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In Reply Refer To: MS 5231

July 17, 1995

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

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Gentlemen:

Reference is made to the following plan received July 5, 1995:

Type Plan - Initial Development Operations Coordination Document
Lease - OCS-G 6850
Block - 872
Area - Mobile
Activities Proposed - Well and Caisson No. 1

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

Your control number is N-5126 and should be referenced in your communication and correspondence concerning this plan.

Sincerely,

For

(Orig. Sgd.) J. R. Hennessey

Donald C. Howard
Regional Supervisor
Field Operations

bcc: Lease OCS-G 6850 POD File (MS 5032)
MS 5034 w/public info. copy of the plan
and accomp. info.

MTolbert:cic:07/17/95:DOCDOM

NOTED - SCHEXNAILDRE



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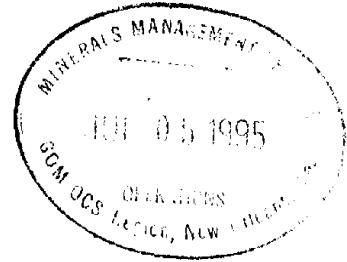
June 30, 1995

DOCD Submittal
Mobile Block 872

Chevron U.S.A. Production Co.
Special Projects Group
935 Gravier Street
New Orleans, LA 70112

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

Attention: Mr. Kent Stauffer
Chief, Plans, Platform and Pipeline Section



Dear Mr. Stauffer:

The enclosed DOCD submitted for approval by Chevron allows for the hook-up and production of lease OCS- G 6850 which was recently acquired by Chevron from Pennzoil. The subject DOCD mirrors the DOCD currently under review by your office for Mobile Block 863, with the exception that all offshore work will be completed and the well put on production this year. Given the proposed work is being coordinated with that planned for the Mobile 864 area, we hope to commence work sometime in August.

Should you have any questions concerning this plan, please feel free to call me at 592-6095.

Sincerely,

S. M. Fury

INITIAL
DEVELOPMENT OPERATIONS COORDINATION DOCUMENT
(DOCD)

CHEVRON USA INC
MOBILE BLOCK 872
LEASE OCS-G-6850

OFFSHORE, ALABAMA



Chevron USA Inc. submits for approval an Initial Development Operations Coordination Document (DOCD) to include well OCS-G-6850 #1 single well caisson in Mobile Block 872.

1. HISTORY

Mobile Block 872 is located in the Federal OCS 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.

The OCS-G-6850 #1 was drilled from a Supplemental Plan of Exploration approved on April 11, 1986. The well is currently suspended. A plat showing the location of the well is included as Attachment #2. A plat showing the location of the well in relation to the Central Producing Facility in Mobile Block 916 to which it will be connected is Attachment #3. A current structure map is given as Attachment #4.

2. LOCATION

OCS-G-6850 #1

Surface Location:	640' FNL and 4194' FEL of Mobile Block 872
Bottom-Hole Location:	
Total Depth:	
Water Depth:	39'

3. ACTIVITY SCHEDULE

A schedule of the activities to be conducted under the DOCD are included in Attachment #5.

4. ONSHORE SUPPORT BASE

Chevron USA Inc. expects to use existing onshore base facilities located in Pascagoula, MS or Theodore, Alabama to support the proposed activities in Mobile Blocks 872. The base has adequate personnel and facilities to support marine and air transportation to handle the requirements of this additional development in Blocks 872. No incremental jobs or dockside facilities will be created or required as a result of this activity.

5. 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 Mobile Block 872, a Fast Response Unit (FRU) will be directed to any spill by Chevron with sufficient personnel, equipment and materials to handle both minor and major spills. The estimated response time for a spill in the area is as example shown below:

1.	Procure a boat and deploy to Theodore Base	3 hours
2.	Unload vessel and load out fast response unit and oil spill containment equipment	2 hours
3.	Travel time to lease site (distance from Theodore Base to area is approximately 35 miles)	4 hours
4.	Total time to respond to a spill in Blks. 872	9 hours

The distance from the Pascagoula Base to the proposed locations is approximately the same; therefore, the estimated time to deploy equipment from Pascagoula to respond to any spill in the area is expected to be the same or possibly less from Theodore.

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 Mobile Area is shown below. A copy of the Probability Table (Attachment #6) and Spill Area Map (Attachment #7) is included in this document.

<u>AREA</u>	<u>LAND SEGMENT CONTACT</u>	<u>PERCENT (%)</u>
20	St. Bernard, Orleans, St. Charles, St. John, Livingston, Tangipahoa, and St. Tammany Parishes	4
21	Hancock, Harrison & Jackson Parishes	23
22	Mobile, Alabama	17
23	Baldwin, Alabama	9

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.

6. **DESCRIPTION OF DRILLING RIG AND PREVENTION POLLUTION EQUIPMENT**

There are no drilling activities associated with this Initial DOCD for lease Mobile Block 872, Lease OCS-G-6580.

7. **DISCHARGES**

All discharges are currently regulated by the General NPDES Permit GMG 280000 for the Gulf of Mexico. They include the following type and estimated volumes.

1. **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.

2. **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.

8. **HYDROGEN-SULFIDE (H₂S)**

The area in which operations are to be conducted has been classified as a zone known to contain H₂S. Since there are no drilling activities associated with this proposed DOCD, Chevron will be in complete compliance with the requirements of 30 CFR 250.67 in the Gulf of Mexico in zones known to contain hydrogen-sulfide (H₂S). An H₂S Contingency Plan for the area pertaining to production facilities will be submitted prior to start-up.

9. **AIR EMISSIONS**

In accordance with Air Quality Regulations, tables in the attached Air Emissions Report (Appendix A) list the projected emissions during the proposed activity of well facility and flowline installation. Producing emissions from the facility have been accounted for in the DOCD for the Mobile 916 Area which contemplates the facility operating at maximum capacity (150 MMCFD). Therefore, no incremental emissions will result at Mobile 916 Central Production Facility as a result of this proposed activity. Emissions from the proposed operations are estimated using the EPA Factors Publications referenced in the tables. Actual emissions are expected to be below those here.

10. **ENVIRONMENTAL REPORT**

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

11. **SAFETY FEATURES AND ENVIRONMENTAL SAFEGUARDS**

Chevron will comply with all pertinent regulations in 30 CFR 250.34, NTL's, and all federal and state regulations 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 MMS lease agreement during all activities in Mobile Blocks 872. No new or unusual technology will be required as a result of the proposed operation.

12. **BOND REQUIREMENTS**

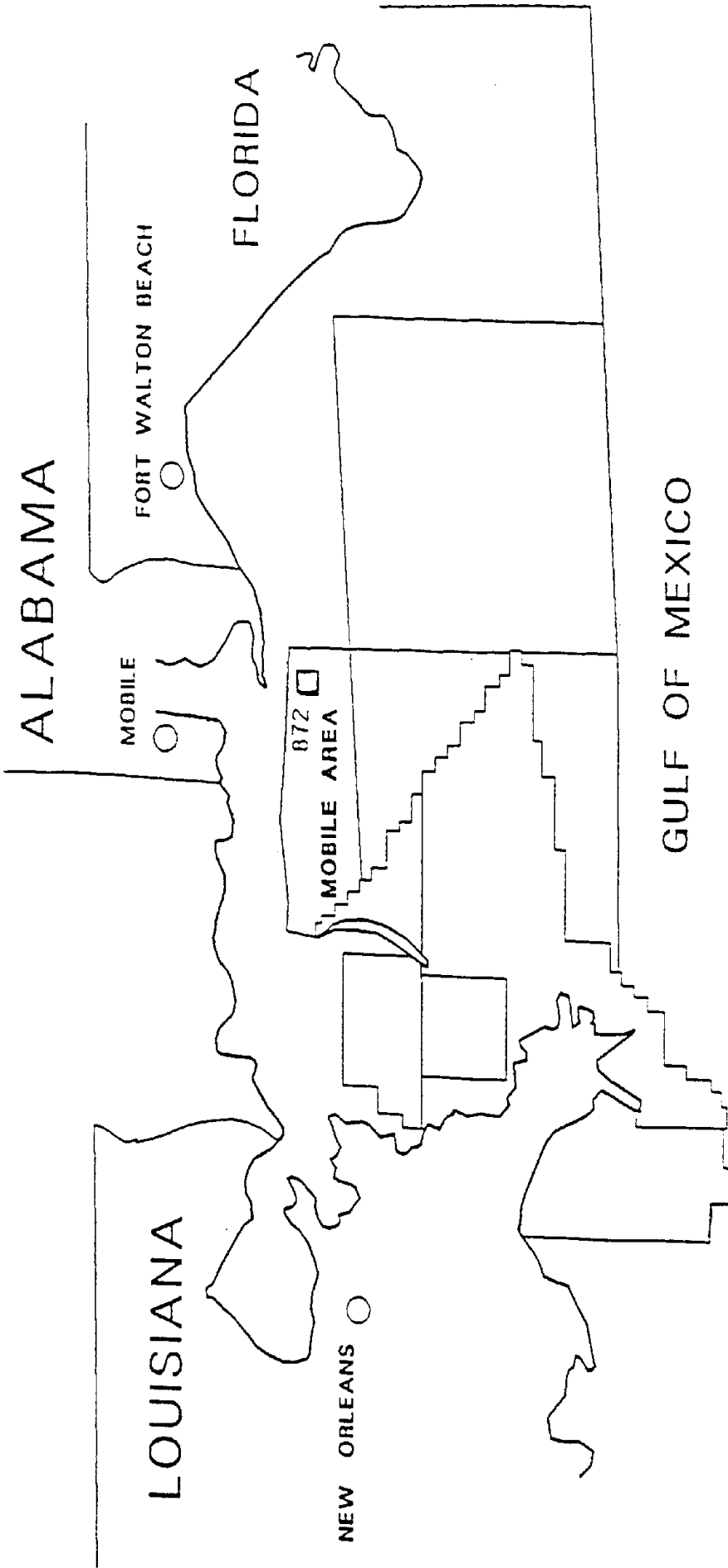
The activity proposed in this DOCD is covered by Chevron's \$300,000.00 area wide bond as supplemented by a \$2,700,000.00 rider filed with the MMS on November 19, 1993 pursuant to direction from the MMS Office of Adjudication.

13. **LEASE STIPULATIONS**

Chevron acknowledges that OCS-G-6850 contains Lease Stipulation #1 - Cultural Resources, #3 - Live Bottom, and #4 - Military Warning Area W-155 respectively. All operations shall be conducted in compliance with said stipulations.

