seabirds, shorebirds, wading birds, marsh birds, and waterfowl. Many species are strongly pelagic, and therefore rarely seen from shore. The remaining species, which are most susceptible to potential deleterious effects resulting from OCS-related activities, are found within coastal and inshore habitats. Recent surveys indicate that Louisiana and Texas are among the most important states in the south and southeastern U.S. in terms of nesting colony sites and total number of nesting coastal and marine birds. Fidelity to these nesting sites varies from year to year along the Gulf Coast, with site abandonment along the northern Gulf Coast often attributed to habitat alteration and excessive human disturbance. Feeding habitats include the waters and coastal shores of the open Gulf, bays and estuaries, brackish and freshwater wetlands, as well as coastal farmlands and landfills.

The following coastal and marine bird species, which inhabit or frequent the north-central and western Gulf of Mexico coastal areas, are recognized by the FWS as either endangered or threatened: piping plover, whooping crane, eskimo curlew, bald eagle, peregrine falcon, eastern brown pelican, and interior least tern.

The piping plover is a distinctive ringed plover of central and eastern North America. It nests on sandy beaches along coasts or inland lakeshores, preferring areas with scant vegetation and cover. Uncontrolled hunting in the early 1900's brought the species

close to extinction. Its historic populations have remained depressed because of losses to their specific nesting and wintering habitat requirements. Preliminary information indicates that Texas is the most important wintering area, in the extensive sand flats of Laguna Madre and sand flats associated with barrier island passes and river mouths. In Louisiana, barrier islands appear to provide the most suitable habitat. Unfortunately, some of these sites are experiencing dramatic rates of land loss via erosion.

Wild whooping cranes presently occur in two migratory populations. The first nests in Canada and migrates to wintering grounds along the Texas coast on salt flats and islands in and around Aransas National Wildlife Refuge (ANWR). The second population was established in southeastern Idaho. Results from the 1991 winter census indicated only 132 whooping cranes in the peak ANWR population, representing a drop in the previous year's census of 146 birds (USDOI, FWS, 1992). Cranes feed during the winter months on a wide variety of foods gathered from the coastal environment.

The bald eagle is the only species of sea eagle regularly occurring on the North American continent. The bulk of the bald eagle's diet is fish, combined with opportunistic capture of a variety of vertebrate species. The bald eagle requires a large area for hunting and is sensitive to chemical contaminants in the food chain. The historical nesting range of the bald eagle in the southeast U.S. included the entire coastal plain and along major rivers and lakes.

The peregrine falcon of North America has been separated into three subspecies: the Arctic peregrine, American peregrine, and Peale's peregrine. The Arctic peregrine nests in tundra areas of North American and Greenland, and migrates south to the Gulf Coast, West Indies, and Central and South America. Coastal areas along the Gulf Coast are well known as foci for migrant peregrines, where beaches, flats, and wetlands are used for hunting and resting.

The eastern brown pelican is a colonial nesting species that feeds entirely upon fishes captured by plunge diving in coastal waters. It rarely ventures beyond 20 miles from the coast. A severe reduction in its population occurred during the late 1950's and is attributed to the toxic effects of DDT. Subsequent to the 1972 U.S. ban on the use of DDT, there has been a marked increase in populations of the brown pelican along its entire former range.

The least tern is the smallest North American tern. Populations occurring within the Mississippi basin have been eliminated as a result of destruction and alteration of nesting habitat along the Mississippi River and its tributaries. Least terns are the only nesting tern species in Louisiana to use mainland beaches, and they will use humanmade and managed spoil sites as well.

J. SOCIOECONOMIC

In relation to oil and gas activity in the Gulf of Mexico, the exploration and production of crude oil and gas is classified as a primary industry. Classified as secondary industries are activities associated with the processing of crude oil and gas in refineries, natural gas plants, and petrochemical plants.

