UNITED STATES GOVERNMENT
MEMORANDUM

01/12/99

To: Public Information, (MS 5034)

From: Exploration/Development Plans Section, (MS 5231)

Reference is made to the following plan received December 11, 1998:

Type Plan - Initial Development Operations Coordination Document
Leases - OCS-G 13845, 14336, and 14337
Blocks - 480, 461, and 462
Area - West Cameron
Activities Proposed - Wells and Caissons Nos. 2 and 3
Control Number - N-6373
Operator - Petsec Energy Inc.

In accordance with 30 CFR 250.204, this plan is hereby deemed submitted and is now being considered for approval.

Michael Tolbert
Reviewing Engineer

PETSEC ENERGY INC.

PUBLIC INFORMATION

December 11, 1998

Mr. Donald C. Howard
Regional Supervisor, Office of Field Operations
U.S. Department of the Interior
Minerals Management Service
1201 Elmwood Park Boulevard
New Orleans, Louisiana 70123-2394

RE: Initial Development Operations Coordination Document
Lease OCS-G-14337 and OCS-G-13845, West Cameron Area, Blocks 462 and 480
OCS Federal Waters, Gulf of Mexico, Offshore, LA

Gentlemen:

In accordance with the provisions of Title 30 CFR 250.204, Petsec Energy Inc. (Petsec) hereby submits for your review and approval nine (9) copies of the Initial Development Operations Coordination Document for Lease OCS-G-14337 and OCS-G-13845, West Cameron Blocks 462 and 480, Offshore, Louisiana. Five (5) copies are "Proprietary Information" and four (4) copies are "Public Information".

Excluded from the Public Information copies are certain geologic discussions, depth of wells and structure maps.

Petsec anticipates activity commencement under this proposed Initial Development Operations Coordination Document on approximately May 01, 1999.

Should additional information be required, please contact J. V. Delcambre at (318) 989-1942.

With kindest regards,

Howard H. Wilson, Jr.
Vice President, Operations

HHW:JVD
Enclosures

CONTROL No. N-6373
REVIEWER: MIKE TOLBERT
PHONE: (504) 736-2867

143 Ridgeway Drive, Suite 113 • Lafayette, LA 70503-3402 • (318) 989-1942 • Fax (318) 989-2517

PUBLIC
INFORMATION

PETSEC ENERGY INC.

INITIAL DEVELOPMENT OPERATIONS COORDINATION DOCUMENT

LEASE OCS-G-14337 AND OCS-G-13845

WEST CAMERON BLOCKS 462 AND 480

Petsec Energy Inc., as designated operator, hereby submits this proposed Initial Development Operations Coordination Document in accordance with the regulations contained in Title 30 CFR 250.204 and more specifically defined in the Minerals Management Service Letters to Lessees and Operators dated October 12, 1988 and September 5, 1989.

1. HISTORY OF LEASE

Lease OCS-G-14337, West Cameron Block 462 was acquired by Petsec Energy Inc. at the Central Gulf of Mexico Lease Sale 147, held on March 30, 1994. The expiration date of the lease is July 01, 1999.

On June 06, 1997, Petsec Energy spud the West Cameron Block 461, OCS-G-14336, Well No. 3 from a surface location in West Cameron Block 479, OCS-G-15096. The wellbore crossed part of Block WC 462 as it was drilled to it's bottom hole location in West Cameron Block 461. The well was then temporarily abandoned on July 23, 1997, pending additional drilling activity by Petsec in the West Cameron Block 480 area.

Lease OCS-G-13845, West Cameron Block 480 was acquired by Petsec Energy Inc. at the Central Gulf of Mexico Lease Sale 142, held March 1993. The expiration date of the subject oil and gas lease was October 30, 1998. Petsec filed with the MMS a Suspension of Production (SOP) which approved a request for an extension of the lease to enable Petsec to complete operations necessary to establish production from the lease by September of 1999.

On May 22, 1997 Petsec began drilling operations on the West Cameron Block 480, OCS-G-13845, Well No. 1 from a surface location in West Cameron Block 479, OCS-G-15096. No commercial quantities of hydrocarbons were found in the No. 1 wellbore, therefore the well was permanently abandoned on 07-23-97.

On December 31, 1997, Petsec spud the West Cameron Block 480, OCS-G-13845, Well No. 2 from a surface location in West Cameron Block 480. Due to lost tools in the wellbore, the open hole section of the wellbore was abandoned and Petsec subsequently drilled three additional wellbores (sidetracks), until the final depth of West Cameron Block 480, OCS-G-13845, Well No. 2 WB4 was reached on April 19, 1998. Commercial quantities of hydrocarbons were found in the wellbore of WC 480 No. 2 WB4 and the well was temporarily abandoned with a mudline suspension system on May 05, 1998.

In accordance with Letter of Lessee's and Operators (LTL) dated November 5, 19480, which amends Title 30 CFR Part 256 surety bond requirements applicable to OCS lessees and operators, Petsec

Energy Inc. has on file in the amount of $3,000,000 an area wide bond to meet the development bonding criteria for Leases West Cameron 461 and 480.

2. PROPOSED DEVELOPMENT ACTIVITIES

This Initial Development Operations Coordination Document being submitted by Petsec covers the completion operations of two exploratory wells, the installation of two caisson well protectors with minimum production facilities, the installation of two pipelines (see Attachment "N" proposed pipeline route map) to carry the production for processing and sales and commencement of production from Lease West Cameron Block 462 and 480

Hydrocarbon production from West Cameron Block 480, OCS-G-13845, Well No. 2 and West Cameron 461, OCS-G-14336, Well No. 3 will be transported via proposed pipelines to Petsec's West Cameron Block 461, OCS-G-14336 "A" Platform. There the production will to be process through existing equipment, the wells will be tested, production will be separated and processed, metered for sales and then transported to sales via Petsec's existing 8-inch pipeline exiting West Cameron Block 461 "A" Platform.

No new offshore, near-shore or onshore pipelines or facilities will be constructed.

3. LOCATION OF PROPOSED ACTIVITIES

The current surface locations (SL) for the West Cameron Block 461, OCS-G-14337, Well No. 3 and West Cameron 480, OCS-G-13845, Well No. 2, bottom hole locations (BHL), true vertical depth (TVD), measured depth and water depth for each well and beginning and ending points of the proposed pipelines are listed below in the following table. See Attachment A-1, location plat for additional information.

WELL LOCATION	PROPOSED LOCATION	WATER DEPTH	TOTAL DEPTH	DAYS TO COMPLETE
WC 461Well #3	SL: 3589 FNL & 3405' FEL, West Cameron Blk. 479, OCS-G-15096	130'		30
	Lat: 28° 32' 57.921" Long: 93° 11'34.811"			
Beg. Pipeline	SL: 3589 FNL & 3405' FEL, West Cameron Blk. 479, OCS-G-15096	130'	N/A	20
	Lat: 28 ° 32' 11.413" Long: 93° 10' 52.883"			
End Pipeline	1203' FNL & 1493' FWL WC 461, OCS-G-14336	130'	N/A	
	LAT: 28° 35' 47.300" LONG: 93° 10' 44.279"			

WELL LOCATION	PROPOSED LOCATION	WATER DEPTH	TOTAL DEPTH	DAYS TO COMPLETE
WC 480 Well #2	SL: 8358' FNL & 263' FWL, West Cameron Blk. 480, OCS-G-13845	140'		30
	Lat: 28° 32' 11.413" Long: 93° 10' 52.883"			
Beg. Pipeline	SL: 8358' FNL & 263' FWL, West Cameron Blk. 480	140'	N/A	20
	Lat: 28 ° 32' 11.413" Long: 93° 10' 52.883"			
End Pipeline	1203' FNL & 1493' FWL WC 461, OCS-G-14336	130'	N/A	
	LAT: 28° 35' 47.300" LONG: 93° 10' 44.279"			

4. SCHEDULE OF ACTIVITIES

Activities under this Initial Development Operations Coordination Document for West Cameron Blocks 462 and 480, OCS-G-14337 and OCS-G-13845 are anticipated to commence on June 01, 1999. The following table details the chronological order of the proposed operations.

	Activity		Activity Schedule Approximate Date
1.	Install Caisson Well Protector for Well WC 480 #2.		May 01, 1999
2.	Install Caisson Well Protector for Well WC 461 #3		May05, 1999
3.	Complete West Cameron Block 480, OCS-G-13845, Well #2.		June 01, 1999
4.	Complete West Cameron Block 461, OCS-G-14337, Well #3.		July 01, 1999
4.	Lay and bury pipelines from WC 480, OCS-G-13845 Well #2 and WC 461 #3 Well to WC 461, OCS-G-14336 "A" Platform.		August 01, 1999
5.	Commencment production, WC 461 Well #3 and WC 480 Well #2.		September 01, 1999

5. DESCRIPTION OF PLATFORM / DRILLING UNIT (Attachment " B, B-1 & B")

A typical jack-up rig has been identified a the type of moveable offshore drilling unit (MODU) to be used for the proposed well completion operations. Typical Diverter and BOP Schematics are included as Attachments B-1 and B-2. Rig specifications will be included as part of the Applications for Permit to Drill.

Selection of a MODU will contingent upon compliance with Title 30 CFR 250.400. Specific safety and pollution-prevention features shall include but not be limited to well control and blow-out prevention equipment. In addition, adequate life rafts and personal flotation devices as required by the U.S. Coast Guard will be available at all times. The drilling unit and each of the marine vessels servicing the rig will be equipped with the required navigational safety aids to alert ships of its presence in all weather conditions.

A portion of West Cameron Blocks 479 and 480 are designated as a shipping fairway area. Petsec has obtained approval for the West Cameron Block 480, Well No. 2 surface location from the Department of Army, U. S. Corps of Engineers to install a permanent structure within 500 feet of a designated shipping lane, per CFR 33, Part 322. However the time limit on the permit has expired and Petsec has filed another application requesting approval to install a permanent structure within 500 feet of a designated shipping lane for the WC 480 Well No. 2 surface location. See Attachment "L" for copy of the application.

All hydrocarbon handling equipment utilized for testing and production operations will be designed, installed and operated to prevent pollution from the proposed and existing structures.

Maintenance or repairs which are necessary to prevent pollution of offshore waters shall be undertaken immediately. There shall be no disposal of equipment, cables, containers, or other materials into offshore waters.

6. STRUCTURE MAP /CROSS SECTIONS- (Included as Attachment "C" & "D")

Not applicable.

7. BATHYMETRY MAP (Included as Attachment "E")

Water depths in West Cameron Blocks 479 and 480 range from approximately 124 feet in the northwest corner to 140 feet in the southeast corner of Block 480. The sea floor slopes uniformly towards the south at an average rate of 3.0 feet/mile (0.03°). Sonar data displayed the seafloor as coarse with very numerous seafloor gas vents and small mud mounds. Several anchor drag marks resulting from pervious pipeline and oil and gas exploration activities in the area were noted. Bathymetry maps showing the proposed surface location of the subject wells is included as Attachments "E" and "E-1".

8. SHALLOW HAZARDS ANALYSIS (Included as Attachment "F")

Geophysical surveys of West Cameron Block 480 and West Cameron Block 479 (surface location of WC 461 #3) have been conducted. The purpose of these surveys were to evaluate geologic conditions and inspect for potential bottom and sub-bottom hazards or constraints to lease development. Shallow hazard analysis have been prepared for each of proposed surface locations, evaluating any seafloor, subsurface geologic, manmade features and conditions are included as Attachment "F" and "F-1".

9. OIL SPILL CONTINGENCY PLAN (Included Response & Trajectory)

All drilling and construction operations shall be performed in accordance with industry standards to prevent pollution of the environment. Petsec currently has an Oil Spill Contingency Plan in place which has been approved by the MMS. This plan designates an Oil Spill Response Team consisting of Petsec Energy Inc.'s personnel and contract personnel. The team's duties are to eliminate the source of any spill, remove all sources of possible ignition, deploy the most reliable means of available transportation to monitor the movement of a slick, and contain and remove the slick if possible.

Petsec's Oil Spill Response Team attends drills for familiarization with pollution-control equipment and operation procedures on an annual basis.

Petsec is a member of Clean Gulf Associates (CGA). The CGA stores pollution control equipment at two locations in Texas, at Ingleside and Galveston; four locations in Louisiana, at Houma, Grand Isle, Fort Jackson, and Lake Charles and one location in Mississippi, at Pascagoula.

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

Petsec will make every effort to see that a spill is responded to as quickly as possible. Response equipment and response times will be suitable for anticipated environmental conditions in the area.

In good weather conditions fast response with oil booms, skimmers, pump and storage tanks would required approximately 15 hours, including preparation time as indicated below. A heavy equipment system response would require approximately 24-36 hours, including 6 hours preparation time.

	RESPONSE EQUIPMENT	RESPONSE TIME HOURS
1.	Procurement of boat capable of handling oil spill containment equipment and deployment to Petsec's Shorebase in Cameron, LA	2.0
2.	Transportation of equipment from CGA nearest base in Lake Charles, LA and Load out Fast Response Unit	4.0
3.	Travel time from Cameron, LA to Lease Sites (90) miles @ 10 MPH	9.0
4.	Estimated Total Time	15.0

Equipment located in Lake Charles, Louisiana would be utilized first with additional equipment transported from the next nearest equipment base as required.

In the event a spill occurs from either of the surface locations in West Cameron Block 480 or West Cameron 479, a projected trajectory of a spill has been prepared utilizing information in the Environmental Impact Statement (EIS) for OCS Lease Sales 157 and 161.