14. **CZM CONSISTENCY**

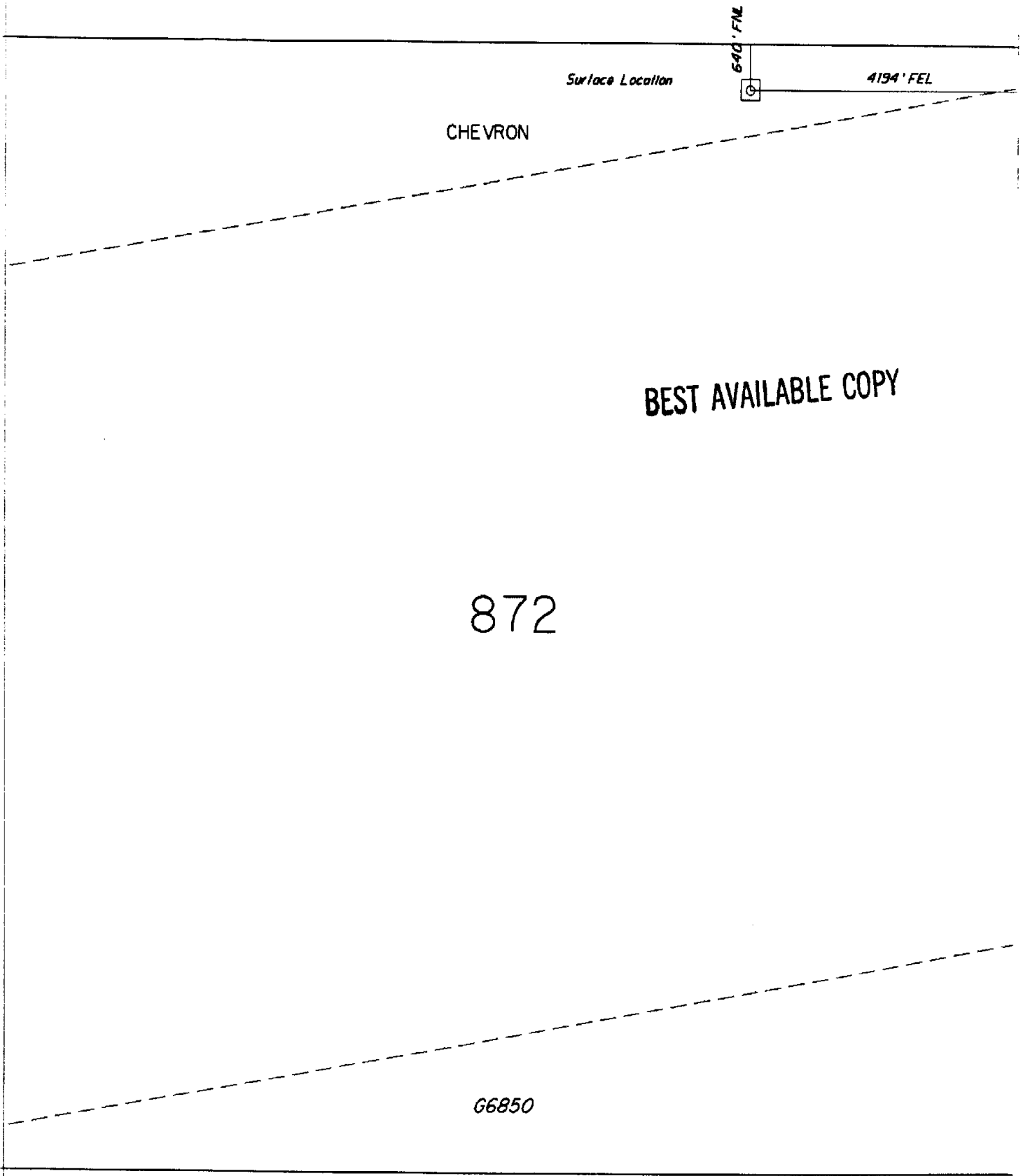
The Coastal Zone Management Consistency Certification is included in this document as Attachment #8. To the best of our knowledge, the set of findings included in the Environmental Report and DOCD indicate that each of the proposed activities, their associated facilities and effects, are consistent, comply with and will be conducted in a manner consistent with the provisions and guidelines of the Alabama and Mississippi Coastal Management Programs.



VICINITY MAP

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DRAWING NOT TO SCALE



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872

66850

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

ATTACHMENT #2

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



Gulf of Mexico Business Unit

MOBILE BLOCK 872

Offshore Alabama

LOCATION PLAT

OCSG-6850 #1

SCALE: 1" = 2000'

DATE: 05-23-95

ATTACHMENT #5

DOCD MO 872 Block

Activities to be covered under DOCD:

- To allow for the installation of flowline bundles to produce MO 872 #1 well to MO 916 "AP" (Central Production Facility)
- To allow for installation of Deck / Facilities and Hook-up MO872 "A" Satellite facility

Schedule of Activities

Flowline Installation

8/95 MO 872 "A" 15 days (crosses fairway)
Corps of Engineers Permit required

Flowline Bundle: 1 each 2" fuel gas, 3" solvent, 6" bulk production (wet natural gas)

Marine Vessel Support Requirements:

Lay Barge w/ tug, periodic Crew Boat runs (assume every 3 days), Cargo Barge w/ tug (3 days), Dive Boat (5 days)

Deck Installations

9/95 MO 872 "A" 3 days

Marine Vessel Support Requirements:

Derrick Barge w/ tug, Cargo Barge w/ tug, periodic Crew Boat runs (assume every 3 days)

Deck / Facilities Hook-up

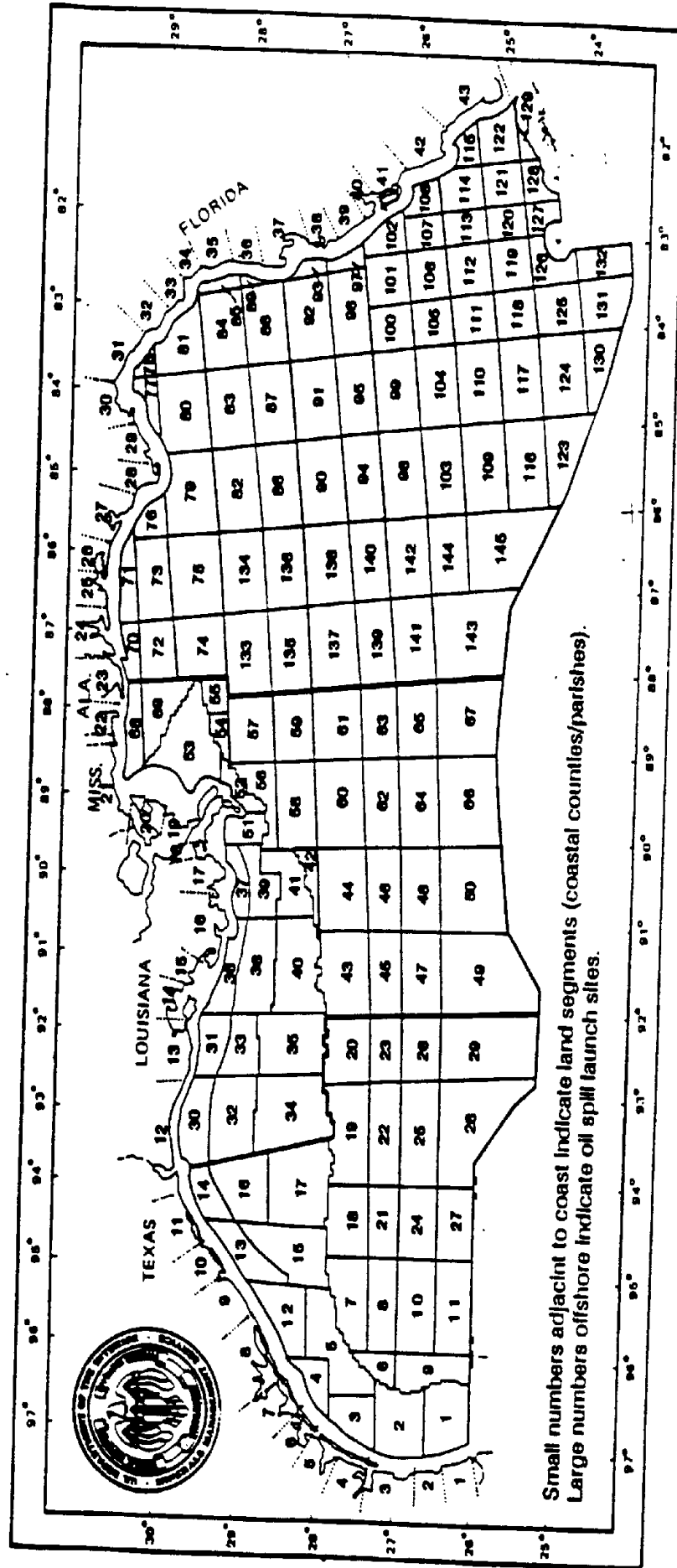
10/95 MO 872 "A" 15 days

Marine Vessel Support Requirements:

Jack-up Boat, periodic Crew Boat Runs (assume every 2 days), Cargo Boat (3 days only)

Production Start-up

To be produced through Central Production Facilities MO 916 "AP"
Commencement of Production 10/95



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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	n	n	n	n	n	n	n
20	n	n	n	10	1	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
21	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
22	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
23	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
24	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
25	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
26	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
27	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	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	n	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	n	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	n	4	n	n	n	n	n	n	n	n	n	n	n	n	n	n
35	n	n	n	n	n	n	n	n	n	n	5	n	n	n	n	n	n	n	n	n	n	n	n	n	n
36	n	n	n	n	n	n	n	n	n	n	5	n	n	n	n	n	n	n	n	n	n	n	n	n	n
37	n	n	n	n	n	n	n	n	n	n	1	n	n	n	n	n	n	n	n	n	n	n	n	n	n
38	n	n	n	n	n	n	n	n	n	n	n	5	n	n	n	n	n	n	n	n	n	n	n	n	n
39	n	n	n	n	n	n	n	n	n	n	n	n	3	n	n	n	n	n	n	n	n	n	n	n	n

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

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COASTAL ZONE MANAGEMENT

CONSISTENCY CERTIFICATION

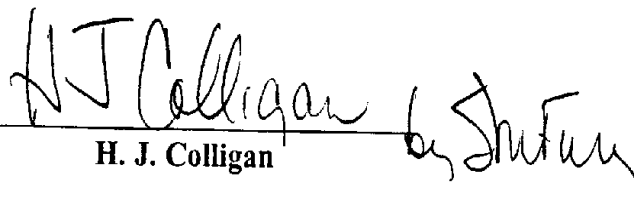
**TYPE OF PLAN: DEVELOPMENT OPERATIONS
COORDINATION DOCUMENT (DOCD)**

AREA AND BLOCK: MOBILE BLOCK 872

LEASE NUMBER: OCS-G-6850

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**



H. J. Colligan

June 30, 1995

APPENDIX "A"
AIR EMISSIONS REPORT

COMPANY	Chevron U.S.A.
AREA	MOBILE
BLOCK	872
LEASE	OCS-G-6850
PLATFORM	"A"
WELL	Flowline/ Facility
LATITUDE	
LONGITUDE	
COMPANY CONTACT	Sandi Fury
TELEPHONE NO.	504-592-6095
REMARKS	

AIR EMISSION CALCULATIONS

Fuel Usage Conversion Factors		Natural Gas Turbines		Natural Gas Engines		Diesel Recip. Engine		REF.	DATE
	SCF/hp-hr	9.524	7.143	7.143	0.0483	0.0483	AP42 3.2-1	AP42 3.2-1	4/76 & 8/94
Equipment/Emission Factors	units	TSP	SOX	NOx	VOC	CO	REF.	DATE	
NG Turbines	gms/hp-hr		0.34	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	11	0.33	2.4	AP42 3.4-1	4/93	
NG Heaters/Boilers/Burners	lbs/mmscf	5	362	140	2.8	35	AP42 1.4-1/2/3	4/93	
NG Flares	lbs/mmscf		68.5	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				