The production of OCS oil and gas, particularly offshore Louisiana, has been a major source of revenue in the study area since 1954. Data from the 1988 Census show that the average annual payroll associated with oil and gas activities amounts to approximately $1.7 billion for the Gulf of Mexico Region ($1.4 billion for the Central Gulf and $0.3 billion for the Western Gulf). Average annual tax dollars generated per employee in the offshore oil and gas program are estimated at 8% of payroll revenues. Thus, State and local taxes generated annually by the Federal offshore oil and gas program are estimated at $114.9 million from the Central Gulf and $20.9 million from the Western Gulf.

Job estimates as of December 1992 show that 31,800 jobs are directly or indirectly dependent on the offshore program. Approximately 84% of these jobs are associated with activity in the Central Gulf and 16% are related to the Western Gulf. Nearly all offshore-related employment in the Central Gulf is due to activity offshore Louisiana. In addition, offshore activity in other areas of the Gulf also generates employment in Louisiana. Estimates of direct employment offshore are 26,600 workers in the Central Gulf, and 5,200 workers in the Western Gulf.

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 Chevron USA, Inc.'s operations in Viosca Knoll Block 161 (OCS-G 6876) is Pascagoula, Mississippi.

III. UNAVOIDABLE ADVERSE ENVIRONMENTAL IMPACTS

A. WATER QUALITY

Routine operational discharges (drilling muds and cuttings, produced waters, deck drainage, and sanitary and domestic wastes) or accidental spills may temporarily degrade some measures of water quality adjacent to the proposed surface location. However, these impacts decrease to very low with distance from the source. Therefore, the impact from these factors is considered to be low.

B. EFFECTS ON MARINE ORGANISMS

Some organisms will be killed and some will be temporarily functionally impaired as a result of operational discharges. The most affected groups will be plankton and benthos immediately around the proposed surface locations. Damage will be both mechanical and toxicological. These communities are widespread throughout the deep-water areas of the Gulf. These impacts are considered to be localized, short term and reversible at the population level.

An oil spill could affect a broad spectrum of marine organisms. However, most effects would be localized and short term. Any effects on mammals and turtles would be significant.

C. EFFECTS ON THREATENED OR ENDANGERED SPECIES

Activities resulting from the proposed action have a potential to cause detrimental effects on endangered cetaceans. These cetaceans could be impacted by operational discharges, helicopter and vessel traffic, platform noise, explosive platform removals, seismic surveys, oil spills, and oil-spill response activities. The effects of the majority of these activities are estimated to be sublethal, and expected impact levels range from low to very low. Sale-related oil spills of any size are expected to seldom contact endangered and threatened cetaceans.

Activities resulting from the proposed action have a potential to affect Alabama, Choctawhatchee, and Perdido Key beach mice detrimentally. Beach mice could be impacted by oil spills and oil-spill response activities. It is expected that there will seldom be interaction between these events and beach mice or their habitats.

Activities resulting from the proposed action have a potential to affect marine turtles detrimentally. Marine turtles could be impacted by anchoring, structure installation, pipeline placement, dredging, blowouts, operational discharges, OCS-related trash and debris, vessel traffic, explosive platform removals, oil-spill response activities, oil spills, and habitat and water quality degradation. The effects of the majority of these activities are expected to be sublethal. Sale-related oil spills of any size are seldom expected to contact marine turtles.

Activities resulting from the proposed action have the potential to affect Central Gulf coastal and marine birds detrimentally. It is expected that the effects from the major impact-producing factors on coastal and marine birds are negligible and of nominal occurrence. As a result, there will be no discernible disturbance of Gulf coastal and marine birds.

The brown pelican, Arctic peregrine falcon, bald eagle, piping plover, and least tern may be impacted by helicopter and service-vessel traffic, offshore pipeline landfalls, entanglement in and ingestion of offshore oil- and gas-related plastic debris, and oil spills. The effects of these activities are expected to be sublethal. Sale-related oil spills of any size are expected to seldom contact threatened and endangered birds or their critical feeding, resting, or nesting habitats.