The EIS contains oil spill trajectory simulations using seasonal surface currents coupled with wind data, adjusted every 3 hours for 30 days or until a target is contacted. Hypothetical spill trajectories were simulated for each of the potential launch sites across the entire Gulf. These simulations presume 500 spills occurring in each of the four seasons of the year. The results in the EIS were presented as probabilities that an oil spill beginning from a particular launch site would contact a certain land segment within 3, 10, or 30 days.

Utilizing the summary of the trajectory analysis as presented in the EIS, the probable projected land fall of an oil spill is as follows. Also listed is the CGA Map Number corresponding to the land segment which will be utilized to determine environmentally sensitive areas that may be affected by a spill.

AREA/BLOCK	LAND SEGMENT	%	CGA MAP NO.
West Cameron 479 & 480	Galveston, TX	2	TX Map # 4
	Jefferson, TX	1	TX Map # 4
	Cameron, LA	1	LA Map # 5

A review of the Biologically Sensitive Areas indicated on LA Map No. 5, as referenced in the CGA Manual Volume II, indicate the coastal areas consisting of live oak forest, waterfowl concentrations, bird rookies, oyster beds, primary fish and shellfish nursery grounds and recreational beaches.

A review of the biologically sensitive areas indicated on TX Map No. 4 as referenced in CGA manual volume II, indicated the coastal areas consisting of barrier islands, primary fish and shellfish nursery grounds, waterfowl concentrations, bird rookies, oyster beds, and recreational beaches. Note that Brazonia National Wildlife Refuge, Bryan Beach State Park and San Bernard National Wildlife Refuge are all located along Brazonia county, with Galveston State Park and Point Boliver Lighthouse located in Galveston County.

If a spill should occur from a proposed location, Petsec would immediately activate its Oil Spill Response Team, determine from current conditions the probable location and time of land fall by contacting Continental Shelf Associates and/or the National Oceanic Atmospheric Administration's (NOAA) Gulf of Mexico Scientific Support Coordinator (SSC), for assistance in predicting spill movement. Then, using the Clean Gulf Operations Manual, Volume II, identify biologically sensitive areas and determine the appropriate response mode.

Volume II, Sections V and VI of the CGA Manual contain maps as listed above, equipment containment/cleanup protection response modes for the sensitive areas and depicts the protection response modes that are applicable for oil spill clean-up operations. Each response mode is schematically represented to show optimum deployment and operation of the equipment in areas of Volume II, Sections V and VI of the CGA Manual contain maps listed above, equipment containment/cleanup protection response modes for the sensitive areas and depicts the protection response modes that are applicable for oil spill clean-up operations. Each response mode is schematically represented to show optimum deployment and operation of the equipment in areas of environmental concern. Implementation of the suggested procedures assures the most effective use of the equipment and will result in reduced adverse impact of oil spills on the environment. Supervisory personnel have the option to modify the deployment and operation of equipment to more effectively respond to site-specific circumstances.

10. NEW OR UNUSUAL TECHNOLOGY

No new techniques or unusual technology will be required for these operations.

11. LEASE STIPULATIONS

Oil and gas exploration activities on the OCS are subject to stipulations developed before the lease sale and would be attached to the lease instrument, as necessary, in the form of mitigating measures. The MMS is responsible for ensuring full compliance with stipulations. Petsec Energy Inc. will comply with all lease stipulations for both blocks West Cameron 462 and 480.

12. DISCHARGES

All discharges associated with the completion of the wells and construction activities will be in accordance with regulations implemented by Minerals Management Service (MMS), U.S. Environmental Protection Agency (EPA), and the U.S. Coast Guard (USCG).

The MMS issued a special advisory notice (NTL 86-11) strongly encouraging the oil and gas industry to take special educational, operational and awareness measures to reduce and to eliminate contributions to marine debris in the Gulf of Mexico.

Annex V of the International Convention for the Prevention of Pollution from ships, also known as MARPOL Protocol, prohibits the dumping of all plastic wastes, including plastic packaging materials and fishing gear.

EPA's Western Gulf of Mexico NPDES General Permit GMG290147 addresses the discharge limitations and testing protocol for drilling fluids, cuttings and associates wastes. Discharges will contain no free oil and will be in compliance with and monitored as required by the permit. Any drilling fluid contaminated with oil will be transported to shore for proper disposal at an authorized disposal site.

Solid domestic wastes will be transported to shore for proper disposal at an authorized disposal site, and sewage will be treated on locations by U.S. Coast Guard approved marine sanitation devices.

Mud may be discharged for purposes of dilution or at end of well. Surveillance of the fluid is accomplished through daily inventory of mud and chemicals added to the system; in addition to monthly and end-of-well LC50 toxicity tests required by the EPA.

There are no anticipated discharges associated with Petsec's completion operations for West Cameron Block 461, Well No. 3 and West Cameron 480, Well No. 2.

13. HYDROGEN SULFIDE

In accordance with Title 30 CFR 250.417, Petsec requests that West Cameron Block 480 and 462 be classified by the Minerals Management Service as an area where the absence of hydrogen sulfide be confirmed. The basis for this determination is through the evaluation of geological data from Petsec's Lease, OCS-G-13845, Wells No. 1 and 2 and Lease OCS-G-14336, Wells No. 1, 2 and 3.

14. PROJECTED EMISSIONS (Included as Attachment "G")

Offshore air emissions related to the proposed activities will result mainly from the drilling rig completion operations, derrick barge and the lay barge operations utilized in the structure modifications and pipeline installation activities, along with helicopters and service vessels. These emissions occur mainly from combustion or burning of fuels and natural gas and from venting or evaporation of hydrocarbons. The combustion of fuels occurs primarily on diesel-powered generators, pumps or motors and from lighter fuel motors. Other air emissions can result from catastrophic events such as oil spills or blowouts.

Primary air pollutants associated with OCS activities are nitrogen oxides, carbon monoxide, sulfur oxides, volatile organic compound, and suspended particulate. Projected Air Quality Emissions are included as Attachment "G".

15. ENVIRONMENTAL REPORT (Included as Attachment "H")

An Environmental Report is included as Attachment "H".

16. COASTAL ZONE CONSISTENCY CERTIFICATION (Included as Attachments "I"

Issues identified in the Louisiana Coastal Zone Management Programs include the following: general coastal use guidelines, levees, linear facilities (pipelines); dredged soil disposition; shoreline modifications, surface alterations, hydrologic and sediment transport modifications; waste disposal; uses that result in the alteration of waters draining into coastal waters; oil, gas or other mineral activities; and air and water quality.

A certificate of Coastal Zone Management Consistency for the State of Louisiana is enclosed as Attachment "I". A copy of the Public Notice request for publication in the Louisiana Baton Rouge State Times is included as Attachment "J", as well as the appropriate Parish Journal (Cameron Parish Pilot) being included as Attachment "K".

17. ONSHORE SUPPORT BASE

The proposed surface locations in West Cameron Blocks 479 and 480 are located approximately 88 miles from the nearest shoreline and 90 miles from the shorebase located at Cameron, Louisiana. Water depths range from approximately 124 feet to 140 feet. A Vicinity Plat showing the location of the West Cameron Blocks 479 and 480 relative to the shoreline and onshore base is included as Attachment "M".

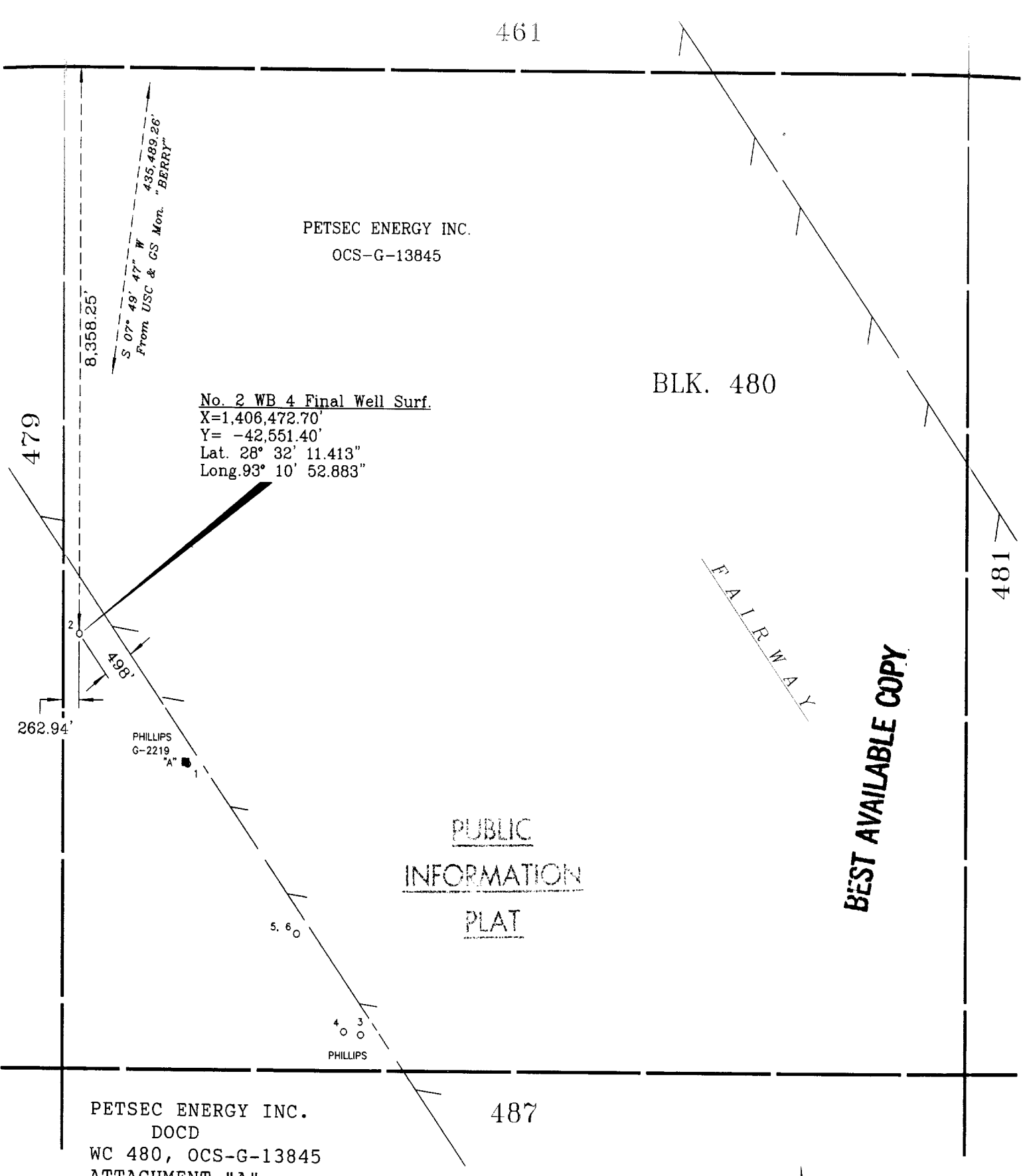
Petsec will utilize existing onshore facilities located in Cameron, Louisiana. This will serve as port of debarkation for supplies and crews. No onshore expansion or construction is anticipated with respect to the proposed activities. This base is capable of providing the services necessary for the proposed activities. It has 24 hour service, a radio tower with a phone patch, dock space, equipment and supply storage base, drinking and drill water, etc.

Support vessels and travel frequency during well completion operations, construction and production activities are as follows:

	DRILLING/CONSTRUCTION	PRODUCTION
Crew Boat	1 trip per week	1 trip per week
Supply Boat	2 trips per week	N/A
Helicopter	1 trip per week	1 trip per week

18. LIST OF ATTACHMENTS

A Location Plats
B Platform Design Drawing / Drilling Unit BOP's
C Structure Map (Not included with Public Information copy).
D Cross Sections (Not included with Public Information copy).
E Bathymetry Map
F Shallow Hazards Analysis
G Projected Air Emissions
H Environmental Report
I Coastal Zone Consistency Certification - State of Louisiana
J Public Notice Request - State Times
K Public Notice Request - Parish Journal
L Dept. of Army, U. S. Corps of Engineers, Permit
M Vicinity Map
N Proposed Pipelines Route Map



PETSEC ENERGY INC.
DOCD
WC 480, OCS-G-13845
ATTACHMENT "A"