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COMPANY	MOBILE	AREA	BLOCK	LEASE	PLATFORM	WELL	LATITUDE	LONGITUDE	CONTACT	PHONE	REMARKS	TONS PER YEAR								
												CO	SOx	NOx	VOC	TSP	SOx	NOx	VOC	TSP
Chevron U.S.A.																				
OPERATIONS																				
		EQUIPMENT																		
		Diesel Engines																		
		Nat. Gas Engines																		
			MMBTU/HR	SCF/HR	SCFD	HR/D	DAYS	TSP	SOx	NOx	VOC	CO	TSP	SOx	NOx	VOC	CO			
DRILLING		PRIME MOVER->600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
		PRIME MOVER->600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
		PRIME MOVER->600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
		AUXILIARY EQUIP->600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
		VESSELS->600hp diesel(supply)	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
		PIPELINE LAY BARGE diesel	4960	239.568	5749.63	24	15	2.62	16.28	120.18	3.61	26.22	0.47	2.93	21.63	0.65	4.72			
PIPELINE		SUPPORT VESSEL-cargo	3000	144.9	3477.60	24	3	1.59	9.85	72.69	2.18	15.86	0.06	0.35	2.62	0.08	0.57			
INSTALLATION		SUPPORT VESSEL-crew	2000	96.6	2318.40	2	6	1.06	6.56	48.46	1.45	10.57	0.01	0.04	0.29	0.01	0.06			
		SUPPORT VESSEL-dive	2000	96.6	2318.40	24	5	1.06	6.56	48.46	1.45	10.57	0.06	0.39	2.91	0.09	0.63			
		DERRICK BARGE diesel	4960	239.568	5749.63	24	3	2.62	16.28	120.18	3.61	26.22	0.09	0.59	4.33	0.13	0.94			
FACILITY		MATERIAL TUG diesel	3600	173.88	4173.12	24	3	1.90	11.81	87.22	2.62	19.03	0.07	0.43	3.14	0.09	0.69			
INSTALLATION		SUPPORT VESSEL-crew	2000	96.6	2318.40	2	1	1.06	6.56	48.46	1.45	10.57	0.00	0.00	0.05	0.00	0.01			
offshore		JACK-UP WORK VESSEL diesel	2500	120.75	2898.00	24	15	1.32	8.20	60.57	1.82	13.22	0.24	1.48	10.90	0.33	2.38			
hook-up		SUPPORT VESSEL-crew	2000	96.6	2318.40	2	8	1.06	6.56	48.46	1.45	10.57	0.01	0.05	0.39	0.01	0.08			
		SUPPORT VESSEL-cargo	3000	144.9	3477.60	6	3	1.59	9.85	72.69	2.18	15.86	0.01	0.09	0.65	0.02	0.14			
		RECIP->600hp diesel-crane	152	7.3416	176.20	3	90	0.33	0.31	4.69	0.37	1.01	0.05	0.04	0.63	0.05	0.14			
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 crew	2000	96.6	2318.40	2	60	1.06	6.56	48.46	1.45	10.57	0.06	0.39	2.91	0.09	0.63			
		SUPPORT VESSEL supply	3000	144.9	3477.60	6	36	1.59	9.85	72.69	2.18	15.86	0.17	1.06	7.85	0.24	1.71			
		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	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	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	0.00	0.00			
		RECIP 4 cycle rich nat gas-gen	375	2678.625	64287.00	24	90	0.00	0.00	8.26	0.12	7.10	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	0.12	7.67			
		MISC.	BPD	SCF/HR	COUNT															
		TANK-	0																	
		FLARE-	0	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		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00			
		FUGITIVES-	0	0	1000.0	0	90		0.03	0.00	0.03	0.00		0.00	0.00	0.03	0.00			
		GLYCOL STILL VENT-	0	0		0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00			
DRILLING		OIL BURN	0	0		0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00			
WELL TEST		GAS FLARE	0	0		0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00			
		1995 YEAR TOTAL						18.85	115.25	881.45	25.97	193.25	1.30	7.85	67.22	1.93	20.39			
EXEMPTION		DISTANCE FROM LAND IN																		
CALCULATION		MILES																		
		MOB63-XLV																		

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MO863-XLW

COMPANY	MOBILE	AREA	BLOCK	LEASE	PLATFORM	WELL	LATITUDE	LONGITUDE	CONTACT	PHONE	REMARKS	POUNDS PER HOUR							TONS PER YEAR						
												MAX. FUEL	ACT. FUEL	GAL/D	SCF/D	TSP	SOx	NOx	VOC	CO	TSP	SOx	NOx	VOC	CO
OPERATIONS		EQUIPMENT		HP	MMBTU/HR	SCF/HR	HR/D	DAYS	POUNDS PER HOUR							TONS PER YEAR									
		Diesel Engines		HP	MMBTU/HR	SCF/HR	HR/D	DAYS	TSP	SOx	NOx	VOC	CO	TSP	SOx	NOx	VOC	CO							
DRILLING		PRIME MOVER	>600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
		PRIME MOVER	>600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
		AUXILIARY EQUIP	<600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
		VESSELS	>600hp diesel(crew)	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 INSTALLATION		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							
		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	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							
		JACK-UP WORK 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							
		SUPPORT VESSEL-crew		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
		SUPPORT VESSEL-cargo		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							
PRODUCTION		RECIP. <600hp diesel-crane		152	7,3416	176.20	3	365	0.33	0.31	4.69	0.37	1.01	0.18	0.17	2.57	0.21	0.56							
		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 crew		2000	96.6	2318.40	2	260	1.06	6.56	48.46	1.45	10.57	0.27	1.71	12.60	0.38	2.75							
		SUPPORT VESSEL supply		3000	144.9	3477.60	6	156	1.59	9.85	72.69	2.18	15.86	0.74	4.61	34.02	1.02	7.42							
		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	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	0.00	0.00							
		RECIP. 4 cycle rich nat gas-gen		375	2678.625	64287.00	24	365	0.00	0.00	8.26	0.12	7.10	0.00	0.01	36.18	0.51	31.11							
		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																			
DRILLING WELL TEST		TANK-		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							
		FLARE-		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							
		PROCESS VENT-		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							
		FUGITIVES-		0	0	1000.0	0	365	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
DRILLING WELL TEST		GLYCOL STILL VENT-		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							
		OIL BURN		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							
		GAS FLARE		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							
1996 YEAR TOTAL												2.98	16.72	134.09	4.15	34.55	1.20	6.49	85.36	2.22	41.84				
EXEMPTION CALCULATION												149.85	149.85	149.85	149.85	149.85	149.85	149.85	149.85	149.85	149.85	9313.89			
DISTANCE FROM LAND IN MILES												4.5													

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MO863.XLW

COMPANY	MOBILE	AREA	BLOCK	LEASE	PLATFORM	WELL	LATITUDE	LONGITUDE	CONTACT	PHONE	REMARKS	TONS PER YEAR											
												MAX. FUEL	ACT. FUEL	HR/D	DAYS	TSP	SOX	NOX	VOC	CO	TSP	SOX	NOX
OPERATIONS		EQUIPMENT		OC-S-G-6850	"A"	Flowline Facility	POUNDS PER HOUR					TONS PER YEAR											
		HP	MMBTU/HR	SCF/HR	SCF/D	HR/D	DAYS	TSP	SOX	NOX	VOC	CO	TSP	SOX	NOX	VOC	CO						
DRILLING		Diesel Engines	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						
		Nat Gas Engines	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
		PRIME MOVER->600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
		PRIME MOVER->600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
		AUXILIARY EQUIP-<600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
PIPELINE INSTALLATION		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						
		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 INSTALLATION		DERRICK BARGE diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
		MATERIAL TUG diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
		RECIP -<600hp diesel-crane	152	7,3416	176.20	3	365	0.33	0.31	4.69	0.37	1.01	0.18	0.17	2.57	0.21	0.56						
		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 crew	2000	96.6	2318.40	2	260	1.06	6.56	48.46	1.45	10.57	0.27	1.71	12.60	0.38	2.75						
		SUPPORT VESSEL supply	3000	144.9	3477.60	6	156	1.59	9.85	72.69	2.18	15.86	0.74	4.61	34.02	1.02	7.42						
		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	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	0.00	0.00						
		RECIP 4 cycle rich nat gas-gen	375	2678.625	64287.00	24	365	0.00	0.00	8.26	0.12	7.10	0.00	0.01	36.18	0.51	31.11						
DRILLING WELL TEST		MISC.	BPD	SCF/HR	COUNT																		
		TANK-	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
		FLARE-	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
		PROCESS VENT-	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
		FUGITIVES-	0	0	1000.0	0	365	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
1997 YEAR TOTAL		GLYCOL STILL VENT-	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
		OIL BURN	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	GAS FLARE	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
EXEMPTION CALCULATION								2.98	16.72	134.09	4.15	34.55	1.20	6.49	85.36	2.22	41.84						
DISTANCE FROM LAND IN MILES								149.85	149.85	149.85	149.85	149.85	149.85	149.85	149.85	149.85	9313.69						

AIR EMISSION CALCULATIONS

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL	
Chevron U.S.A.	MOBILE	872	OCS-G-6850	"A"	Flowline/ Facility	
Year		Emitted			Substance	
	TSP	SOX	NOX	HC	CO	
1995	1.30	7.85	67.22	1.93	20.39	
1996	1.20	6.49	85.36	2.22	41.84	
1997	1.20	6.49	85.36	2.22	41.84	
1998	1.20	6.49	85.36	2.22	41.84	
1999	1.20	6.49	85.36	2.22	41.84	
2000	1.20	6.49	85.36	2.22	41.84	
2001	1.20	6.49	85.36	2.22	41.84	
2002	1.20	6.49	85.36	2.22	41.84	
2003	1.20	6.49	85.36	2.22	41.84	
2004	1.20	6.49	85.36	2.22	41.84	
Allowable	149.85	149.85	149.85	149.85	9313.89	

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ENVIRONMENTAL REPORT

**Mobile 916 Area
Norphlet Gas Development**

**Development Operations
Coordination Document**

Submitted to:

**Chevron U.S.A. Production Company
935 Gravier Street
New Orleans, LA 70112**

Prepared by:

**Barry A. Vittor & Associates, Inc.
8060 Cottage Hill Road
Mobile, Alabama 36695
Phone: (334) 633-6100
FAX: (334) 633-6738**

**Submitted:
June 12, 1995**

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I. **DESCRIPTION OF PROPOSED ACTION**

Chevron U.S.A. Production Company proposes to construct, maintain and operate a flowline bundle, hereafter referred to as "pipeline", connecting Federal OCS Mobile Block 872 to an existing central production facility located in Mobile Block 916, offshore Alabama (Figures 1, 2, and 3). As proposed, the initial plan of action provides for the construction of the following project components (Appendix A):

- To allow for the installation of a flowline bundle from MO 872 to the MO 916 CPF (Central Production Facility).
- To allow for installation of Deck/Facilities and Hook-up of MO 872 "A" (well facility).
- To allow for commencement of production of Well MO 872 "A."

At this time, the planned commencement date for proposed activities is on or about July 15, 1995.

A. **DESCRIPTION OF PROPOSED TRAVEL MODES, ROUTES AND FREQUENCY**

Support vessels will be dispatched from a support base. The boats will normally move to the block via the most direct route, however, boats operating in the field may travel from other facilities nearby.