The Gulf sturgeon can be impacted by oil spills resulting from the proposed action. The impact is expected to result in sublethal effects and cause short-term physiological or behavioral changes.

D. WETLANDS AND BEACH

The major impact-producing factors associated with the proposed action that could affect barrier beaches include oil spills, pipeline emplacements, navigation canal dredging and maintenance dredging, and support infrastructure (pipeline landfalls, navigation channels, service bases, platform yards, etc.) are not expected to occur, because no new infrastructure construction is anticipated as a result of the proposed action. Although some maintenance dredging is expected to occur, this activity has not been shown to have a negative impact on barriers, and the need for dredging cannot be attributed to the small percentage of vessel traffic in these channels. Deepening of the channel to Port Fourchon is not expected to affect nearby barrier features.

The proposed activity is not expected to result in permanent alterations of barrier beach configurations, except in localized areas downdrift from navigation channels that have been dredged and deepened. Strategic placement of dredged material resulting from these actions can mitigate adverse impacts upon those localized areas.

Wetlands include forested wetlands (bottomland and swamp), tidal marshes, and seagrasses. Swamps and marshes occur throughout the coastal zone. Seagrasses are restricted in distribution to small areas behind barrier islands in Mississippi and Chandeleur Sounds. Impact-producing factors resulting from OCS oil and gas activities that could adversely affect wetlands include oil spills, pipeline construction and remaining canals, dredging of new navigation channels, maintenance dredging and vessel usage of existing navigation channels, and construction and maintenance of onshore facilities in wetland areas.

The proposed activity is expected to result in a small amount of dieback and mortality of wetlands vegetation as a result of contacts from oil spills. Most of these wetlands will recover within 10 years and the remaining will be converted to open water. Some wetlands are projected to be eroded along channel margins as a result of OCS vessel wake erosion, and some wetlands are projected to be created as a result of beneficial disposal of dredged material from channel-deepening projects.

E. AIR QUALITY

The potential degrading effects on air quality from onshore and offshore operational activities are platform emissions; drilling activities during exploration, delineation and development; service vessel operations; evaporation of volatile hydrocarbons from surface oil slicks; and fugitive emissions during hydrocarbon venting and offloading.

Emissions of pollutants in the atmosphere for these activities are likely to have minimum impact on offshore air quality because of prevailing atmospheric conditions, emission heights and pollutant concentrations. Onshore impact on air quality from emissions from OCS activities is estimated to be negligible because of the atmospheric regime, the emission rates, and distance of these emissions from the coastline. The above discussion is based on average conditions; however, there will be days of low mixing heights and wind speeds that could increase impact levels. These conditions are characterized by fog formation, which in the Gulf occurs 35 days a year, mostly during winter. Impact from these conditions is reduced in winter because the onshore winds have the smallest frequency (37%) and rain removal is greatest. Summer is the worst time, with onshore winds having a frequency of 61%. Emissions of pollutants into the atmosphere are expected to have concentrations that would not change the onshore air quality classifications.

F. COMMERCIAL FISHING

The major impact producing factors on fishing activities from the proposed operations are coastal environmental degradation, structure placement, oil spills, production platform removals, seismic surveys, subsurface blowouts, pipeline trenching, and OCS discharges of drilling muds, produced waters and NORM, and underwater OCS obstructions.

The effects on and the extent of damage from an oil spill to Gulf commercial fisheries is restricted by time and location. Oil spills that contact coastal bays, estuaries, and waters of the OCS when high concentrations of pelagic eggs and larvae are present have the greatest potential to damage commercial fishery resources. Migratory species, such as mackerel, cobia, and crevalle could be impacted if oil spills contact nearshore open waters. An oil spill contacting a low-energy inshore area would affect localized populations of commercial fishery resources, such as menhaden, shrimp, and blue crabs. Chronic oiling in an inshore area would affect all life stages of a localized population of a sessile fishery resource such as oysters.