LA SOUTH ZONE
NAD 27 - CLARKE 1866

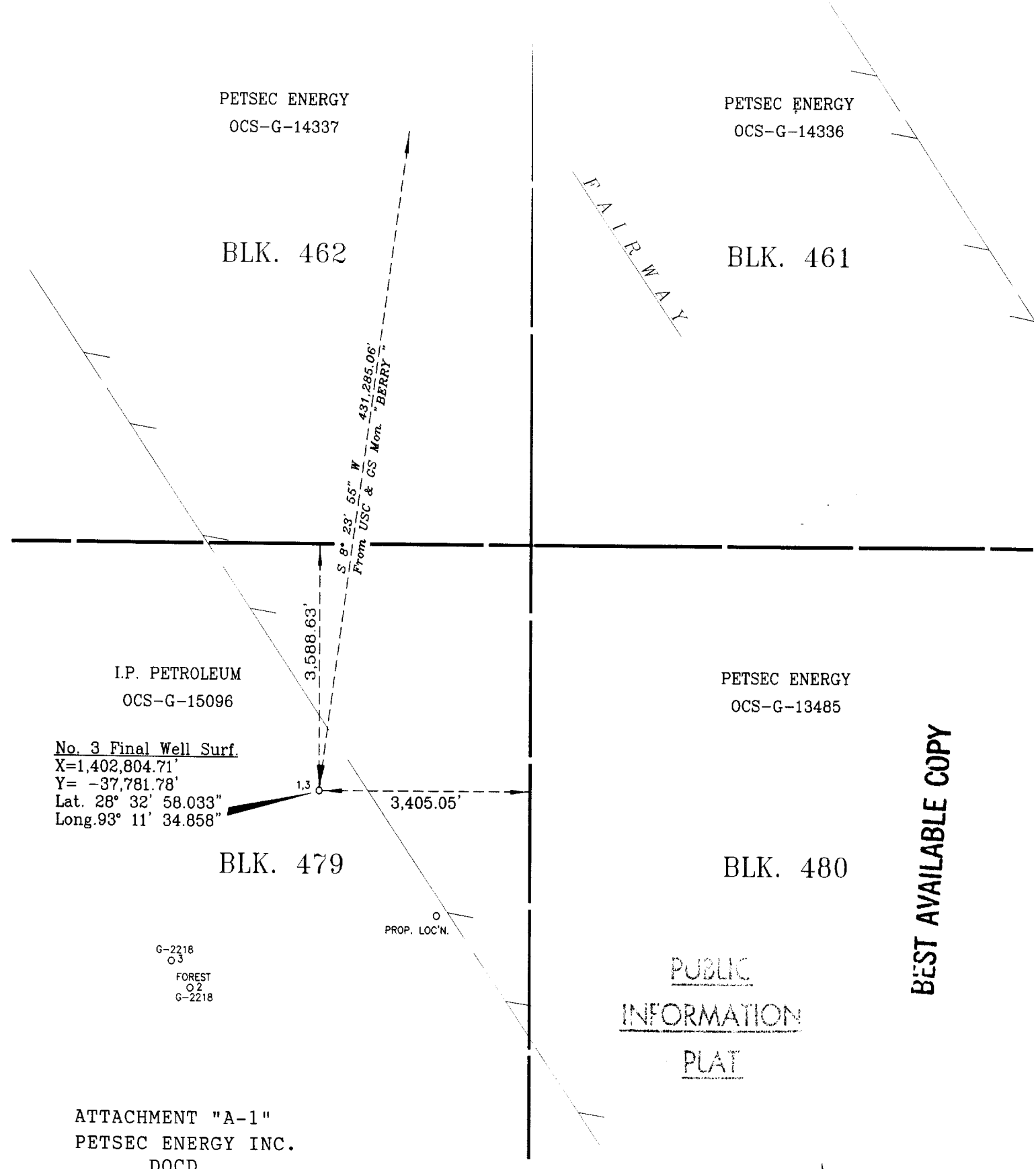
I hereby certify that the above final well surface is correct.

Lionel J. Cormier

Reg. Professional Land Surveyor No. 4401
State of Louisiana
JOHN E. CHANCE & ASSOCIATES, INC.
FILE 480f2WB4

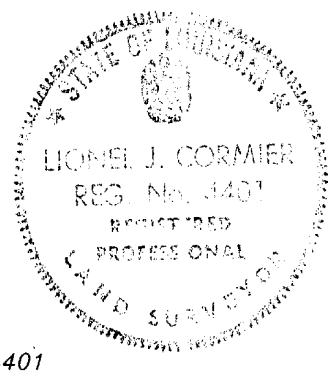
STATE OF LOUISIANA
LIONEL J. CORMIER
REG. No. 4401
REGISTERED
PROFESSIONAL
LAND SURVEYOR

PETSEC ENERGY INC.
OCS-G-13845 NO. 2
FINAL LOCATION
WEST CAMERON AREA BLOCK 480
SCALE:1"=2000' 11/13/98



PUBLIC INFORMATION PLAT

ATTACHMENT "A-1"
PETSEC ENERGY INC.
DOCD
WC 462, OCS-G-14337
LA SOUTH ZONE
NAD 27 CLARKE 1866



I hereby certify that the above final well surface is correct.

Lionel J. Cormier

Reg. Professional Land Surveyor No. 4401
State of Louisiana
JOHN E. CHANCE & ASSOCIATES, INC.
FILE 47946113

PETSEC ENERGY
OCS-G-14336 NO. 3
FINAL LOCATION
WEST CAMERON AREA BLOCK 461
SCALE:1"=2000' 11/13/98

PETSEC ENERGY INC.

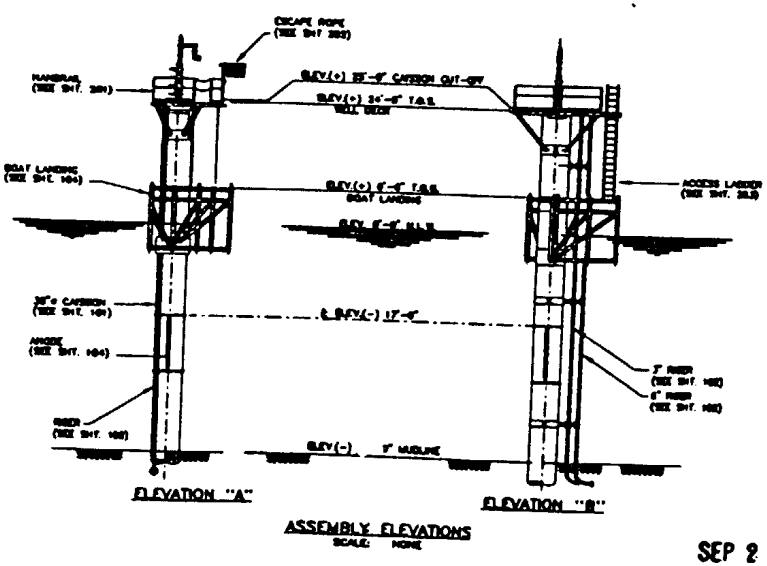
LAFAYETTE , LOUSIANA

WEST CAMERON BLOCK 461 WELL NO.' 3' 130'-0" WATER DEPTH

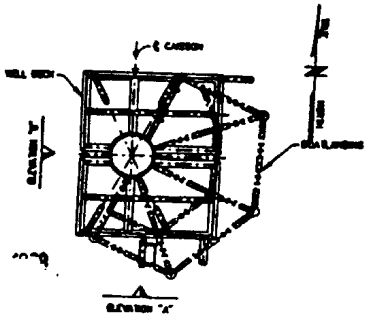
CAISSON WELL PROTECTOR

UST OF DRAWINGS

⚠	000	INDEX SHEET AND ASSEMBLY ELEVATIONS
⚠	101	CAISSON ASSEMBLY ELEVATION, SECTIONS AND DETAILS
⚠	102	RISER ELEVATION, CAISSON CLAMP ASSEMBLY, SECTIONS AND DETAILS
⚠	103	RISER CLAMP ASSEMBLY, SECTIONS AND DETAILS
⚠	104	BOAT LANDING PLANS, SECTIONS AND DETAILS
⚠	201	WELL DECK FRAMING PLAN, SECTIONS AND DETAILS
⚠	202	WELL DECK SECTIONS AND DETAILS
⚠	203	ACCESS LADDER, SECTIONS AND DETAILS



ASSEMBLY ELEVATIONS
SCALE: NONE



KEY PLAN
SCALE: NONE

SEP 2 1

APPROVED FOR CONSTRUCTION

PETSEC ENERGY INC.
TECHNICAL ENGINEERING CONSULTANTS

7/15/98

PETSEC ENERGY INC.
DOCD
WC 462, OCS-G-14337
ATTACHMENT "B"

PETSEC ENERGY INC.

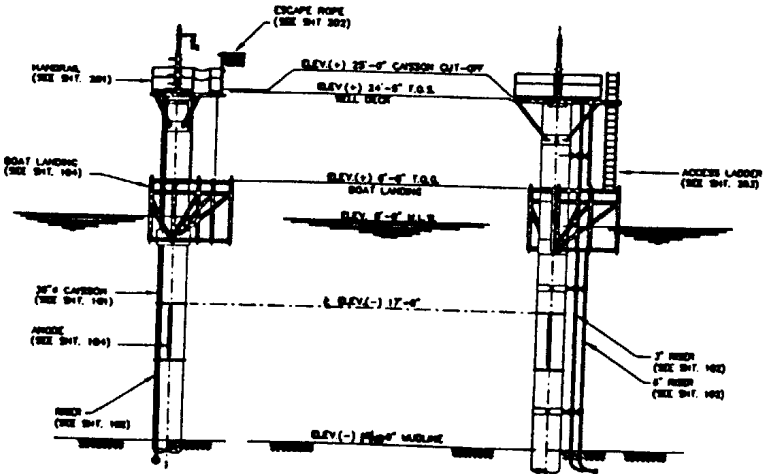
LAFAYETTE , LOUSIANA

WEST CAMERON BLOCK 480 WELL NO.' 2' 140' -0" WATER DEPTH

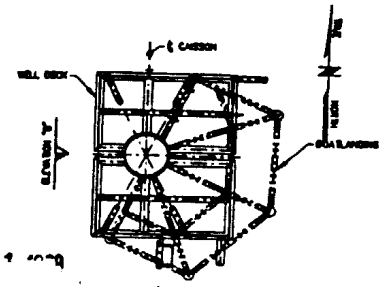
CAISSON WELL PROTECTOR

UST OF DRAWINGS

⚠	000	INDEX SHEET AND ASSEMBLY ELEVATIONS
⚠	101	CAISSON ASSEMBLY ELEVATION, SECTIONS AND DETAILS
⚠	102	RISER ELEVATION, CAISSON CLAMP ASSEMBLY, SECTIONS AND DETAILS
⚠	103	RISER CLAMP ASSEMBLY, SECTIONS AND DETAILS
⚠	104	BOAT LANDING PLANS, SECTIONS AND DETAILS
⚠	201	WELL DECK FRAMING PLAN, SECTIONS AND DETAILS
⚠	202	WELL DECK SECTIONS AND DETAILS
⚠	203	ACCESS LADDER, SECTIONS AND DETAILS



ASSEMBLY ELEVATIONS
SCALE: NONE



KEY PLAN
SCALE: NONE

SEP 2[illegible]

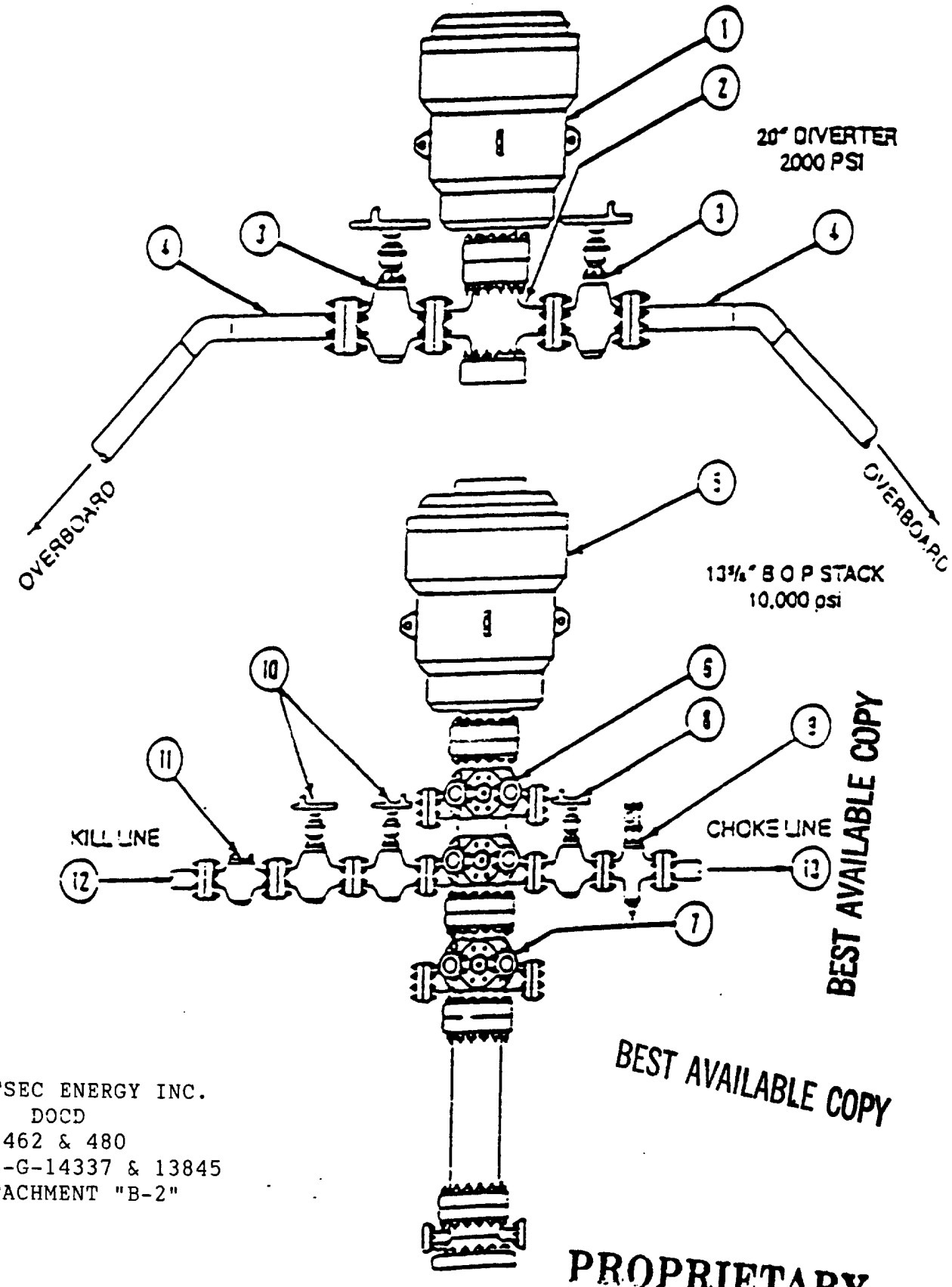
APPROVED FOR CONSTRUCTION

9/18/98

PETSEC ENERGY INC.
TECHNICAL ENGINEERING CONSULTANTS

PETSEC ENERGY INC.
DOCD
WC 480, OCS-G-13845
ATTACHMENT "B-1"

BLOWOUT PREVENTER STACK WITH A HYDRIL DIVERTER



PETSEC ENERGY INC.
DOCD
WC 462 & 480
OCS-G-14337 & 13845
ATTACHMENT "B-2"

Refer to following page for description of individual items of this assembly.