Following is an estimate of trips to the proposed operation.

<u>Support vessel</u>	<u>Construction Operations</u>	<u>Producing Operations</u>
(1) Crew Boat	As Needed	5 Trips/Week
(1) Supply Boat	As Needed	3 Trips/Week
Helicopter	Daily or As Needed	Daily or As Needed

B. **ONSHORE SUPPORT BASE**

The pipeline construction operation would be serviced out of an onshore support base serviced out of either Theodore, AL or Pascagoula, MS. Chevron currently utilizes shore bases in both locations which have adequate resources, personnel, space, and equipment to support pipeline construction activity, as well as the gas producing operations proposed in the Mobile area..

C. **NEW ONSHORE SUPPORT FACILITIES**

No new onshore support facilities are required to support the proposed offshore operation.

D. **NEW OR UNUSUAL TECHNOLOGY**

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

E. **VICINITY MAP**

The proposed activity in Federal OCS Mobile Blocks 872 and 916 is located approximately 4.5 miles

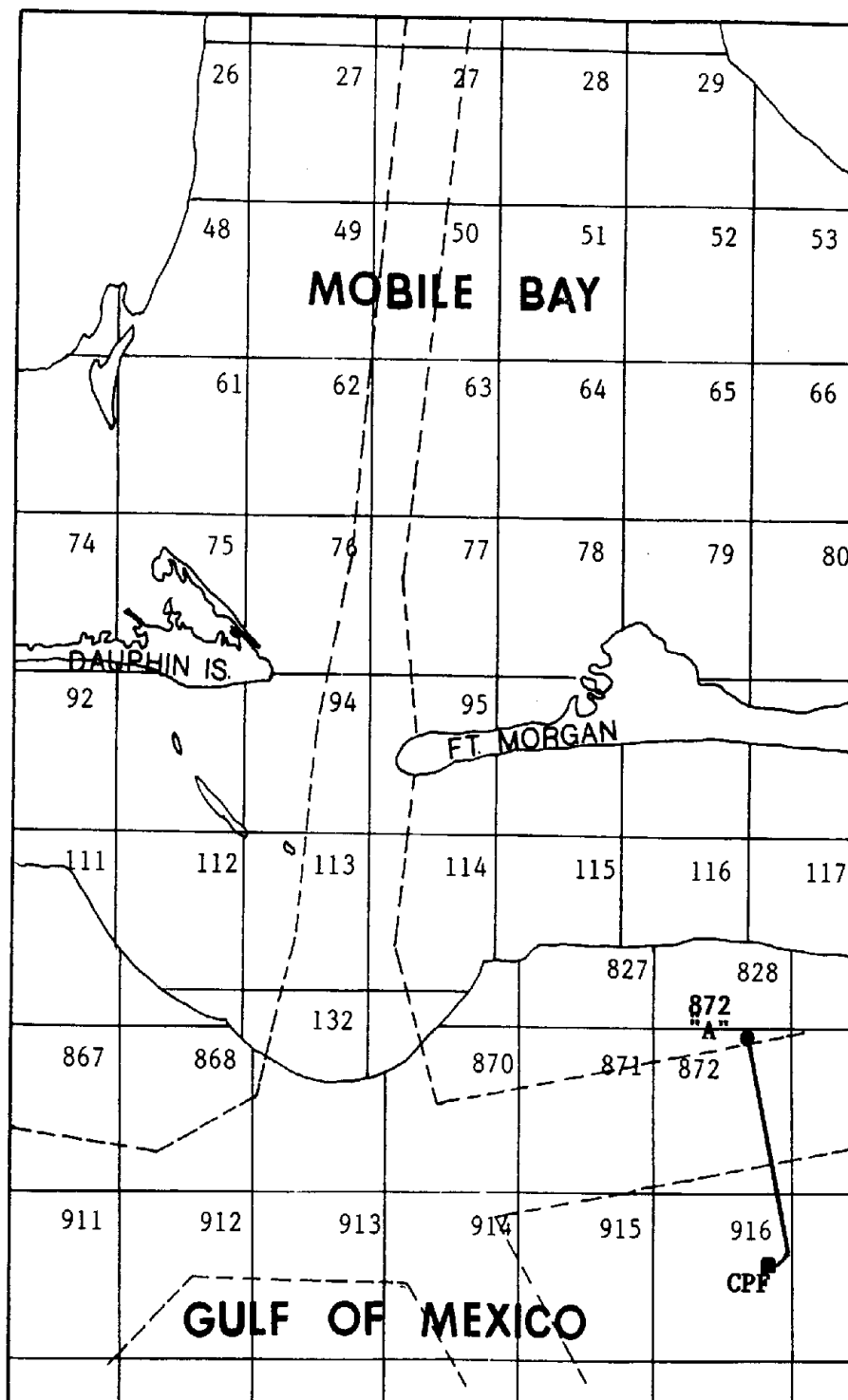
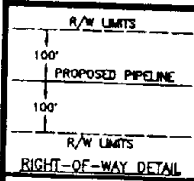


Figure 1. Proposed Chevron flowline bundle route in Federal waters off Fort Morgan, Alabama.

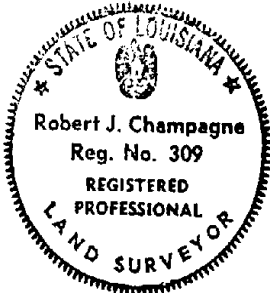
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00+00.00 BLK 872
Prop "A" Str
X= 1,358,040.00'
Y= 10,944,790.00'
Lat. 30° 09' 13.493"
Lon. 87° 53' 37.431"

06+25.63
Fairway Crossing
X= 1,358,163.35'
Y= 10,944,176.66'
Lat. 30° 09' 07.430"
Lon. 87° 53' 35.971"

TOTAL LENGTH = 22,812.70' = 4.32 MI
**PROPOSED 6" GAS, 2" FUEL GAS
& 3" SOLVENT PIPELINES**

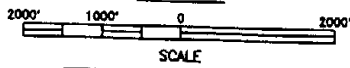


BLK 872
OCS-G-6850
CHEVRON

FAIRWAY

BLK 873

PLAN



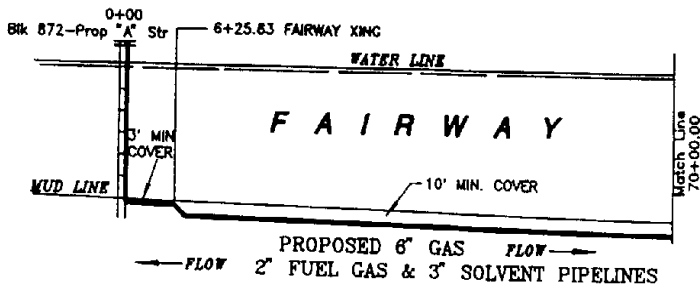
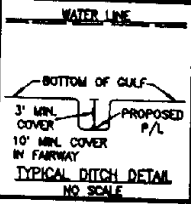
THE RIGHT OF WAY OF THE PROPOSED PIPELINES IS ACCURATELY REPRESENTED

Robert J. Champagne
REG. PROFESSIONAL LAND SURVEYOR NO. 309
STATE OF LOUISIANA
JOHN E. CHANCE & ASSOCIATES, INC.

COORDINATES BASED UPON:
GEODETTIC DATUM: NAD 1927
CLARKE 1866
PROJECTION: U.T.M.
ZONE: 16

THE DESIGN CHARACTERISTICS OF THIS PIPELINE ARE IN COMPLIANCE WITH APPLICABLE REGULATIONS.

AREA ENGINEER



PROFILE



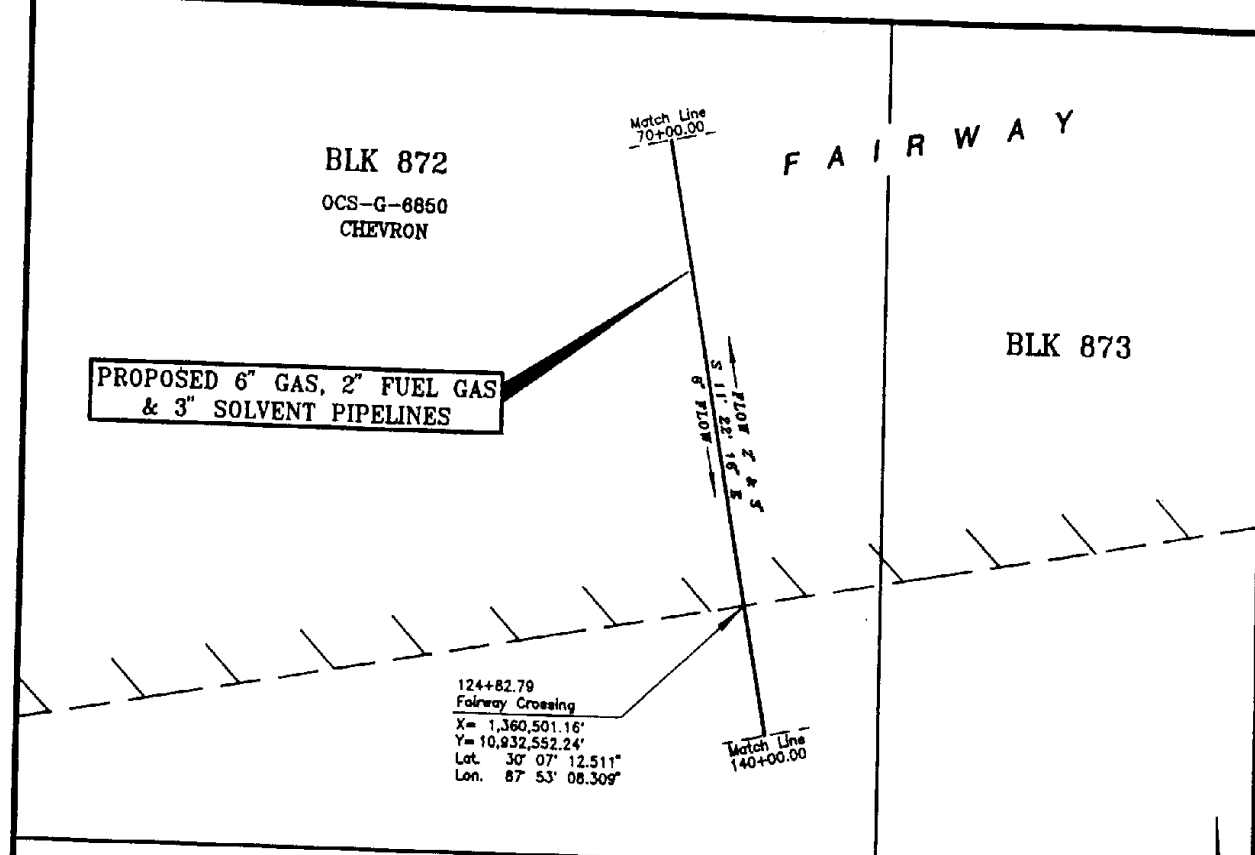
APPLICATION BY
CHEVRON U.S.A. INC.
NEW ORLEANS, LA.
MAY 4, 1995

**PROPOSED 6" GAS, 2" FUEL GAS
& 3" SOLVENT PIPELINE BUNDLE**
BLK 872 TO BLK 916
MOBILE AREA
GULF OF MEXICO

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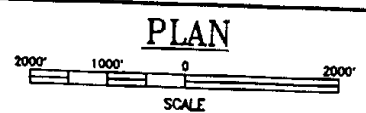
Figure 2. Flowline route detail, Block 872 to Block 916.