The emplacement of a structure, with a surrounding 100 m navigational safety zone, in water depths less than 152 m, results in the loss of approximately 6 ha of bottom trawling area to commercial fishermen and causes space-use conflicts. Gear conflicts

from underwater OCS obstructions result in losses of trawl and shrimp catch, business downtime, and vessel damage.

Commercial fishery resources may also be affected by the discharge of drilling muds which may contain material toxic to marine fishes; however, this is only at concentrations four or five orders of magnitude higher than those found more than a few meters from the discharge point. Further dilution is extremely rapid in offshore waters.

The fate and effects of NORM from the discharge of produced water on seafood available for commercial harvest has become an issue of environmental concern. However, the likelihood of consuming seafood containing higher than normal radium for a sufficient period of time to present a risk is minimal. The prospect that NORM discharged in offshore produced water will affect commercial fishery species and subsequently increase man's intake of radium is virtually zero.

Activities resulting from the proposed action have the potential to cause detrimental effects to Central Gulf commercial fisheries, It is expected that the effects from the major impact-producing factors on commercial fisheries in the CPA are inconsequential and of nominal occurrence. As a result, there will be little discernible disturbance to Gulf commercial fisheries.

G. SHIP NAVIGATION

Very little interference can be expected between drilling rig and vessels utilized during exploratory operations and ships that use established fairways.

Approved aids to navigation will be installed on the drilling rig and all marine vessels servicing these operations in accordance with USCG regulations.

H. ARCHAEOLOGICAL RESOURCES

The greatest potential impact to an historic and/or prehistoric archaeological resource as a result of the proposed action would result form a contact between OCS offshore activity (platform installation, drilling rig emplacement, dredging or pipeline project) and a historic shipwreck.

The OCS activity could contact a shipwreck because of incomplete knowledge on the location of shipwrecks in the Gulf. Although this occurrence is not probable, such an event would result in the disturbance or destruction of important historic archaeological information. Other factors associated with the proposed action are not expected to affect historic archaeological resources.

The archaeological surveys required prior to an operator beginning oil and gas activities in a lease block are estimated to be 90% effective at identifying possible sites. There is only a small probability that an unknown archaeological resource exists in the lease area.

Chevron USA, Inc., as a prudent operator, agrees that, should any site, structure or object of historical or archaeological significance be discovered during drilling and exploration activities within the lease, such finds would immediately be reported to the Director, Gulf of Mexico OCS Region, and every reasonable effort would be made to preserve and protect the archaeological resources from damage until said Director has given directions as to its preservation.

I. RECREATION AND AESTHETIC VALUES

The drilling rig and marine vessels may represent an obstacle to some sport fishermen, but such effect is expected to be negligible and not permanent.

Even though existing regulations and orders prohibit indiscriminate littering of the marine environment with trash, offshore oil and gas operations involving men, machines, equipment and supplies is bound to result in some littering of the ocean. Human nature and accidents associated with offshore operations will contribute some floatable debris to the ocean environment which will eventually come ashore on major recreational beaches.

The effects that normal operations or a minor oil spill would have on any fish stocks important to sport fishermen are also considered to be negligible.

A few oil spills greater than 1 and less than or equal to 50 bbls are assumed to affect portions of CPA beaches, with little disruption of recreational activities. Marine debris will be lost from time to time. However, the impact from resulting intermittent pollution wash-up on Louisiana, Mississippi and Alabama beaches should be very low. A drilling rig and production platform in the nearshore area off Louisiana, Mississippi, and Alabama could also impact the natural seascape from some wilderness beaches. Helicopter and vessel traffic will add very little additional noise pollution likely to affect wilderness beach users.

The proposed action is expected to result in minor pollution events and nearshore operations that may adversely affect the enjoyment of some beach users on Louisiana, Mississippi and Alabama beaches.

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 emissions, 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 Plan of Exploration comply with Mississippi and Alabama's Coastal Management Program and will be conducted in a manner consistent with such program.

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