20" HYDRIL DIVERTER 2000 psi

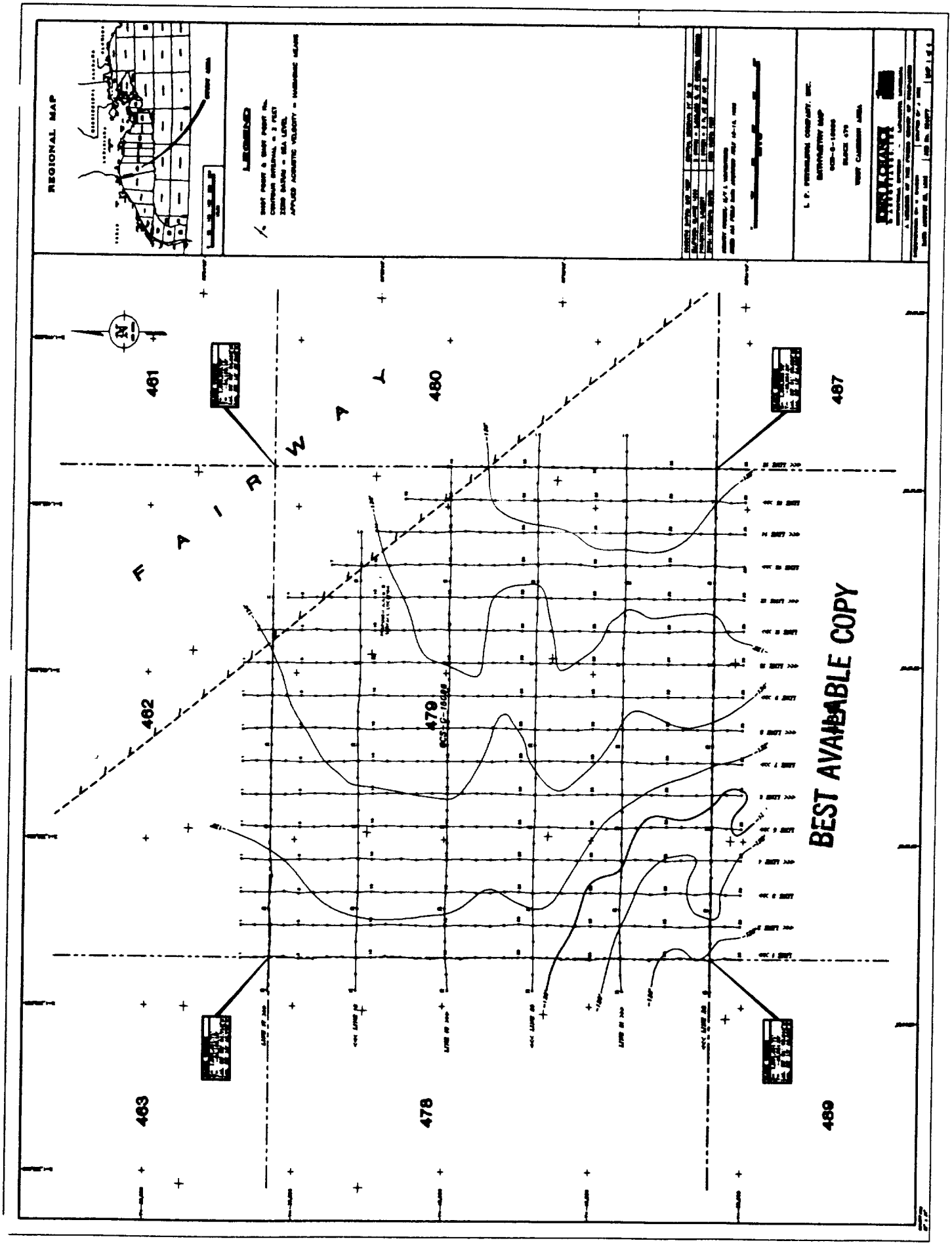
ITEM	DESCRIPTION
1	20" HYDRIL 2000 psi Type MSP
2	20" FLANGE SPOOL 2000 psi w/6" 2000 psi Outlets
3	6" GATE VALVE std Low Pressure (REMOTE)
4	6" DIVERTER LINE (To Overboard)

BLOWOUT PREVENTER STACK

13⅝" 10,000 psi

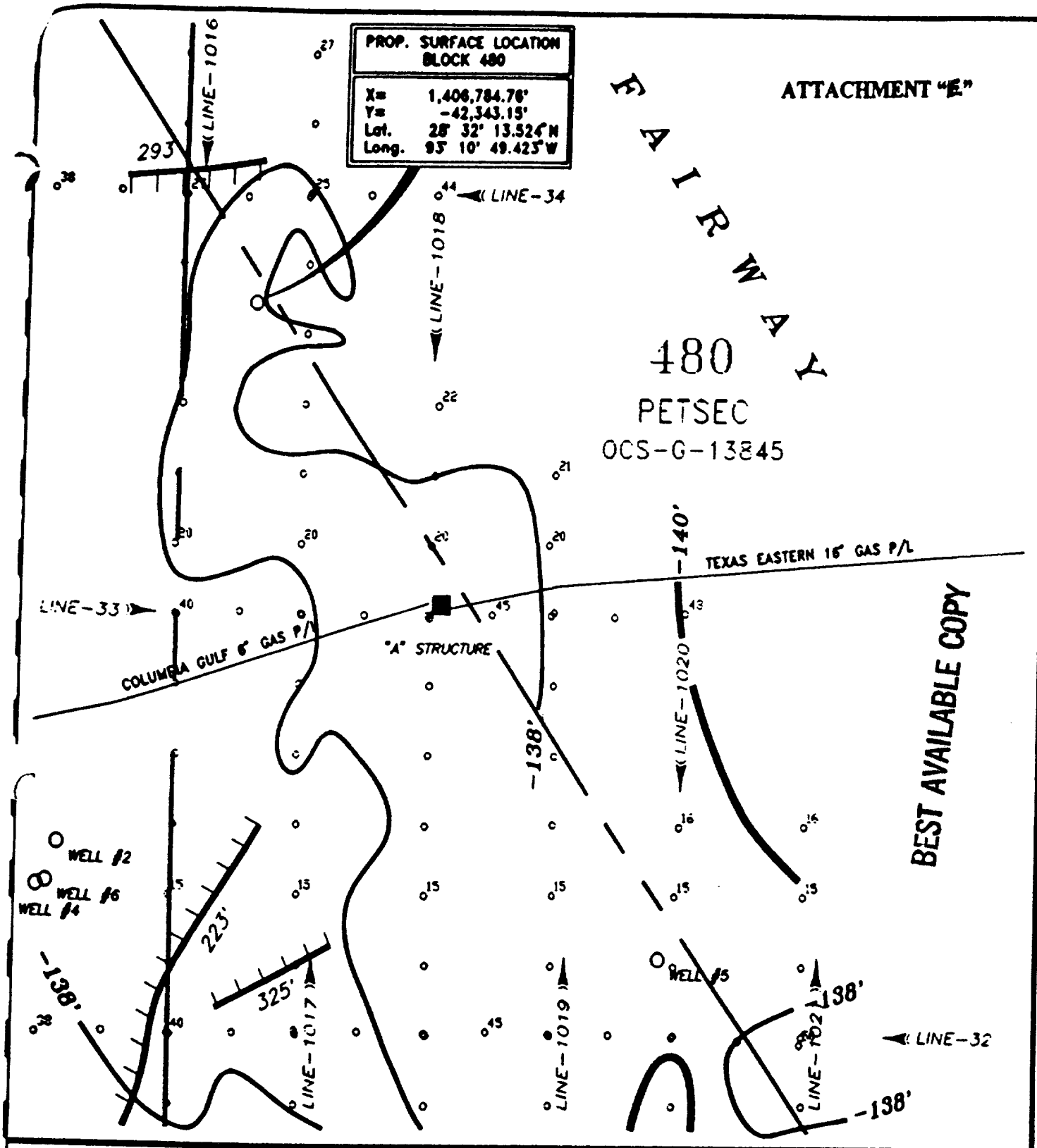
ITEM	DESCRIPTION
5	13⅝" HYDRIL ANNULAR BOP 5000 psi Type GK H2S Trimmed
6	13⅝" CAMERON DOUBLE BOP 10,000 psi WP H_2S Trimmed
7	13⅝" CAMERON SINGLE BOP 10,000 psi WP H_2S Trimmed
8	4 1/16" MANUAL GATE VALVE Cameron Type "F" H_2S
9	2 1/16" REMOTE HYDRAULIC VALVE Cameron Type "F" 10,000 psi H_2S
10	2 1/16" MANUAL GATE VALVE Cameron Type "F" 10,000 psi H_2S
11	2 1/16" CHECK VALVE Cameron Type "R" 10,000 psi H_2S
12	3" 10,000 psi KILL LINE from Choke Manifold
13	3" 10,000 psi CHOKE LINE from choke Manifold

PETSEC ENERGY INC.
DOCD
WC 462 & 480, OCS-G-14337 & 13845
ATTACHMENT "B-2"



PETSEC ENERGY INC.
SUPPLEMENTAL PLAN OF EXPLORATION
WEST CAMERON BLOCKS 480 & 462
ATTACHMENT "E"

ATTACHMENT "E"



500' 0 500' 1,000' 1,500' 2,000'

SCALE: 1" = 1,000'

LEGEND

- 0' SHOT POINT & SHOT POINT NO.
- LINE-0 LINE NO. & DIRECTION
- DENOTES SEISMIC AMPLITUDE ANOMOLIES (BRIGHT SPOTS) WITH DEPTH OF BURIAL BELOW THE SEALEVEL IN MILLISECONDS TWO-WAY TRAVEL TIME.
- IN FEET, HACHURES ON DOWNTHROWN SIDE DENOTES NORMAL FAULT WITH DEPTH OF BURIAL

PETSEC ENERGY INC.

LAFAYETTE, LOUISIANA

ANOMALY & BATHYMETRY MAP
BLOCK 480
OCS-G-13845
WEST CAMERON AREA

PREPARED BY:

cochrane TECHNOLOGIES, INC.

1-800-346-3745 LAFAYETTE, LA

PREPARED FOR: PETSEC ENERGY INC. LAFAYETTE, LA

DRAWING NO.:	2302-480
DATE:	SEPT. 13, 1996
SHEET:	1 OF 1

cochrane
TECHNOLOGIES, INC.

3913 Highway 90 East
Broussard, Louisiana 70518
P.O. Box 81276
Lafayette, Louisiana 70598-1276

1-800-346-3745
Office: (318) 837-3334
Fax: (318) 837-7134

September 17, 1996

Petsec Energy
143 Ridgeway Dr. Ste. 113
Lafayette, LA 70503

Attention: Mr. J. V. Delcambre

RE: Plan of Exploration Letter
Proposed Well No. 1
Block 480, West Cameron Area

Gentlemen:

Cochrane Technologies, Inc. was contracted by Petsec Energy, Inc. to prepare a Plan of Exploration Letter for the proposed well No. 1 in Block 480, West Cameron Area (OCS-G-13845). This letter is intended to address seafloor and sub-bottom conditions within 1000 feet of the location.

The information in this letter is based on the 1995 survey of Block 461, 462, and 480, West Cameron Area. The data was collected aboard the M/V David McCall on August 6 and 7, 1995. Sea conditions varied from two to four feet during data acquisition and complete sets of records were collected. Horizontal positioning was accomplished with a DGPS system providing 24 hour operation. The survey gear included an 1) Echotrac Fathometer, 2) Geometerics 801/03 Magnetometer, 3) Klien Dual-channel Side Scan Sonar, 4) Edo Western Sub-bottom Profiler system and a 5) 16,000 Joule Sparker system (Analog). The survey grid consisted of 6 north-south tracklines spaced 300 meters apart and 3 east west tie lines. Shot points were recorded at 150 meter intervals along all survey lines. Field operations were conducted in accordance with all current Federal Guidelines.

ATTACHMENT "F"

The proposed well site is located in the northern portion of the lease just inside the safety fareway as follows:

8150' FNL	575 FWL
X=1,406,784.76	Y= -42,343.15
Lat: 28° 32' 13.524" N	Long: 93° 10' 49.423"W

Water depths at the proposed site is -138 feet. The seafloor slopes gradually to the south-southwest at an average rate of 3 feet per mile (0.03°). Side scan sonar data display an even-textured seafloor with few gas vents and anchor scars. The seafloor sediments are reported to consist of sand and muddy sand with shear strengths values ranging from 100 lb./sq./ft. at the seafloor to 1500 lb./sq./ft. at 150 feet below the seafloor.