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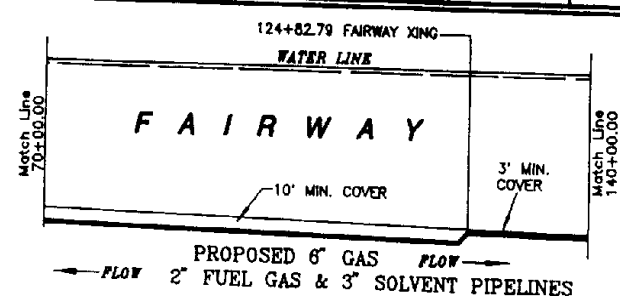
124+82.79
Fairway Crossing
X= 1,360,501.16'
Y= 10,932,552.24'
Lat. 30° 07' 12.511"
Lon. 87° 53' 08.309"

BLK 916
OCS-G-6753
UNOCAL



PLAN

COORDINATES BASED UPON:
GEODETIC DATUM: NAD 1927
CLARKE 1866
PROJECTION: U.T.M.
ZONE: 16



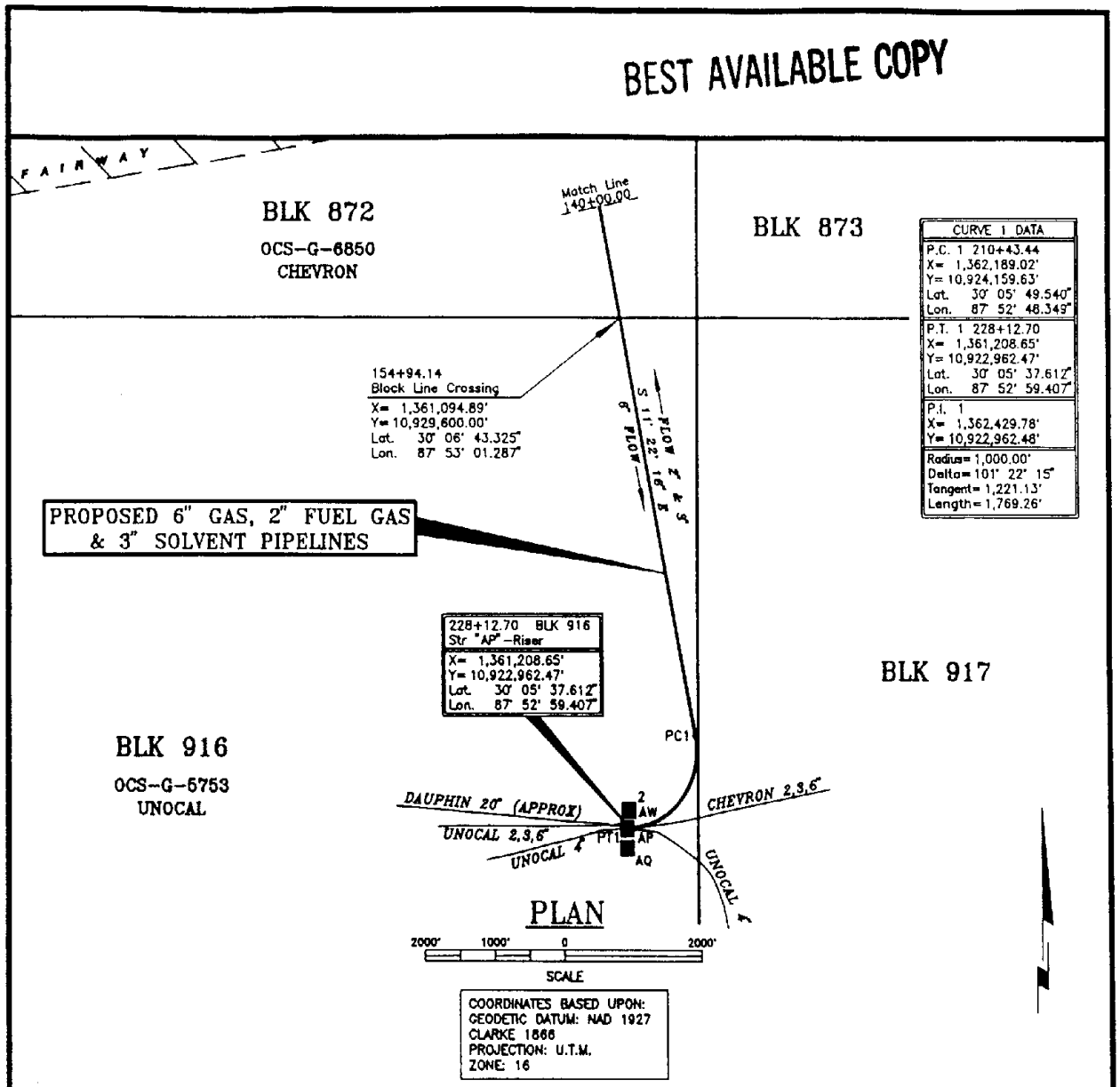
APPLICATION BY
CHEVRON U.S.A. INC.
NEW ORLEANS, LA.
MAY 4, 1995

**PROPOSED 6" GAS, 2" FUEL GAS
& 3" SOLVENT PIPELINE BUNDLE**
BLK 872 TO BLK 916
MOBILE AREA
GULF OF MEXICO

FILE: F.MGK\950371.DWG

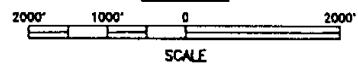
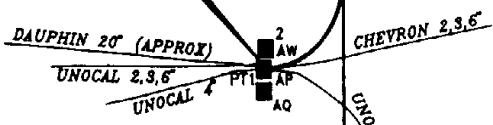
Figure 2 (cont.)

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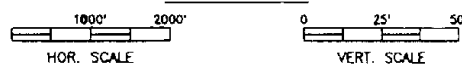
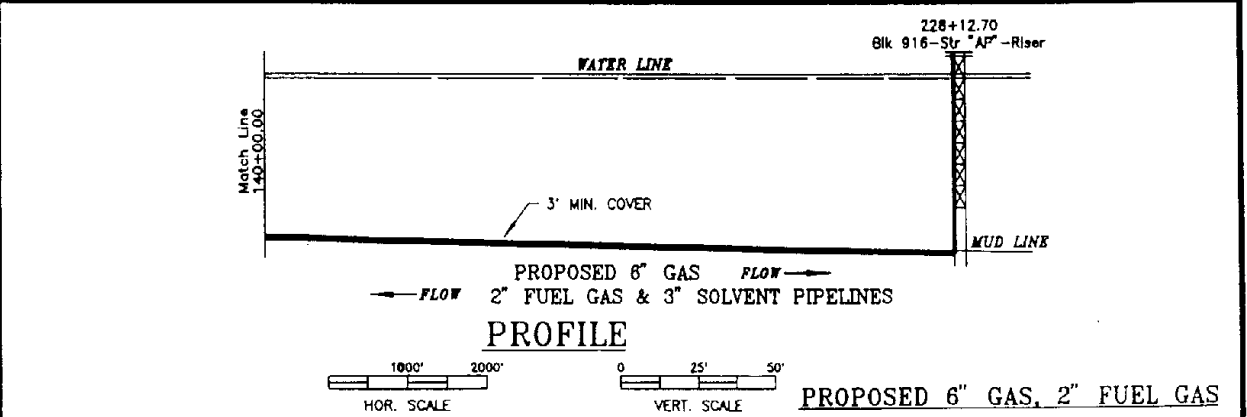


CURVE 1 DATA	
P.C. 1	210+43.44
X	1,362,189.02'
Y	10,924,159.63'
Lat.	30° 05' 49.540"
Lon.	87° 52' 48.349"
P.T. 1	228+12.70
X	1,361,208.65'
Y	10,922,962.47'
Lat.	30° 05' 37.612"
Lon.	87° 52' 59.407"
P.I. 1	
X	1,362,429.78'
Y	10,922,962.48'
Radius	1,000.00'
Delta	101° 22' 15"
Tangent	1,221.13'
Length	1,769.26'

228+12.70	BLK 916
Str "AP" -Riser	
X	1,361,208.65'
Y	10,922,962.47'
Lat.	30° 05' 37.612"
Lon.	87° 52' 59.407"



COORDINATES BASED UPON:
 GEODETIC DATUM: NAD 1927
 CLARKE 1866
 PROJECTION: U.T.M.
 ZONE: 16



APPLICATION BY
 CHEVRON U.S.A. INC.
 NEW ORLEANS, LA.
 MAY 4, 1995

**PROPOSED 6" GAS, 2" FUEL GAS
 & 3" SOLVENT PIPELINE BUNDLE**
 BLK 872 TO BLK 916
 MOBILE AREA
 GULF OF MEXICO

FILE: F:\MKG\950371.DWG

Figure 2 (cont.)

MOBILE BLK 872 "A" STR. OCS-G 6850

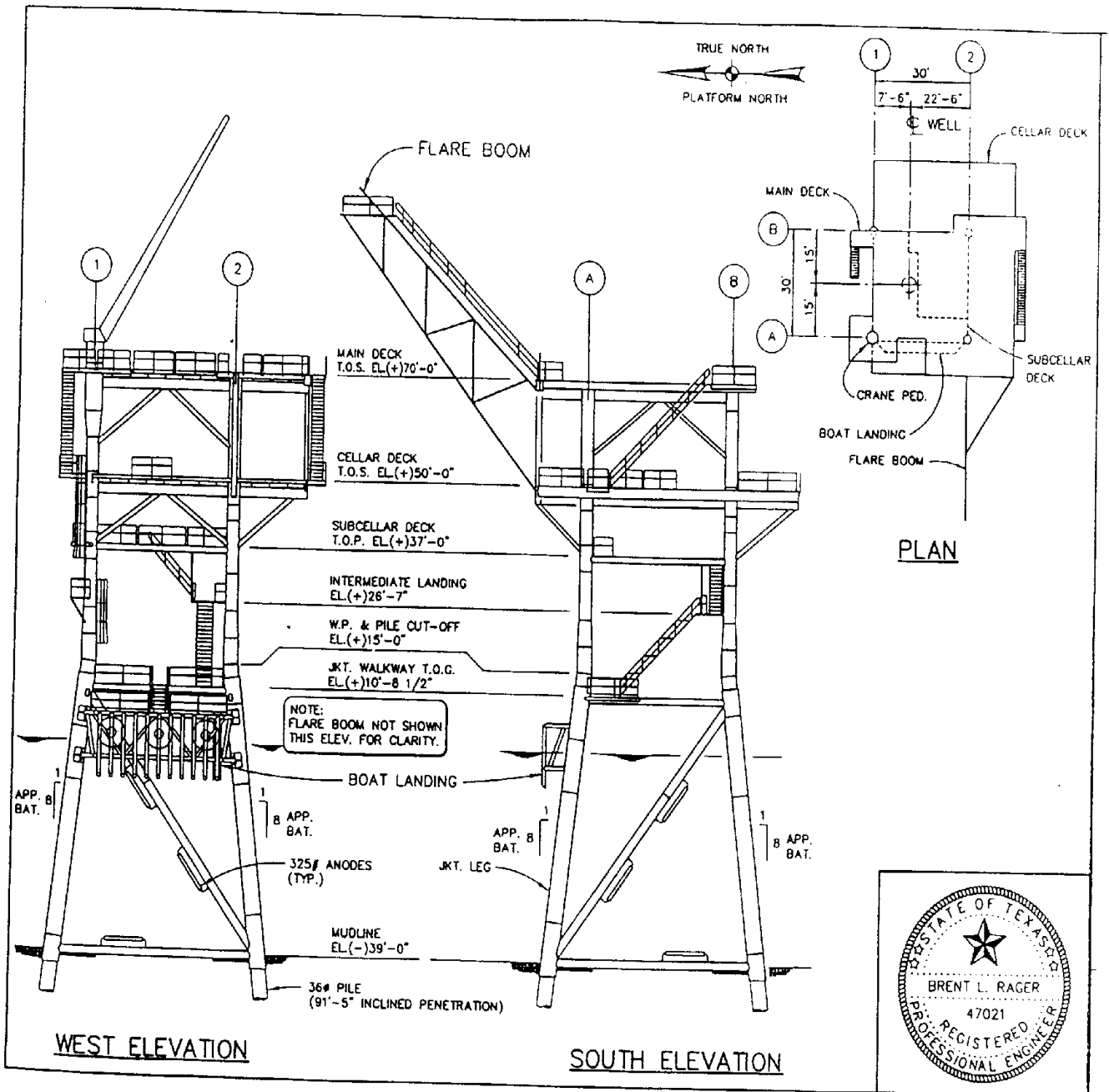


Figure 3. Proposed production platform in Federal OCS Mobile Block 872.

south of the Fort Morgan, Alabama shoreline.