The acquired sub-bottom profiler data indicate the presence of a possible sedimentary contact near shot point 23.1 on trackline 1017 as shown on the accompanying data reproduction. Due to the potential for varying geotechnical properties between these varying sediments we recommend that this area be avoided by bottom seated drill structures. Also delineated on the seismic records is one normal fault approximately 980 feet north of the proposed site. This lineament is buried 293 feet below the sea floor.

The analog sparker data do not indicate any seismic amplitude anomalies beneath the proposed well location. There are several man made structures near the proposed well site. The Tennessee 30 inch, Columbia Gulf 6 inch, and Texas Eastern 16 inch pipelines and the 480 "A" structure are located as shown on the anomaly map (figure 3). The positions of all existing man made structures should be noted and avoided.

The final high resolution geophysical report should be referred to should any additional information be required.

Thank you for the opportunity to be of service.

Respectfully,

S. Dean ElDarragi
Senior Marine Geophysicist

January 24, 1997

Petsec Energy Inc.
143 Ridgeway Drive, Suite 118
Lafayette, Louisiana 70503

Attention: Mr. J. V. Delcambre

Subject: **Proposed "A" Surface Clearance**
Block 479, West Cameron Area (OCS-G-15096)

Gentlemen:

Petsec Energy Inc. contracted John E. Chance and Associates, Inc. to assess seafloor and subbottom conditions at the proposed "A" Surface Location in Block 479, West Cameron Area (OCS-G-15096). A High Resolution Geophysical Hazard Study was conducted across this lease by John E. Chance & Associates, Inc. during July 12-13, 1995, and the final report was submitted to IP Petroleum Company, Inc. in August, 1995. Sixteen (16) north-south tracklines spaced 300 meters apart and six (6) east-west tracklines spaced 900 meters apart provided coverage across the lease exclusive of the shipping fairway in the northeast corner. The survey operations were conducted aboard the *R/V L'arpenteur* utilizing an Odom Echotrac Bathymetric System, E.G.& G. 100 Khz Side Scan Sonar, O.R.E. 3.5 kHz Pinger Profiler, GeoMetrics Proton Magnetometer, and Analog Watergun System. Horizontal positioning of the survey vessel was maintained with the John Chance STARFIX® Satellite Positioning System. The data quality was good to excellent and suitable for archaeological and hazard interpretation.

Petsec Energy Inc. proposes to drill from the following surface location within Block 479, West Cameron Area:

<u>Proposed "A" Location</u>
X=1,402,809.76', Y=-37,793.15'
Latitude: 28° 32' 57.92"N, Longitude: 93° 11' 34.80"W
3600' FNL, 3400' FEL

1) Water depth at the proposed location is -136 feet below sea level. The seafloor slopes to the southeast at approximately 2.5 feet/mile (0.03°). No hazardous features were noted on the seafloor.

2) Seafloor sediments are reported to consist of unconsolidated sand, silt, and clay. Although sediment density variations were observed on sonar data collected within the lease, the seafloor at the proposed "A" location appears uniform in composition. The sediment shear strength values are reported to range from 100 lbs./sq.ft. at the seafloor to 1,700 lbs./sq.ft. at a depth of 150 feet below the seafloor.

3) A thin veneer of unconsolidated Recent Age topstratum overlies the eroded and compacted Beaumont Clay Formation. Subbottom profiler data indicated the shallow strata beneath the proposed "A" surface location is clear of erosional channels. A normal fault extends to the seafloor approximately 1,400 feet east of

the proposed "A" location. The analog watergun profiles showed a seismic amplitude anomaly located 700 feet to the west and south of the proposed location at 180 milliseconds below sea level (450 feet). Proper precautions should be taken in the vicinity of this potential gas event.

4) A TGP 30-inch pipeline extends approximately 2,500 feet to the south of the proposed well location. This pipeline should be noted when positioning the drilling rig. The proposed "A" location is clear of any additional man-made hazards or obstructions.

5) No unidentified magnetic anomalies or side scan sonar targets were noted in the vicinity of the proposed "A" surface location.

6) Any potential areas of prehistoric significance would be located along the margins of the Late Wisconsin channel system buried at the seafloor. The proposed "A" location is not positioned within or near any shallow channel margins. The proposed "A" location is clear of unidentified magnetic anomalies and side scan sonar targets that would suggest the presence of shipwrecks.

Based on the geophysical data collected in the area, the proposed "A" surface location in Block 479, West Cameron Area, is clear of potential hazards to drilling or potential cultural resource materials. The seismic amplitude anomaly located 750 feet west and south of the proposed well site should be avoided. Thank you, and if you have any questions concerning this archeological and hazard assessment, please do not hesitate to call.

Yours truly,

Ted Hampton
Marine Geophysicist/Archaeologist

ATTACHMENT "F"

November, 1998

INITIAL DEVELOPMENT COORDINATION DOCUMENT

AIR QUALITY REVIEW

OPERATOR	PETSEC ENERGY INC.
AREA	WEST CAMERON
BLOCK	462 / 480
LEASE NUMBER	OCS-G-14337 & OCS-G-13845
PLATFORM	N/A
WELLS	#3 & #2
LATITUDE	28° 32' 57.921" / 28° 32' 11.443"
LONGITUDE	93° 11' 34.811" / 93° 10' 52.883'
COMPANY CONTACT	J. V. DELCAMBRE
TELEPHONE NO.	(318) 989 - 2500
REMARKS	Complete 2 wells, install 2 caisson well protectors, lay two pipelines and commence production from leases.

Prepared By:
Regulatory Services, Inc.
143 Ridgeway Drive, Suite 316
Lafayette, LA 70503
(318) 989-2500

ATTACHMENT "G"

AIR EMISSION CALCULATIONS

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELLS
PETSEC ENERGY INC.	WEST CAMERON	479 / 480	OCS-G-15096 / 13845	N/A	#3 & #2

Year	Emitted Substance				
	TSP	SOx	NOx	HC	CO
1999	5.44	32.00	241.52	9.95	68.52
2000	0.42	2.63	27.60	7.82	50.79
2001	0.42	2.63	27.60	7.82	50.79
2002	0.42	2.63	27.60	7.82	50.79
2003	0.42	2.63	27.60	7.82	50.79
2004	0.42	2.63	27.60	7.82	50.79
Allowable	2930.40	2930.40	2930.40	2930.40	68278.24

AIR EMISSION CALCULATIONS

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL	LATITUDE	LONGITUDE	CONTACT	PHONE	REMARKS
PETSEC ENERGY INC	WEST CAMERON	479 / 480	OCS-G-15096	N/A	#3 & #2	28° 32' 57.921"	93° 11 ' 34.811"	J V DELCAMBRE	318-989-1942	COMPLETE 2 WELLS, INSTALL 2 CAISSON WELL PROTECTORS AND PIPELINES, COMMENCE PRODUCTION
			OCS-G-13845			28° 32' 11.443"	93° 10' 52.883"			

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	39.98	1.20	8.72	0.63	3.90	28.78	0.86	6.28
	PRIME MOVER>600hp diesel	1650	79.695	1912.68	24	60	0.87	5.42	39.98	1.20	8.72	0.63	3.90	28.78	0.86	6.28
	PRIME MOVER>600hp diesel	1650	79.695	1912.68	24	60	0.87	5.42	39.98	1.20	8.72	0.63	3.90	28.78	0.86	6.28
	AUXILIARY EQUIP<600hp diesel	360	17.388	417.31	12	60	0.79	0.74	11.10	0.89	2.40	0.29	0.27	4.00	0.32	0.86
	VESSELS>600hp diesel	2500	120.75	2898.00	12	16	1.32	8.20	60.57	1.82	13.22	0.13	0.79	5.81	0.17	1.27
	VESSELS>600hp diesel	2500	120.75	2898.00	12	8	1.32	8.20	60.57	1.82	13.22	0.06	0.39	2.91	0.09	0.63
	HELICOPTER	360	3428.64	82287.36	2	8		0.00	1.03	0.01	0.66		0.00	0.01	0.00	0.01
	TUGS (3 @ 4000 HP)	12000	579.6	13910.40	24	2	6.34	39.38	290.75	8.72	63.44	0.15	0.95	6.98	0.21	1.52
PIPELINE INSTALLATION	PIPELINE LAY BARGE / BURY diesel	5300	255.99	6143.76	24	40	2.80	17.39	128.41	3.85	28.02	1.34	8.35	61.64	1.85	13.45
	SUPPORT VESSEL diesel	2500	120.75	2898.00	24	40	1.32	8.20	60.57	1.82	13.22	0.63	3.94	29.07	0.87	6.34
	SUPPORT VESSEL diesel	1650	79.695	1912.68	12	12	0.87	5.42	39.98	1.20	8.72	0.06	0.39	2.88	0.09	0.63
	SUPPORT VESSEL diesel	2500	120.75	2898.00	24	12	1.32	8.20	60.57	1.82	13.22	0.19	1.18	8.72	0.26	1.90
	HELICOPTER	360	3428.64	82287.36	2	12		0.00	1.03	0.01	0.66		0.00	0.01	0.00	0.01
	AUXILIARY EQUIP<600hp diesel	360	17.388	417.31	12	40	0.79	0.74	11.10	0.89	2.40					
FACILITY INSTALLATION	DERRICK BARGE diesel	1785	86.2165	2069.17	24	10	0.94	5.86	43.25	1.30	9.44	0.11	0.70	5.19	0.16	1.13
	MATERIAL TUG diesel	2500	120.75	2898.00	12	10	1.32	8.20	60.57	1.82	13.22	0.08	0.49	3.63	0.11	0.79
	PRIME MOVER>600hp diesel	1650	79.695	1912.68	24	10	0.87	5.42	39.98	1.20	8.72	0.10	0.65	4.80	0.14	1.05
	PRIME MOVER>600hp diesel	1650	79.695	1912.68	24	10	0.87	5.42	39.98	1.20	8.72	0.10	0.65	4.80	0.14	1.05
	PRIME MOVER>600hp diesel	1650	79.695	1912.68	24	10	0.87	5.42	39.98	1.20	8.72	0.10	0.65	4.80	0.14	1.05
	AUXILIARY EQUIP<600hp diesel	360	17.388	417.31	12	10	0.79	0.74	11.10	0.89	2.40	0.05	0.04	0.67	0.05	0.14
	HELICOPTER	360	3428.64	82287.36	2	2		0.00	1.03	0.01	0.66		0.00	0.00	0.00	0.00
PRODUCTION	DIESEL- Crane	50	2.415	57.96	2	17	0.11	0.10	1.54	0.12	0.33	0.00	0.00	0.03	0.00	0.01
	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
	HELICOPTER	360	3428.64	82287.36	2	17		0.00	1.03	0.01	0.66		0.00	0.02	0.00	0.01
	SUPPORT VESSEL diesel	2500	120.75	2898.00	12	17	1.32	8.20	60.57	1.82	13.22	0.13	0.84	6.18	0.19	1.35
	TURBINE nat gas		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				0.00					0.00	
	FLARE-		833,333		24	4		0.47	59.50	50.25	323.75		0.02	2.86	2.41	15.54
	PROCESS VENT-		0		0	0				0.00					0.00	
	FUGITIVES-			100.0	24	122				0.00					0.00	
	GLYCOL STILL VENT-		0		0	0				0.00					0.00	
DRILLING WELL TEST	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
	GAS FLARE		200000		12	2		0.11	14.28	12.06	77.70		0.00	0.17	0.14	0.93
1999 YEAR TOTAL							26.61	152.69	1218.44	98.30	652.87	5.44	32.00	241.52	9.95	68.52
EXEMPTION CALCULATION	DISTANCE FROM LAND IN MILES											2930.40	2930.40	2930.40	2930.40	68278.24
	88.0															

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL	LATITUDE	LONGITUDE	CONTACT	PHONE	REMARKS
PETSEC ENERGY INC	WEST CAMERON	479 / 480	OCS-G-15096	N/A	#3 & #2	28° 32' 57.921"	93° 11 '34.811"	J V DELCAMBRE	318-989-1942	COMPLETE 2 WELLS, INSTALL 2 CAISSON WELL PROTECTORS AND PIPELINES. COMMENCE PRODUCTION
			OCS-G-13845			28° 32' 11.443'	93° 10' 52.883"			

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	0	0	0.87	5.42	39.98	1.20	8.72	0.00	0.00	0.00	0.00	0.00
	PRIME MOVER>600hp diesel	1650	79.695	1912.68	0	0	0.87	5.42	39.98	1.20	8.72	0.00	0.00	0.00	0.00	0.00
	PRIME MOVER>600hp diesel	1650	79.695	1912.68	0	0	0.87	5.42	39.98	1.20	8.72	0.00	0.00	0.00	0.00	0.00
	AUXILIARY EQUIP<600hp diesel	360	17.388	417.31	0	0	0.79	0.74	11.10	0.89	2.40	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel	2500	120.75	2898.00	0	0	1.32	8.20	60.57	1.82	13.22	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel	2500	120.75	2898.00	0	0	1.32	8.20	60.57	1.82	13.22	0.00	0.00	0.00	0.00	0.00
	HELICOPTER Turbine Nat. Gas	360	3428.64	82287.36	0	0		0.00	1.03	0.01	0.66		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
													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
	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
	HELICOPTER 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
	VESSELS>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
PRODUCTION	CRANE	50	2.415	57.96	2	52	0.11	0.10	1.54	0.12	0.33	0.01	0.01	0.08	0.01	0.02
	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
	HELICOPTER	360	3428.64	82287.36	2	52		0.00	1.03	0.01	0.66		0.00	0.05	0.00	0.03
	SUPPORT VESSEL diesel	2500	120.75	2898.00	12	52	1.32	8.20	60.57	1.82	13.22	0.41	2.56	18.90	0.57	4.12
	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				0.00					0.00	
	FLARE-		833,333		24	12		0.47	59.50	50.25	323.75		0.07	8.57	7.24	46.62
	PROCESS VENT-		0		0	0				0.00					0.00	
	FUGITIVES-			100.0	24	365				0.00					0.01	
	GLYCOL STILL VENT-		0		0	0				0.00					0.00	
DRILLING WELL TEST	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
	GAS FLARE		0		0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
2000 THRU 2004 YEAR TOTAL							7.48	42.18	376.86	60.33	393.62	0.42	2.63	27.60	7.82	50.79
EXEMPTION CALCULATION	DISTANCE FROM LAND IN MILES											2930.40	2930.40	2930.40	2930.40	68278.24
	88.0															

November, 1998

INITIAL DEVELOPMENT COORDINATION DOCUMENT

AIR QUALITY REVIEW

OPERATOR	PETSEC ENERGY INC.
AREA	WEST CAMERON
BLOCK	462 / 480
LEASE NUMBER	OCS-G-14337 & OCS-G-13845
PLATFORM	N/A
WELLS	#3 & #2
LATITUDE	28° 32' 57.921" / 28° 32' 11.443"
LONGITUDE	93° 11' 34.811" / 93° 10' 52.883'
COMPANY CONTACT	J. V. DELCAMBRE
TELEPHONE NO.	(318) 989 - 2500
REMARKS	Complete 2 wells, install 2 caisson well protectors, lay two pipelines and commence production from leases.

Prepared By:
Regulatory Services, Inc.
143 Ridgeway Drive, Suite 316
Lafayette, LA 70503
(318) 989-2500

ATTACHMENT "G"

AIR EMISSION CALCULATIONS

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELLS
PETSEC ENERGY INC.	WEST CAMERON	479 / 480	OCS-G-15096 / 13845	N/A	#3 & #2

Year	Emitted Substance				
	TSP	SOx	NOx	HC	CO
1999	5.44	32.00	241.52	9.95	68.52
2000	0.42	2.63	27.60	7.82	50.79
2001	0.42	2.63	27.60	7.82	50.79
2002	0.42	2.63	27.60	7.82	50.79
2003	0.42	2.63	27.60	7.82	50.79
2004	0.42	2.63	27.60	7.82	50.79
Allowable	2930.40	2930.40	2930.40	2930.40	68278.24

AIR EMISSION CALCULATIONS

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL	LATITUDE	LONGITUDE	CONTACT	PHONE	REMARKS
PETSEC ENERGY INC	WEST CAMERON	479 / 480	OCS-G-15096	N/A	#3 & #2	28° 32' 57.921"	93° 11 ' 34.811"	J V DELCAMBRE	318-989-1942	COMPLETE 2 WELLS, INSTALL 2 CAISSON WELL PROTECTORS AND PIPELINES, COMMENCE PRODUCTION
			OCS-G-13845			28° 32' 11.443"	93° 10' 52.883"			

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	39.98	1.20	8.72	0.63	3.90	28.78	0.86	6.28
	PRIME MOVER>600hp diesel	1650	79.695	1912.68	24	60	0.87	5.42	39.98	1.20	8.72	0.63	3.90	28.78	0.86	6.28
	PRIME MOVER>600hp diesel	1650	79.695	1912.68	24	60	0.87	5.42	39.98	1.20	8.72	0.63	3.90	28.78	0.86	6.28
	AUXILIARY EQUIP<600hp diesel	360	17.388	417.31	12	60	0.79	0.74	11.10	0.89	2.40	0.29	0.27	4.00	0.32	0.86
	VESSELS>600hp diesel	2500	120.75	2898.00	12	16	1.32	8.20	60.57	1.82	13.22	0.13	0.79	5.81	0.17	1.27
	VESSELS>600hp diesel	2500	120.75	2898.00	12	8	1.32	8.20	60.57	1.82	13.22	0.06	0.39	2.91	0.09	0.63
	HELICOPTER	360	3428.64	82287.36	2	8		0.00	1.03	0.01	0.66		0.00	0.01	0.00	0.01
	TUGS (3 @ 4000 HP)	12000	579.6	13910.40	24	2	6.34	39.38	290.75	8.72	63.44	0.15	0.95	6.98	0.21	1.52
PIPELINE INSTALLATION	PIPELINE LAY BARGE / BURY diesel	5300	255.99	6143.76	24	40	2.80	17.39	128.41	3.85	28.02	1.34	8.35	61.64	1.85	13.45
	SUPPORT VESSEL diesel	2500	120.75	2898.00	24	40	1.32	8.20	60.57	1.82	13.22	0.63	3.94	29.07	0.87	6.34
	SUPPORT VESSEL diesel	1650	79.695	1912.68	12	12	0.87	5.42	39.98	1.20	8.72	0.06	0.39	2.88	0.09	0.63
	SUPPORT VESSEL diesel	2500	120.75	2898.00	24	12	1.32	8.20	60.57	1.82	13.22	0.19	1.18	8.72	0.26	1.90
	HELICOPTER	360	3428.64	82287.36	2	12		0.00	1.03	0.01	0.66		0.00	0.01	0.00	0.01
	AUXILIARY EQUIP<600hp diesel	360	17.388	417.31	12	40	0.79	0.74	11.10	0.89	2.40					
FACILITY INSTALLATION	DERRICK BARGE diesel	1785	86.2155	2069.17	24	10	0.94	5.86	43.25	1.30	9.44	0.11	0.70	5.19	0.16	1.13
	MATERIAL TUG diesel	2500	120.75	2898.00	12	10	1.32	8.20	60.57	1.82	13.22	0.08	0.49	3.63	0.11	0.79
	PRIME MOVER>600hp diesel	1650	79.695	1912.68	24	10	0.87	5.42	39.98	1.20	8.72	0.10	0.65	4.80	0.14	1.05
	PRIME MOVER>600hp diesel	1650	79.695	1912.68	24	10	0.87	5.42	39.98	1.20	8.72	0.10	0.65	4.80	0.14	1.05
	PRIME MOVER>600hp diesel	1650	79.695	1912.68	24	10	0.87	5.42	39.98	1.20	8.72	0.10	0.65	4.80	0.14	1.05
	AUXILIARY EQUIP<600hp diesel	360	17.388	417.31	12	10	0.79	0.74	11.10	0.89	2.40	0.05	0.04	0.67	0.05	0.14
	HELICOPTER	360	3428.64	82287.36	2	2		0.00	1.03	0.01	0.66		0.00	0.00	0.00	0.00
PRODUCTION	DIESEL- Crane	50	2.415	57.96	2	17	0.11	0.10	1.54	0.12	0.33	0.00	0.00	0.03	0.00	0.01
	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
	HELICOPTER	360	3428.64	82287.36	2	17		0.00	1.03	0.01	0.66		0.00	0.02	0.00	0.01
	SUPPORT VESSEL diesel	2500	120.75	2898.00	12	17	1.32	8.20	60.57	1.82	13.22	0.13	0.84	6.18	0.19	1.35
	TURBINE nat gas		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				0.00					0.00	
	FLARE-		833,333		24	4		0.47	59.50	50.25	323.75		0.02	2.86	2.41	15.54
	PROCESS VENT-		0		0	0				0.00					0.00	
	FUGITIVES-			100.0	24	122				0.00					0.00	
	GLYCOL STILL VENT-		0		0	0				0.00					0.00	
DRILLING WELL TEST	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
	GAS FLARE		200000		12	2		0.11	14.28	12.06	77.70		0.00	0.17	0.14	0.93
1999 YEAR TOTAL							26.61	152.69	1218.44	98.30	652.87	5.44	32.00	241.52	9.95	68.52
EXEMPTION CALCULATION	DISTANCE FROM LAND IN MILES											2930.40	2930.40	2930.40	2930.40	68278.24
	88.0															

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL	LATITUDE	LONGITUDE	CONTACT	PHONE	REMARKS
PETSEC ENERGY INC.	WEST CAMERON	479 / 480	OCS-G-15096	N/A	#3 & #2	28° 32' 57.921"	93° 11 ' 34.811"	J. V. DELCAMBRE	318-989-1942	COMPLETE 2 WELLS, INSTALL 2 CAISSON WELL PROTECTORS AND PIPELINES, COMMENCE PRODUCTION
			OCS-G-13845			28° 32' 11.443'	93° 10' 52.883"			

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	0	0	0.87	5.42	39.98	1.20	8.72	0.00	0.00	0.00	0.00	0.00
	PRIME MOVER>600hp diesel	1650	79.695	1912.68	0	0	0.87	5.42	39.98	1.20	8.72	0.00	0.00	0.00	0.00	0.00
	PRIME MOVER>600hp diesel	1650	79.695	1912.68	0	0	0.87	5.42	39.98	1.20	8.72	0.00	0.00	0.00	0.00	0.00
	AUXILIARY EQUIP<600hp diesel	360	17.388	417.31	0	0	0.79	0.74	11.10	0.89	2.40	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel	2500	120.75	2898.00	0	0	1.32	8.20	60.57	1.82	13.22	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel	2500	120.75	2898.00	0	0	1.32	8.20	60.57	1.82	13.22	0.00	0.00	0.00	0.00	0.00
	HELICOPTER Turbine Nat. Gas	360	3428.64	82287.36	0	0		0.00	1.03	0.01	0.66		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
													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
	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
	HELICOPTER 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
	VESSELS>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
PRODUCTION	CRANE	50	2.415	57.96	2	52	0.11	0.10	1.54	0.12	0.33	0.01	0.01	0.08	0.01	0.02
	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
	HELICOPTER	360	3428.64	82287.36	2	52		0.00	1.03	0.01	0.66		0.00	0.05	0.00	0.03
	SUPPORT VESSEL diesel	2500	120.75	2898.00	12	52	1.32	8.20	60.57	1.82	13.22	0.41	2.56	18.90	0.57	4.12
	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				0.00					0.00	
	FLARE-		833,333		24	12		0.47	59.50	50.25	323.75		0.07	8.57	7.24	46.62
	PROCESS VENT-		0		0	0				0.00					0.00	
	FUGITIVES-			100.0	24	365				0.00					0.01	
	GLYCOL STILL VENT-		0		0	0				0.00					0.00	
DRILLING WELL TEST	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
	GAS FLARE		0		0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
2000 THRU 2004 YEAR TOTAL							7.48	42.18	375.86	60.33	393.62	0.42	2.63	27.60	7.82	50.79
EXEMPTION CALCULATION	DISTANCE FROM LAND IN MILES											2930.40	2930.40	2930.40	2930.40	68278.24
	88.0															

Attachment "H"

PETSEC ENERGY INC.

INITIAL DEVELOPMENT OPERATIONS COORDINATION DOCUMENT

ENVIRONMENTAL REPORT

WEST CAMERON BLOCKS 462 / 480
LEASE OCS-G-14337 / OCS-G-13845

OFFSHORE, LOUISIANA

TABLE OF CONTENTS

I. DESCRIPTION OF PROPOSED ACTION

Petsec Energy Inc. proposes to conduct development activities in West Cameron Blocks 462 and 480, OCS-G-14337 and OCS-G-13845, Offshore, Louisiana

As proposed, the Initial Development Operations Coordination Document for West Cameron Blocks 462 and 480 provides for installation of two caisson well protectors, well completion operations of two wells, installation of two pipelines and commencement of production operations from Leases OCS-G-14337 and 13845.

At this time, the planned commencement date for proposed activities is on or about May 01, 1999.

A. DESCRIPTION OF PROPOSED TRAVEL MODES, ROUTES AND FREQUENCY

Support vessels will be dispatched from a support base located in Cameron, Louisiana. The boats will normally move to the block via the most direct route from Cameron, Louisiana. However, boats operating in the field may travel from other facilities nearby. The following is an estimate of trips to the proposed operations.

	Drilling / Construction Operations	Production Operations
Crew Boat	1 trip per week	1 trip per week
Supply Boat	2 trips per week	N/A
Helicopter	1 trip per week	1 trip per week

B. ONSHORE SUPPORT BASE

The proposed activities will utilize a support base located at Cameron, Louisiana. This base provides 24 hour service, a radio tower with phone patch, dock space, office space, parking lot, equipment and supply storage space, drinking and drill water, etc. The proposed development activities will help to maintain this base at its present level of activity. No expansion of the physical facilities or 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 State of Louisiana, identifies 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 these operations.

D. VICINITY MAP

The surface locations for the proposed activities are West Cameron Blocks 479 and 480 which are located approximately 88 nautical miles from the nearest coastline and 90 miles from Cameron, Louisiana. The seafloor across West Cameron Blocks 479 and 480 slopes to the south at an average rate of 3 feet/mile (0.03 degrees). Water depths range from approximately 124 feet to 140 feet. See Attachment "M" for details.