F. METHOD AND RATE OF GAS TRANSPORT TO SHORE

Sweetened and dehydrated gas will be carried from the CPF to shore-based delivery systems via an existing 20-inch pipeline. This pipeline is operated by Dauphin Island Gathering Partners and carries sweet gas to a compressor station in south Mobile County, where it is distributed for sale.

II. DESCRIPTION OF AFFECTED ENVIRONMENT

A. PHYSICAL AND ENVIRONMENTAL

1. Commercial Fishing

Commercial fisheries provide a valuable resource to the economy of Alabama. In 1993, over \$34.2 million entered Alabama's economy via Gulf of Mexico commercial fisheries, nearly \$19.3 million of which came from Alabama offshore waters (National Marine Fisheries Service, 1994). Although a considerable amount of the commercial fisheries activity occurs at least 5 km offshore, much of the commercial catch is composed of estuarine-dependent species. In Alabama, 92% of the catch by weight and 98% of the value of the commercial catch is composed of estuarine-dependent species. Major fish and shellfish species with commercial and recreational value are listed in Appendix B.

The commercial shrimping industry is the most economically important fishery in Alabama, contributing 68% of the weight and 88% of the value of the total Alabama seafood landings in 1993. The three species of shrimp which represent the Alabama and Mississippi catches are the white shrimp (*Penaeus setiferus*), the brown shrimp (*Penaeus aztecus*), and the pink shrimp (*Penaeus duorarum*). In 1993, over 75% of the commercial finfish came from offshore fishermen (National Marine Fisheries Service, 1994). The species dominating this catch were the red snapper (*Lutjanus campechanus*), the southern flounder (*Paralichthys lethostigma*), the striped mullet (*Mugil cephalus*), and the Atlantic croaker (*Micropogonias undulatus*).

Commercial fisheries also provide a valuable resource to the economy of Mississippi. In 1983, over \$29 million entered Mississippi's economy via Gulf of Mexico commercial fisheries, nearly \$9.2 million of which came from Federal OCS waters (National Marine Fisheries Service, 1994). Although a considerable amount of the commercial fisheries

activity occurs at least 5 km offshore, much of the commercial catch is composed of estuarine-dependent species. In Mississippi, 87% of the catch by weight and 88% of the value of the commercial catch is composed of estuarine-dependent species.

The commercial finfish and shrimping industries are the most economically important fisheries in Mississippi, contributing 46% and 45%, respectively, of the value of the total Mississippi seafood landings in 1993. In 1993, nearly 80% of the commercial finfish came from offshore fishermen (beyond 5 km of the shoreline) (National Marine Fisheries Service, 1994). The species dominating this catch were the menhaden (*Brevoortia patronus*), the red snapper (*Lutjanus campechanus*), and the Atlantic croaker (*Micropogonias undulatus*) (Barry A. Vittor and Associates, Inc., 1985).

2. 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 ocean-going vessels, but not all vessels stay within the fairways. Many others, such as fishing boats and support vessels, travel through areas with a high concentration of fixed structures. In such cases, the most important mitigating 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 ocean-going vessels are equipped with radar capable of aiding navigation in all weather conditions, contributing to safe navigation on the OCS.

The barge(s) and each of the marine vessels servicing these operations will be equipped with all USCG required navigational safety aids to alert ships of its presence in all weather conditions.

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The proposed flowline from Federal OCS MO 872 to MO 916 will cross a shipping safety fairway. The pipelines will be buried such that a minimum of 10 feet is provided over the top to protect against accidental impacts from marine vessels and anchors. The proposed pipeline segments that do cross a fairway will be buried a minimum of 3 feet.

3. 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 publically 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 Coast residents and tourists from throughout the nation and foreign countries use these resources extensively and intensively for recreational activity. Commercial and private recreational facilities and establishments, such as resorts, marinas, amusement parks and ornamental gardens, also serve as primary-interest areas. Beach use is a major economic factor for many Gulf coastal communities, especially during peak-use seasons in the spring and summer. Tourism in the central zone of the Gulf Coast States has been valued at an estimated \$20 billion per year.

The Gulf States from Texas to Alabama account for about 1.3 million registered motorboats and over 3.5 million paid fishing license holders. The two major recreational areas most directly associated with the offshore leasing and potentially affected by it are the offshore marine environment and the coastal shorefront of the adjoining states. The major recreational activity occurring on the OCS is offshore marine recreational fishing and diving.

4. Potential or Known Cultural Resources

Surveys of the area around the proposed pipeline corridor were conducted by John E. Chance and Associates, Inc. in 1995. They reported that there were some ferrous anomalies and side scan sonar contacts in the vicinity of the project, and interprets them to be either modern debris or possible debris from shipwrecks. According to Laura A. Landry, Marine Archaeologist with John E. Chance and Associates, Inc. there are some records of shipwrecks in the general vicinity of Fort Morgan. However, the two closest

anomalies/contacts are at least 170 feet away from the pipeline route and would not be affected by this project. Potential prehistoric archeological sites are buried below the three-foot recommended depth for the pipeline and should not be impacted by pipeline construction.

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5. Ecologically Sensitive Features

Coastal barrier landforms consist of islands, spits, and beaches that stretch in an irregular chain from Alabama to Texas. 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. Barrier landforms are young coastal features. They began to form 5,000 to 6,000 years ago after the main mass of continental ice sheets had melted and global rate of sea-level rise began to slow.

The term "barrier" identifies the structure as one that protects other features, such as bays, lagoons, estuaries, and marshes, from the direct impacts of open ocean. By separating coastal waters from the ocean, barriers contribute to the amount of estuarine habitat available along the coast. As much as two-thirds of the high-value Atlantic and Gulf species of fish are considered to be directly dependent during some stage of their life on conditions in an estuary. Another benefit of both the barriers and their adjacent marshes and bays is that of providing habitats for a large number of birds and other animals, including several threatened or endangered species, such as the loggerhead turtle, the southern bald eagle, the alligator, and the brown pelican.

The barrier landforms of the Central Gulf of Mexico occur in three settings. From east to west, these include the barrier islands of Mississippi Sound (Figure 4), the Mississippi River deltaic plain barriers, and the barriers of the Chenier Plain in Louisiana.

The Central Gulf Coast includes barrier islands that are part of the National Park System. These are the 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

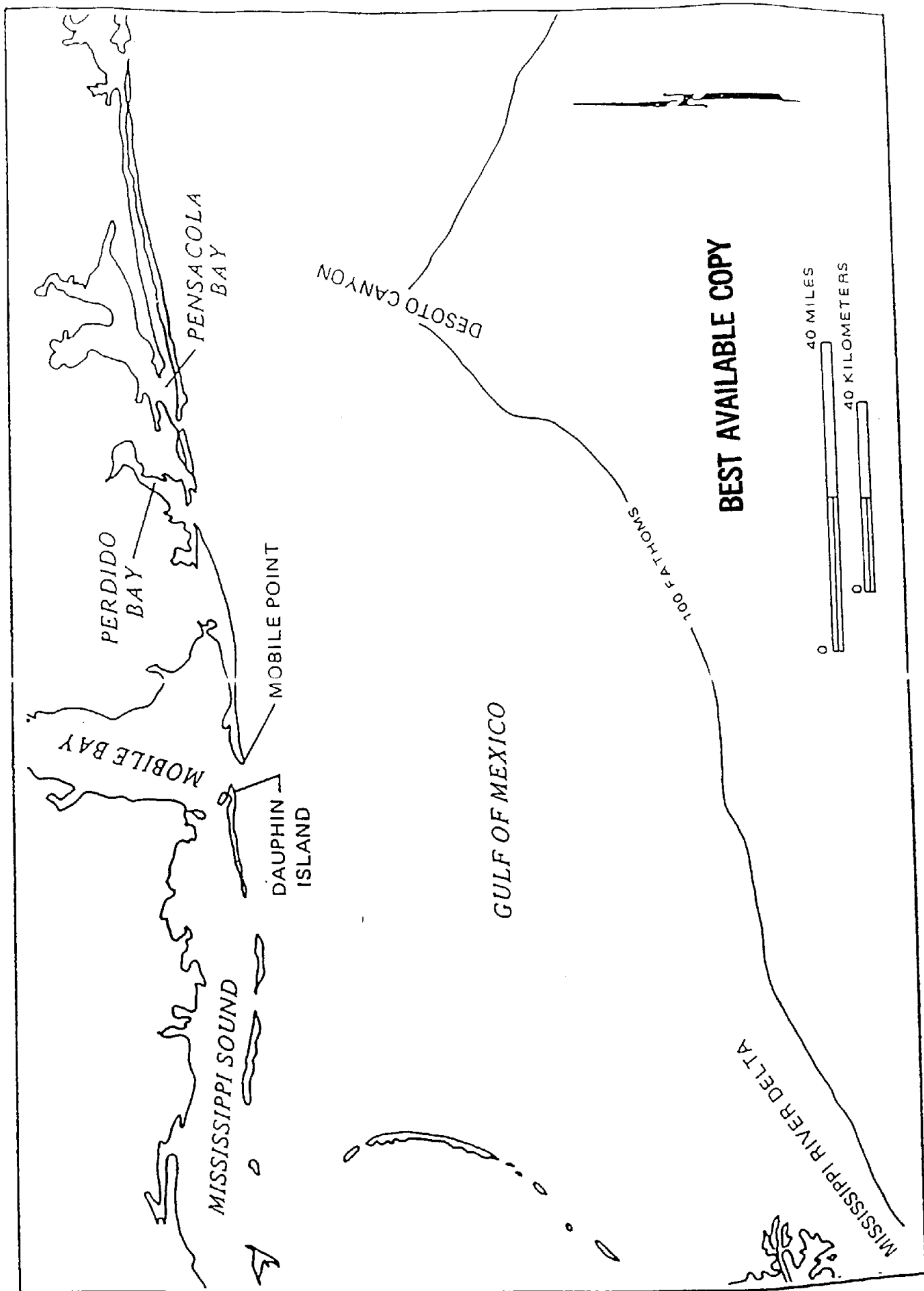


Figure 4. Mississippi-Alabama Shelf section of the Continental Shelf province (Boone, 1973).

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nursery grounds for juvenile forms of many important fish species.

In Mississippi and Alabama, the mainland marshes behind Mississippi Sound occur as discontinuous wetlands associated with estuarine environments (Figure 5). The most extensive wetland areas in Mississippi occur east of the Pearl River delta near the western border of the State and in 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, 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.

On a percentage basis, wetlands loss has occurred more rapidly in Alabama during these years than it did in Louisiana. 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.

A recent study funded by MMS entitled "Causes of Wetland Loss in the Coastal Central Gulf of Mexico", examined coastal ecosystems of the Northern Gulf of Mexico region and how wetland habitats have changed as a result of natural processes and man's activities thereon. The study's primary focus was on assessing and quantifying the direct and indirect impacts of OCS-related activities on wetland areas. Canal construction for pipelines and navigation has been the major OCS-related impacting factor. Neither of these activities would be part of the proposed pipeline operations to connect Well MO 872#1 to the producing facility located in MO916..

Seagrasses are not present in offshore Alabama and Mississippi; however, fairly extensive beds may be found in some estuarine areas behind the barrier islands throughout the Gulf (Barry A. Vittor & Associates, Inc.; 1985). The most extensive beds occur in Chandeleur Sound in coastal Louisiana and in the Mississippi Sound. The distribution of seagrass beds in the Central Gulf has diminished during recent decades. The primary factors believed to be responsible for these conditions include hurricanes, freshwater diversion from the

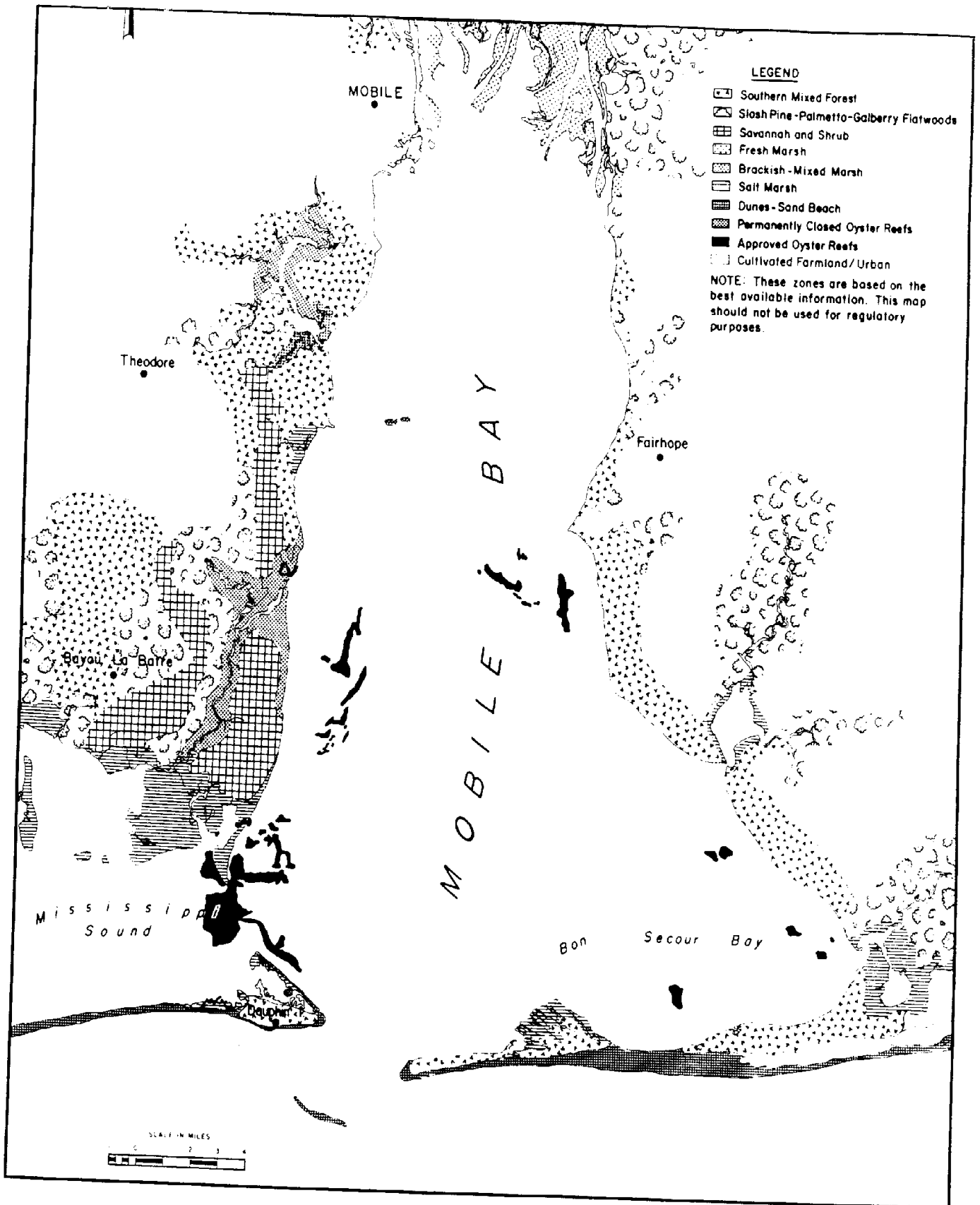


Figure 5. Major biological features of coastal Alabama, including Fort Morgan. From: U.S. Army Corps of Engineers, 1979.

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Mississippi River during flood stage into coastal areas, dredging activities and water quality degradation.

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 operation, 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, between 67 and 110 m (220 and 360 ft) depth. 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, scarps, and relict patch reefs. It has been postulated that these features were built during lower stands of the sea during the rise in sea level following the most recent ice age. 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 at water depths between 50 and 100 m. These structures may have a 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 (Continental Shelf Associates, Inc.; 1985). The pinnacles 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 sand. The live-bottom surveys required by MMS and conducted by John E. Chance and Associates, Inc. have also revealed sand, silt, soft clay and mud substrate in the survey area. These areas are not conducive to live-bottom community growth since a hard substrate is generally needed for epifaunal attachment. As the substrate grades to carbonate sand in the Eastern Gulf, the potential for live-bottoms increases.

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

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topographic features. None of those listed are in or near the vicinity of the proposed pipeline corridors in Federal OCS MO 872 to MO 916.

Lunar tides for the area are diurnal with an average amplitude of 0.43 m (1.4 ft) and range from 0.1 m to over 0.8 m (0.3 - 2.6 ft).

Nearshore Gulf waters can periodically be dominated by the Loop Current; however, sustained winds are the primary force that control water movements in the nearshore Gulf of Mexico. In general, winds ranging from the northwest to northeast to southeast result in Gulf surface currents that move westerly. Winds from the southeast to southwest to northwest result in easterly water movements. Tidal forces and river flow influence Gulf current movements to a lesser extent. Westerly currents generated nearshore (water less than 20 feet deep), have an average velocity of 1.0-2.5 knots which can increase to as high as 5 knots during flood tides. In areas over 20 feet deep, circulation can be influenced by a number of forces. Overall, interactions between the Mississippi Sound and the Gulf of Mexico result in dynamic and constantly changing water movement.

Surface water temperatures in nearshore Gulf waters reflect air temperatures. The water column of the nearshore Gulf is marginally stratified during winter and summer months with the following typical water temperatures (Barry A. Vittor & Associates, Inc.; 1985):

Winter season -		
surface waters		15°C
bottom waters		18°C
Summer season -		
surface waters		30°C
bottom waters		22°C

Water temperatures are more uniform with depth during Spring and Fall seasons. Surface salinities typically range from 20 ppt near the western end of Dauphin Island to over 32 ppt offshore. Bottom salinities are less variable, typically ranging from 30 to 35 ppt.

6. Pipelines and Cables

Surveys of the area were conducted by John E. Chance and Associates, Inc. in 1995. They reported the presence of other pipelines in the vicinity which would be parallel to the proposed pipeline corridor. As a prudent operator, Chevron USA Production Company will

conduct its operation in order to avoid all pipelines and/or cables in the vicinity of the proposed operations.

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7. Other Mineral Uses

The proposed pipeline corridor for Federal OCS MO 872 to MO 916 will have no direct or indirect impact on other mineral uses.

8. 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 or 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 of collecting, processing, storing, and discharging garbage and to designate the person who is in charge of carrying out the plan. These rules also apply to all oceangoing 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 major discharges from gas pipeline activities include produced water, jetting fluids, ballast water, and storage displacement water. Minor discharges include sanitary and

domestic wastes, run off from support vessels and grey water.

9. 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 (Barry A. Vittor & Associates, Inc., 1985). 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, though 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.

Four species of baleen whales (northern right, fin, sei and humpback) and one species of toothed whales (sperm whale) found within the Gulf of Mexico are currently listed as an endangered species under the provisions of the U.S. Endangered Species Act of 1973 (U.S. Fish & Wildlife Service, 1994). All are uncommon to rare in the Gulf except for the sperm whale. Appendix C lists threatened and endangered species that could occur in offshore Alabama waters.

The Alabama, Choctawhatchee and Perdido Key beach mice 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. Seeds are the major component of their diet.

The green sea 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 sea turtles prefer depths of less than 20 m, where seagrasses and algae are plentiful. Eglin Air Force Base, Santa Rosa County, Florida is the only recent (1987) nesting record of green sea turtles in the entire Gulf Coast of Florida. However, there is an important immature green turtle population ranging from Homosassa Bay, Florida to Cedar Keys, Florida (Moler, 1992).

Leatherbacks, the largest and most oceanic of the marine turtles, occasionally enter shallow

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water in more northern areas. Their nesting is concentrated on coarse-grain beaches in the tropical latitudes. The hawksbill is the least commonly reported marine turtle in the Gulf. Texas is the only Gulf state where stranded hawksbill turtles are regularly reported.

The Kemp's ridley sea turtle is the most imperiled of the world's marine turtles. Nesting in the United States occurs infrequently on Padre and Mustang Islands in south Texas from May to August. Females appear to inhabit nearshore areas, and congregations of Kemp's have been recorded off the mouth of the Mississippi River. In May 1989, one Ridley nest produced 24 hatchlings on Maderia Beach, Florida (Moler, 1992).

The loggerhead sea turtle appears worldwide in habitats ranging from estuaries to the continental shelf. Aerial surveys indicate that loggerheads are common in less than 50 m depths, but they are also found in deep water. In the Gulf of Mexico, recent surveys indicate that the Florida Panhandle accounts for only 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. Nesting in Texas occurs primarily on North and South Padre Islands, although occurrences are recorded throughout coastal Texas.

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 separated into five major groups: seabirds, shorebirds, wading birds, marsh birds and water fowl. The following coastal and marine bird species which inhabit or frequent the north-central Gulf of Mexico coastal areas and recognized by the FWS as either endangered or threatened are: piping plover, whooping crane, eskimo curlew, bald eagle, peregrine falcon, eastern brown pelican and interior least tern.