II. DESCRIPTION OF AFFECTED ENVIRONMENT

A. COMMERCIAL FISHING

The Gulf of Mexico continues to provide nearly 20% of the commercial fish landings in the continental United States. During 1994, commercial landings of all fisheries in the Gulf of Mexico totaled nearly 2.2 billion pounds valued at about $806 million.

Menhaden, with landings of 1.7 billion pounds, valued at $76.7 million, was the most important Gulf species in quantity landed during 1994. Shrimp, with landings of 206.2 million pounds, valued at $335 million was the most important Gulf species in value landed during 1994. The 1994 Gulf oyster fishery accounted for 72% of the national total with landings of 27.3 million pounds of meats, valued at about $96 million. The Gulf blue crab fishery accounted for 25% of the national total with landings of 49.1 million pounds valued at $34 million.

Alabama ranked third among Central and Western Gulf states in total commercial landings for 1994 with 23.3 million pounds landed, valued at $48.1 million. Shrimp was the most important fishery landed, with 14.4 million pounds, valued at $30.1 million. In addition, during 1993, the following five species each accounted for landings valued at over $125,000: blue crab, black mullet, red mullet roe, flounder, and the American oyster.

Mississippi ranked last among Central and Western Gulf states in total commercial fishery landings for 1994, with 22.1 million pounds landed, valued at $44.8 million. Shrimp was the most important fishery, with 10.5 million pounds landed, valued at about $18.4 million. In addition, during 1994, the following four species each accounted for landings valued at over $125,000: black mullet, red snapper, American oyster, and blue crab.

Louisiana ranked first among Central and Western Gulf states in total commercial fishery landings for 1994, with 1.7 billion pounds landed, valued at $339.7 million. Menhaden was the highest quantity finfish, with 1.0 billion pounds landed, valued at $49 million. Shrimp was the highest value shellfish, with 87.6 million pounds landed, valued at $158 million. In addition, during 1994, the following 12 species each accounted for landings valued at over $1 million: black drum, flounder, red mullet roe, Atlantic sheepshead, red snapper, vermilion snapper, spotted sea trout, swordfish, yellowfin tuna, blue crab, and the American oyster.

Texas ranked second among Central and Western Gulf states in total commercial fishery landings for 1994 with nearly 81.1 million pounds, valued at $206.2 million. In quantity and value, shrimp ranked first with about 78 million pounds, valued at $141.9 million In addition, during 1994, the following seven species each accounted for landings valued at over $500,000: black drum, red snapper, vermilion snapper, yellowfin tuna, blue crab, and American oyster. The Gulf of Mexico yielded the nation's second largest regional commercial fishery by weight in 1994. The Gulf Fisheries landing were 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.

Nearly all species significantly contributing to the Gulf of Mexico's commercial catches are estuarine dependent. The degradation of inshore water quality and loss of Gulf wetlands as nursery areas are considered significant threats to commercial fishing. Conflicts between fishermen using fixed gear (traps) and mobile gear (trawls) continue to be a problem in some parts of the Gulf. Natural catastrophes may change the physical characteristics of offshore, nearshore and inshore ecosystems and destroy gear and shore facilities.

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 stocks 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 anchorage are areas contiguous to and associated with a fairway, in which fixed structures may be permitted within certain space limitations.

Fairways play an important role in the avoidance of collisions on the OCS, particularly in the case of larger oceangoing vessels, but no all vessels stay within the fairways. Many others, such as fishing boats and OCS support vessels, travel through areas with high concentration of fixed structures. In such cases the most important mitigation factor is the requirement for adequate marking and lighting of structures. After a structure has been in place for a while, it often becomes a landmark and an aid to navigation for vessels that

operate in the area on a regular basis. Most ocean going vessels are equipped with radar capable of aiding navigation in all weather conditions. This has contributed to safe navigation on the OCS.

Portions of West Cameron Blocks 462 and480 are contained in a designated shipping fairway area. The drilling rig and each of the marine vessels servicing this operations will be equipped. with all U.S. Coast Guard required navigational safety aids to alert ships of its presence in all weather conditions. Petsec will incorporated and apply as part of its operational procedures all MMS and U.S. Coast Guard rules and regulations governing oil and gas operations in a designated shipping fairway. In addition, Petsec has applied for approval from the U. S. Corps of Engineers for a permit to allow the installation of a permanent structure within 500 feet of a designated shipping area. See Attachment "L" for copy of permit application.

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 beaches, and wildlife lands, as well as designated preservation areas, such as national seashores, parks, beaches, and wildlife lands, as well as designated preservation areas, such as historic and natural sites and landmarks, wilderness areas, wildlife sanctuaries, and scenic rivers. Gulf Coast residents and tourists from throughout the nation, as well as from 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.

Predominant among public recreation areas abutting the Gulf of Mexico are Padre Island National Seashore and Gulf Islands National Seashore. These seashores account for approximately 110 miles of exposed Gulf beachfront, which accommodates over 1.5 million recreational visits a year. Besides beaches, these seashores contain nationally significant forts, shipwrecks, wetlands, lagoons and estuaries, seagrasses, fish and wildlife and archaeological sites.

Other national resource lands like coastal components of the National Wildlife Refuge System exemplified by Bon Secour National Wildlife Refuge in Alabama's Baldwin and Mobile Counties and the recently established Grand Bay National Wildlife Refuge with lands along the Mississippi and Alabama coast, harbor wildlife and habitat worthy of national management and protection.

The two major recreational areas most directly associated with and potentially affected by offshore leasing are the offshore marine environment and coastal shorefront of the adjoining states. The major recreational activity occurring on the OCS is recreational fishing and diving. A special report by Schmied and Burgess (1987) indicates there are about 4 million

resident participants in marine recreational fishing and over 2 million tourists who angle for Gulf marine species. According to NMFS, over 40 % of the nations marine recreational fishing catch comes from the Gulf of Mexico, and marine anglers in the Gulf made over 15 million fishing trips in 1991, exclusive of Texas. Texas marine anglers using private boats expended over 4.5 million man-hours to land about 1.5 million saltwater fish during the 1990-1991 fishing years.

Marine recreational fishing trips and catch along the Gulf coast had been declining for several years but began to rebound in 1991. Speckled trout is the most sought sport fish in coastal marine waters; whereas, snapper and mackerel are some of the more popular offshore sport fish. Marine recreational fishing in the Gulf Region from Texas to Alabama is a major industry important to these state's economies. The marine recreational fishing industry accounts for an estimated $769 million is sales and employment for over 15,000 people, earning more than $158 million annually.

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 area. Beaches are a major inducement for coastal tourism, as well as a primary resource for resident recreational activity. 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 major economic factor for many Gulf coastal communities, especially during peak-use seasons in the spring and summer. Tourism in the coastal zone of the five Gulf Coast States has been valued at an estimated $20 billion/year.

D. POTENTIAL OR KNOWN CULTURAL 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 previously has 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 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. A recently completed Texas A& M University study has (Garrison et al., 1989) updated the shipwreck database. Statistical analysis of over 4,000 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. 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.

Geophysical surveys of West Cameron Blocks 462 and 480 have been conducted. The high resolution geophysical survey data has been evaluated for evidence of historic shipwrecks and high probability areas for prehistoric archaeological sites associated with formerly subaerially exposed landforms. The lease tracts are in an area of high probability for both historic and prehistoric cultural resources. Because of the active marine oriented history, the probability for a ship wreck occurrence is considered to be high, although the potential for preservations of a wreck is only moderate.

A review of lists and charts published by the U. S. Department of Transportation, the National Ocean Service and CEI, as well as files maintained by the MMS indicates that no shipwrecks have been recorded in West Cameron Blocks 462 and 480, although a number of wrecks have been reported in the areas around the Blocks since colonial times whose locations remain unconfirmed.

Correlation's between prehistoric archeological sites and geomorphic features on the Gulf Coastal Plain have shown that certain landforms were attractive habitation and resources utilization site. Such features include the natural levees, margins, point bars, and terraces of alluvial streams, the margins of lakes and estuaries, relict beach ridges, and the crests of surfacially exposed salt domes. The identification of such features on presently submerged portions of the shelf would indicate high probability areas for prehistoric archeological sites.

The profiler data indicate that the subbottom sediments are extensively eroded and reworked, and that no high probability areas for prehistoric archeological sites were recorded.

No clusters of anomalies that could represent buried shipwreck remains are noted, although a number of the isolated anomalies evidence large amplitudes indicating that they could be significant ferrous objects buried in the seafloor sediments or too small to be recorded by sonar. They could represent buried steamboat engine parts, a ship anchor, or other historic objects, as well as modern debris.

The evaluation of the high resolution geophysical survey data from West Cameron Blocks 462 and 480 indicates that no geomorphic features representing high probability areas for prehistoric archeological sites are recorded in the near surface sediments. The unidentified magnetic anomalies greater in amplitude than 100 grammas could represent relict shipwreck remains and should be avoided. The unidentified sonar target and associated magnetic anomaly are interpreted as modern debris from the previous development in the area.

Petsec Energy Inc., as a prudent operator, will avoid all sites, structures, or objects of historical or archaeological significance. Such findings will be reported and every reasonable effort will be made to preserve and protect the cultural or archaeological resource.

E. ECOLOGICALLY SENSITIVE FEATURES

Coastal barriers of the Western and Central Gulf Coast consist of relatively low land masses that can be divided into servile interrelated environments. The beach itself consists of the foreshore and backshore. The nonvegetated foreshores 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 consist of broad flats that support scrubby woody vegetation. Saline or freshwater ponds may be found among the dunes on the 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 offshore during the winter due to seasonal wave energy differences.

Changes in landforms can also be noncyclically progressive. As headlands and beaches are eroded away, their sediments are reworked. Under site-specific conditions, sandy sediments are transported laterally along the shoreline forming sand spits to the side of headlands or islands. As these sand spits extend themselves, they may encape marshes or previously open shallow Gulf waters. By separating inshore waters from Gulf waters and slowing the distribution of freshwater into the Gulf, the movement of barrier landforms can contribute to the area of esturaine habitat available along a coast.

Accumulations and movements of the sediments that make up barrier landforms are often described in terms of transgressive and regressive sequences. Transgressions and regressions are related to local relative sea-level change and rates of sedimentation and erosion. A transgressive sequence is one in which the shore moves landward and marine deposits from on terrestrial sediments. In contrast, a regressive sequence is one in which terrestrial sediments are deposited

over marine deposits as the land builds out into the sea. Both transgressive and regressive barriers occur in the Central and Western Gulf of Mexico.

From east to west, headlands found on the barrier coast of the Western and Central Gulf include Baldwin County Headland in Alabama, the barrier islands of Mississippi Sound, Chandeleur Island, the Modern Mississippi River Delta and its developing barrier islands, the Bayou Lafourche Headland and accompanying barrier islands, Isles Dernieres, the Cheniere 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 Rio Grande Delta. The Mississippi Sound barrier islands are relatively young, having formed some 3, 000 to 4,000 years ago as a result of shoal-bar aggradation. The islands are well vegetated by southern maritime climax forest of pine and palmetto. The islands generally are regressive with high beach ridges and prominent sand dunes. The Mississippi Sound islands are separated from each other by tidal inlets with deep, wide channels. These channels have associated ebb and flood tidal deltas. Shoals are adjacent to all the barriers. The barriers are separated from the mainland by Mississippi Sound.

Louisiana has the most rapidly retreating beaches in the nation. The statewide average for 1956-1978 was 8.29 m/yr (van Beek and Meyer-Arendt, 1982). The sand beach formed between the Gulf and Bay Marchand retreated landward at rates of 18-23 m/yr between 1887 and 1978 (Penland and Suter, 1988). The average retreat rate for Fourchon Beach between the 1880's and 1980's has ranged from 10 to 20 m/yr (Boyd and Penland, 1988).

The coast of the Chenier Plain is fronted by sand beaches and coastal mudflats. The source of mud is the discharge of the Mississippi and Atchafalaya Rivers. Their fine sediments drift westward with the prevailing nearshore currents. Fluid mud extends from the seaward edge of the marsh grasses to a few hundred meters offshore. Although only thin sand beaches occur along the Chenier Plain, resting against the marsh, much of the Chenier coast is fairly stable.

The Texas coast between Louisiana and Rollover Pass is a physiographic continuation of the Chenier Plain. Here, thin accumulations of sand, shell and caiche 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 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 coast wetlands. The deterioration of coastal wetlands, particularly in Louisiana, is an issue of concern. In Louisiana, the annual rate of wetlands loss has been measured at 130 km2 for the period 1955-1978. A recent study has shown that the

current rate of landloss on the Deltaic Plain area of the Louisiana coast has decreased to about 90 km2 per year.

Several factors contribute to wetlands loss in coastal Louisiana, including sediment deprivation (a result of a 50 % decrease in the suspended-sediment load of the Mississippi River since the 1950's and the channelization of the river, which has prevented overbank sediment deposition), subsidence and sea-level rise, and the construction of pipeline and navigation canals through the wetlands.

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 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 and levying in the Mississippi wetlands.

In Texas, coastal marshes occur along the inshore side of barrier islands and bays 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 and hypersaline waters to the south. In these areas, smooth cordgrass, the most common salt-marsh grass elsewhere in the Gulf occurs rarely in salt marshes. Common salt-marsh plants here include more salt-tolerant species such as batis maritima and salicornia.

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.

A recent study funded by MMS entitled "Causes of Wetland Loss in the Coastal Central Gulf", 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.