Those birds most susceptible to oiling either raft at sea, such as gulls and tern, or dive when disturbed, such as cormorants and boobies. Migrant and nonmigrant coastal and marine birds populate the beaches and wetlands of the northern Gulf of Mexico. This broad category consists of three main groups: waterfowl, wading birds and marine birds. Feeding habitats include the waters and coastal shores of the open Gulf, bays, estuaries, brackish and freshwater wetlands, as well as coastal farmlands and landfills.

The piping plover is endangered in the Great Lakes watershed and threatened elsewhere. Its

historic populations have remained depressed because of losses to their beach and nesting habitat. Piping plovers are susceptible to contact with spilled oil because of their preference for feeding in intertidal areas.

The whooping crane breeding population winters along the Texas coast from November to April, occupying the coastal marshes of Aransas, Calhoun and Matagorda Counties. Portions of these counties and the Aransas National Wildlife Refuge have been designated as critical habitat for the whooping crane.

The Arctic peregrine falcon is a subspecies of the peregrine falcon, which breeds in North American tundra. A portion of the population migrates along the Central, Mississippi and Eastern flyways to winter in the U.S. and Mexican Gulf coasts. The birds concentrate along beaches and barrier islands.

Bald eagles are found throughout the Gulf states. Bald eagles actively nest in upland and wetland areas 30-40 miles from the coast throughout the Gulf. Bald eagles inhabit areas near water although they rarely nest on the coast. They prey on birds, fish and small mammals. Historically, two nestings have occurred along the Mississippi coast. In northwestern Florida, coastal nesting occurs at St. Vincent, St. Marks and lower Suwannee National Refuges.

Brown pelicans have been removed from the Federal endangered species list in Alabama and Florida but remain listed as endangered in Mississippi, Louisiana and Texas. Their decline is primarily the result of hatching failure caused by ingestion of fish that contain pesticides. Nesting occurs in colonies on coastal islands. Brown pelicans inhabit the coast, rarely venturing into freshwater or flying more than 32 km (20 miles) offshore. They feed by plunge-diving to catch fish near the surface.

B. SOCIOECONOMICS

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 oil and gas has been a major source of revenue. Data from the 1987 Census show

that the average annual payroll associated with oil and gas activities amounts to approximately \$1.7 billion for the Central Gulf region and \$2.2 million for the Eastern Gulf region. Average annual tax dollars generated per employee in the 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 \$134.7 million from the Central Gulf and \$0.2 million from the Eastern Gulf regions, respectively.

III. UNAVOIDABLE ADVERSE ENVIRONMENTAL IMPACTS

A. WATER QUALITY

Accidental oil or other 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 potential impact level from these factors is considered to be very low.

B. EFFECTS ON MARINE ORGANISMS

Placement of the pipeline would kill or disrupt benthic organisms living under the affected area. Although some motile animals could avoid the area, some adverse impacts could not be avoided. Because benthic communities tend to recover quickly, and the area affected is small, these impacts would not be deleterious to the overall ecosystem over the long term.

C. EFFECTS ON THREATENED AND 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, pipeline construction noise, 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. Potential oil spills of any size are seldom expected to contact cetaceans.

Activities resulting from the proposed action have a very low potential to affect Alabama, Choctawhatchee, and Perdido Key beach mice. Beach mice could be impacted by oil spills and oil-spill response activities, but their habitat is isolated from the pipeline corridor by prevailing currents and tides. It is expected that there will seldom be interaction between pipeline installation or operation and beach mice or their habitats.

Activities resulting from the proposed operation have a potential to affect marine turtles. Marine turtles could be impacted by barges, pipeline installation, operational discharges, trash and debris,

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support vessel traffic, oil-spill response activities and oil spills. The effects of the majority of these activities are expected to be sublethal. Potential oil spills of any size are seldom expected to contact marine turtles.

Activities resulting from the proposed operation 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 minimal occurrence. As a result, there will be no discernible disturbance to Gulf coastal and marine birds.

The brown pelican, Arctic peregrine falcon, bald eagle, and piping plover may be impacted by helicopter and service-vessel traffic. The effects of these activities are expected to be sublethal. Potential 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. The potential for adverse impacts due to pipeline installation and operation is very low.

D. BEACHES AND WETLANDS

The proposed activity is not expected to result in any alterations of barrier beach or wetland configurations.

Pipeline installation and operation would have no impact on area swamps or marshes that occur in the coastal zone or on seagrasses that occur in small areas behind barrier islands in the Mississippi Sound and Fort Morgan Peninsula areas.

E. AIR QUALITY

Pipeline installation- and operation-related air emissions would be temporary. Localized and minor alterations to air quality would occur during the proposed activity. These effects would be due to exhaust emissions from diesel- and gasoline-powered equipment.

The potential degrading effects on air quality from onshore and offshore pipeline installation activities

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are due to barge emissions; jetting activities during exploration, delineation, and development; service vessel operation; and fugitive emissions during hydrocarbon venting and offloading.

Emissions of pollutants into the atmosphere for these activities are likely to have minimum impact on offshore air quality because of prevailing atmospheric conditions, emission heights, and pollution concentrations. Onshore impact on air quality from emission from OCS activities is estimated to be negligible because of the atmospheric regime, the emission rates, and distance of these emissions from the coastline. 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 impacts on fishing activities from the proposed operation are pipeline placement, potential oil spills and subsurface blowouts.

The emplacement of a pipeline, buried at a minimum of three feet below the seafloor, would have no permanent impact on Gulf commercial fisheries. Impacts on Central Gulf commercial fisheries during the proposed operation are considered to be very low and temporary.

G. SHIP NAVIGATION

Potential interference can be expected between the pipeline installation activities, structures and marine vessels utilized during pipeline-laying operations and ships that use established fairways.

In accordance with USCG regulations, approved aids to navigation that are aboard all marine vessels servicing these operations would minimize the risk of accidents involving these vessels.

H. CULTURAL RESOURCES

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

The proposed activity could contact a shipwreck due to incomplete knowledge of the location of shipwrecks in the Gulf. Although this occurrence is not probable, such an event could result in the

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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 are estimated to be 90% effective in identifying possible sites. No such sites were located in the proposed pipeline corridor during recent cultural resource surveys. Since potential prehistoric archeological sites would be buried below the three-foot recommended depth for the pipeline such sites would not be impacted by pipeline construction.

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

I. RECREATION AND AESTHETIC VALUES

The pipeline construction barges and support marine vessels may represent an obstacle to some sport fishing, but such effects are expected to be negligible and temporary.

The proposed operation could accidentally contribute some floatable debris to the ocean environment which will eventually wash ashore on recreational beaches.

The effects of normal operations or a minor spill on recreational fish stocks would be negligible.

Occasional minor oil spills (<50 bbls) are assumed to affect portions of area beaches with little disruption of recreational activities. During construction, a pipeline corridor in the offshore area off Alabama and Mississippi could temporarily impact the natural seascape from some wilderness beaches. Helicopter and vessel traffic will add very little additional noise pollution and should not disrupt wilderness beach occupants.

J. SOCIOECONOMICS

A high percentage of the workers involved in the proposed activity would be specialized contractors

from other regions. Therefore, the demand for increased housing or public services would be minimal. Work shift periods would extend to over 7 days with crews returning to shore only for shift changes. Surface traffic at the shorebase would consist of work boat trips at the time of shift changes and deliveries of materials and supplies. Offshore activities would result in slightly increased waterborne traffic out of the base. This traffic would result from the operation of additional crewboats, supply boats, and cargo barges. These various watercraft would shuttle back and forth between the construction project and the base on an as-needed basis. Pipeline construction equipment would operate in the Gulf during the entire project.

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 operation are covered by a Minerals Management Service approved Oil Spill Contingency Plan.
- C. All applicable Federal, State, and Local requirements regarding air emission and water quality and discharge for the proposed activities, as well as any other permit conditions, will be complied with.
- D. The proposed activities described in detail in the Initial Plan of Exploration will comply with Alabama's Coastal Management Program and will be conducted in a manner consistent with this Program.

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APPENDIX A:

Project Components and Schedule of Activities.

DOCD Mobile Block 872

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Activities to be covered under DOCD:

- To allow for installation of flowline bundle to MO 916 CPF
- To allow for installation of MO 872#1 deck/facilities hook-up
- To allow for commencement of well production (through CPF at MO 916 "AP")

Schedule of Activities

Flowline installation:

7/95 15 days (crosses fairway) Corps of Engineers Permit required

Flowline Bundle:

1 each - 2' fuel gas, 3' solvent, 6' bulk production (wet natural gas)

Marine Vessel Support Requirements:

Lay bargew/tug, periodic crew boat runs (assume every 3 days), cargo barge with tug (3 days), dive boat (5 days)

Deck Installation:

8/95 MO 872 "A" 3 days

Marine Vessel Support Requirements

Derrick Barge w/tug, cargo barge w/tug, periodic crew boat runs (assume every 3 days)

Deck/Facilities Hook-up:

9/95 MO 872 "A" 15 days

Marine Vessel Support Requirements:

Jack-up boat, periodic crew boat runs (assume every 2 days), cargo boat (3 days only)

Production Start-up

9/95 Commencement of Production

To be produced through Central Production Facilities MO 916"AP"

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APPENDIX B:

Major commercially and recreationally important species
occurring in offshore coastal Alabama and Mississippi.

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Appendix B: Major commercially and recreationally important species occurring in offshore coastal Alabama and Mississippi.

Seafood

Penaeus aztecus (brown shrimp)

Penaeus duorarum (pink shrimp)

Penaeus setiferus (white shrimp)

Crassostrea virginica (oyster)

Callinectes sapidus (blue crab)

Sport and Commercial Fishes

Mugil cephalus (striped mullet)

Micropterus salmoides (largemouth bass)

Lepomis spp. (bluegill, sunfishes)

Pomatomus saltatrix (bluefish)

Caranx hippos (crevalle)

Scomberomorus cavalla (king mackerel)

Lutjanus campechanus (red snapper)

Paralichthys lethostigma (southern flounder)

Rachycentron canadum (cobia)

Micropogonias undulatus (Atlantic croaker)

Morone saxatilis (striped bass)

Cynoscion nebulosus (spotted seatrout)

Cynoscion arenarius (sand seatrout)

Sciaenops ocellatus (red drum)

Scomberomorus maculatus (spanish mackerel)

Archosargus probatocephalus (sheepshead)

Coryphaena hippuros (dolphin)

Epinephelus spp. (grouper)

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APPENDIX C:
Endangered and threatened animals in
Mississippi-Alabama Shelf waters

Appendix C: Endangered and threatened animals in Mississippi-Alabama Shelf waters. Source: U.S. Dept. of Interior (1992).

Reptiles

Caretta caretta caretta (Atlantic loggerhead turtle)- T

Chelonia mydas (Green sea turtle)- T

Dermochelys coriacea (Leatherback sea turtle)- E

Eretmochelys imbricata imbricata (Atlantic hawksbill turtle)- E

Lepidochelys kemp (Atlantic ridley turtle)- E

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Mammals

Balaenoptera borealis (Sei whale) - E

Balaenoptera physalus (Finback whale) - E

Eubalaena glacialis (Right whale) - E

Megaptera novaeangliae (Humpback whale) - E

Physeter catodon (Sperm whale) - E