Direct impacts were defined as those physical alterations that are the direct result of canal construction. Direct impacts include wetlands resulting from the actual dredging of the canal, the

disposal of dredged spoil and any subsequent widening of the canal as a result of channel-bank erosion. Based on the study's findings, OCS-related direct impacts have accounted for 16% of all the direct impacts that have occurred in Louisiana's wetlands. Direct OCS impacts account for only 4 % - 5% of the total wetlands loss during the period 1955\1956 to 1978. In recent years, more stringent construction regulations have required that pipelines installed across wetlands be backfilled with spoil material immediately after the pipeline is emplaced in its ditch. Direct impacts per unit length of OCS-related navigation canals are about 20 times greater than OCS pipeline canals. Indirect impacts are those that occur as a result of hydrologic changes (salinity and drainage regimes) brought on by canal construction. Indirect impacts from canals associated with the OCS program have been estimated as accounting for 4% - 13% of the total amount of wetland loss that occurred in coastal Louisiana between 1955/1956 to 1978.

There are an estimated 3 million ha of submerged seagrass beds in the exposed, shallow coastal waters of the northern Gulf of Mexico. An additional 166,000 ha are found in natural embayments and are not considered exposed to OCS impacts. The area off Florida contains approximately 98.5% of all coastal seagrasses in the northern Gulf of Mexico. Texas and Louisiana contain approximately 0.5 % of the Gulf seagrasses. Mississippi and Alabama have the remaining 1 % of seagrass beds.

Seagrass beds grow in shallow, relatively clear and protected waters with predominantly sand bottoms. Their distribution depends on an interrelationship among a number of environmental factors that include temperature, water depth, tubidity, salinity and substrate suitability. Primarily because of low salinity and high tubidity , the luxuriant growth of seagrasses and the concomitant high diversity of associated marine species are found only within a few scattered protected locations in the Central and Western Gulf of Mexico. The turbid waters and soft highly organic sediments of Louisiana's estuaries limit widespread distribution of seagrass beds. Consequently, there are only a few areas in coastal Louisiana where seagrass beds occur. The most extensive beds occur in Chandeleur Sound. Seagrasses also occur within Mississippi Sound.

Offshore seagrasses are not conspicuous in the Central and Western Gulf; however, fairly extensive beds may be found in estuarine areas behind barrier islands throughout the Gulf. Seagrasses would be continuous around the entire periphery of the Gulf if it were not from the adverse effects of tubidity and low salinity of the Mississippi River effluent from the delta to Galveston.

In general, the vast majority of bottom substrate available to benthic communities in the Central and Western Gulf consists of soft, muddy bottoms; the benthos here is dominated by polychaetes. Benthic habitats on the continental shelf at most risk to potential impacts from oil and gas operations are those of the topographic features and the pinnacle trend live bottom.

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-relief rocky areas to major pinnacles, as well as ridges, scraps and relict patch reefs. It has been postulated that these features formed during the last sea level low stages of 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.

In the pinnacle trend, the bases of the pinnacles rise from the seafloor between 53 and 110 m with vertical relief occasionally in excess of 20 m. The features of the pinnacle trend offer a combination of topographic relief and hard substrate for the attachment of sessile organisms and therefore, have a greater potential to support significant live-bottom communities than surrounding areas on the Mississippi-Alabama Shelf.

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 associated with seismic wipe-out zones and hydrocarbon seep areas between water depths grater than 400 m and 1000 m. Chemosynthetic communities have been a source of controversy over the past few years, in part because of the unusual environment 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 40 m in order to judge the potential of the region for supporting chemosynthetic organisms. In accordance with NTL 99-11, Petsec Energy Inc. will review this block for any site-specific activities.

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 or 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 valve.

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 list 23 topographic features. None of those listed are in or near the vicinity of the proposed operations in West Cameron Block480.

F. PIPELINES AND CABLES

As a prudent operator, Petsec Energy, 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 locations.

G. OTHER MINERAL USES

The activities proposed for West Cameron Blocks 462 and 480 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.

Under the provisions of Title 33 CFR 151.73 all 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 a Waste Management Plan in accordance with Title 33 CFR 151.57 and off 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 also apply to all oceangoing ships of 12 m or more in length that are documented under the laws of the U.S. or numbered by a State an 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 8 m or more in length. or more length. Furthermore, the Shore Protections Act of 1988 requires ships transporting garbage and refuse to assure that garbage and refuse are 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 waste would be more stringently regulated under hazardous wastes rules, i.e., industry would be responsible for the wastes from the generation to their final disposal. Exempt wastes include those generally coming from an activity directly associated with the drilling, production, or processing of 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 acidifying fluids and well completion and workover fluids; and from production operations, produced sand, deck drainage, and miscellaneous well fluids (cement, BOP fluid); and other sanitary and domestic wastes, gas and oil processing wastes, and miscellaneous discharges.

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, though historical sightings and strandings census data suggest that they more offend 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, Blainville's and Sowerby's); killer whale; false and pygmy killer whale; short-finned pilot whale; grampus (Risso's dolphin); melonheaded 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.

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

The Alabama, Choctawhatchee and Perdido Key beach mice, subspecies of the oil field mouse, occupy restricted habitats in the mature coastal dunes of Flordia 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, and sometimes sea rocket and invertebrates.

The green turtle population in the Gulf once supported a commercial harvest in Texas and Florida, but the populations has not completely recovered since the collapse of the fishery around the turn of the century. Green turtles prefer depths of less than 20 m, where seagrasses and algae are plentiful. Leatherbacks, the most oceanic of the marine turtles, occasionally enter shallow water in more northern areas. The hawksbill is the least commonly reported marine turtle in the Gulf. Texas is the only Gulf state where stranded 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. Female 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. 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 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. Nesting in Texas occurs primarily on North and South Padre Islands, although occurrences are recorded throughout coastal Texas.

Those birds most susceptible to oiling either raft at sea, such as gulls and terns, 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 and 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. On the Gulf Coast, Texas and Louisiana have the largest numbers and highest wintering densities. There, the plover prefers intertidal flats and beaches for its 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 Arnasas, 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 Northern American tundra. A portion of the population migrates along the Central, Mississippi and Eastern Flyways to winter on 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 - 50 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 Wildlife Refuges.

Brown pelicans have been removed from the Federal endangered species list in Alabama and Florida, but remain listed as endangered n Mississippi, Louisiana and Texas. Their decline is primarily the result of hatching failure caused by ingestion of fish containing pesticides. Nesting

occurs in colonies on coastal islands. Six brown pelican rookeries have been documented in Louisiana: on Queen Bess, North Last, Calumet-Timbalier and Grand Gosier Islands, and at South Pass. There is also a small rookery on Pelican Island in Nueces County, Texas. Unsuccessful nesting has occurred on Sunset Island in Matagorda Bay, and 40 hatchlings have been reintroduced to San Bernard National Wildlife Refuge. 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.

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 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 1990 Census show that the average annual payroll associated with oil and gas activities amounts to approximately $3.3 billion for the Gulf of Mexico Region ($2.7 billion for the Central Gulf, $0.6 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 $217.0 million from the Central Gulf and $50.9 million from the Western Gulf.

Job estimates for the year 1995 show that 31,700 jobs are directly or indirectly dependent on the offshore program. Approximately 81 % of these jobs are associated with activity in the Central Gulf and 19% 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 25,677 workers in the Central Gulf and 6,023 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 operations in West Cameron Blocks 462 and 480 will be located at Cameron, Louisiana.

III. UNAVOIDABLE ADVERSE ENVIRONMENTAL IMPACTS

A. WATER QUALITY

As a result of the proposed action, marine waters could be degraded from bottom disturbances, oil spills and waste discharges. Bottom disturbances from platform and pipeline emplacements and removals are expected to result in minor, localized, temporary impacts to water quality due

to sediment resuspension. Oil spill incidents are expected to have a negligible impact on regional water quality, alter surface water for only a short duration, two to three months, and will affect only a very small area of offshore waters at any one time. More stringent conditions, required in the new NPDES permits for waste discharges from the OCS oil and gas industry, are expected to eliminate the biological and ecological impacts that were documented to have occurred in the past from discharges. The contribution from waste discharges associated with CPA to regional, long-term changes in offshore water quality is expected to be negligible.

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. The impacts could cause acute or chronic physiological stress, alter normal behavior and result in some degree of avoidance, either temporary or permanent, of the impacted area(s). Lethal impacts are expected to be rare for all marine mammals, with the most likely impacts resulting from vessel collision with lethargic individual animals at the surface. The unexpected and unintentional removal of individuals of any species is considered an incidental take. recovery times will vary with species size, gestation period and rates of reproductive activity. 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, oil-spill response activities, beach trash and debris and coastal habitat degradation. Deleterious effects are not expected because of the low probability of spill occurrence and due to the protected species and habitat requirements for cleanup under the Oil Pollution Act of 1990. Unless an oil spill would occur in conjunction with a strong storm surge, there is an estimated probability of less than 0.5% if contact to occur with the 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 emplacement, dredging, operational discharges, OCS-related trash and debris, vessel traffic, explosive platform removals, oil-spill response activities and oil spills. The effects of the

majority of these activities are expected to temporarily disturb their habitats but deaths are expected to be rare. Disturbances are expected to be temporary and marine turtles are expected to recover from within a period of weeks to months. The extent and severity of effects from any oil spill are expected to be lessened by coastal oil-spill contingency.

The Gulf of Mexico is populated by resident and migratory species of coastal and marine birds. This broad category consists of five main groups, seabirds, shorebirds, wading birds, marsh birds and waterfowl. The major impact-producing factors related to the proposed action include air emissions, oil spills, oil-spill response activities, degradation of water quality resulting from OCS discharges, OCS helicopter and service vessels traffic and noise, habitat loss and modification resulting from pipeline landfalls and coastal facility construction and discarded trash and debris from service-vessels and OCS Structures. Effects of the major impact-producing factors on coastal and marine birds would be periodic disturbance and temporary displacement of localized groups and individuals from proposed activities. Decreases in number of adults and / or nests could occur as a result of oil spills and spill related coastal habitat loss or degradation. Groups experiencing the loss of individuals would require up to several years to recover to a pre-disturbance condition, depending on the species and the existing conditions.

The brown pelican, arctic peregrine falcon, bald eagle and piping plover 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 causing temporary disturbances and displacement of individual or localized groups inshore. Chronic sublethal stress, however, is often undetectable in birds and can be masked for some period of time. It can serve to weaken individuals and expose them to infection and disease. Lethal effects result primarily from uncontained inshore oil spills and associated spill-response activities and are especially serious for endangered species. Any reduction in population size represents a threat to their existence. The net effect will be the alteration of species composition and possibly the reduction o of the overall capacity of the disturbed area(s) in general. It is assumed that an oil spill in the CPA will rarely contact and affect the feeding, resting or nesting habitats for endangered birds. The effect from a spill is expected to be negligible.

The Gulf sturgeon could be impacted by oil spills resulting from the proposed action. The impact could cause nonfatal irritation of the gill epithelium and an increase of liver function for less than a month. However, oil spills of any size will rarely contact the fish.

D. WETLANDS AND BEACH

The major impact-producing factors associated with the proposed action that could affect barrier landforms include oil spills, pipeline emplacement, navigation canal dredging and maintenance dredging and support infrastructure. Impacts from onshore and nearshore construction of OCS-related infrastructure (pipelines 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.

The proposed activity is not expected to result in permanent alternations of barrier beach configurations, except n localized areas downdrift from navigation channels that have been dredged and deepened.

Wetlands include forested wetlands (swamps), 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 Sound. Impact-producing factors resulting from OCS oil and gas activities that could adversely affect wetlands include oil spills, onshore discharge of OCS-produced waters, pipeline placements, dredging of new navigation channels, maintenance dredging and vessel usage of existing navigation channels and construction of onshore facilities in wetland areas.

Offshore oil spills associated with the proposed action can result from platform accidents, pipeline breaks or navigational accidents. Just as the probability of an oil spill impacting coastal beaches is extremely low, an offshore oil spill is unlikely to contact coastal wetlands or seagrasses in the CPA.

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 operation; evaporation of volatile hydrocarbons from surface oil slicks; 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, emissions heights, and pollutant 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. 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 about 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 effects of commercial fisheries from activities associated with the proposed action could come from coastal environmental degradation, emplacement of production platforms, underwater OCS obstructions, production platform removals, seismic surveys, oil spills, subsurface blowouts, pipeline trenching and offshore discharges of drilling muds, produced water an naturally occurring radioactive material (NORM).

Since approximately 92 % of commercially harvested species are estuary dependent, coastal environmental degradation resulting from the proposed action, although indirect, has the potential to adversely affect commercial fisheries. The environmental deterioration and effects on commercial fisheries results from the loss of Gulf wetlands as nursery habitat and from the functional impairment of existing habitat through decreased water quality.

Wetlands and estuaries within the CPA may be affected by OCS-related activities resulting from the proposed action. These include construction of new onshore facilities in wetland areas; pipeline placement in wetland areas; vessel usage of navigation channels and access canals; maintenance of navigation channels; inshore disposal of OCS-generated oil field wastes, and oil and chemical spills from both coastal and offshore OCS-support activities.

The emplacement of production platform with surrounding 100-m navigation safety zone, in water depths of less than 152 m results in the loss of approximately 6 ha of bottom trawling area to commercial fishermen and causes space-use conflicts. Underwater OCS obstructions, such as pipelines, cause gear conflicts that result in losses of trawls and shrimp catch, business downtime and vessel damage. However, all pipelines in water depths less than 61 m will be buried and their locations made public knowledge. Nearly 97% of trawl fishing in the CPA occurs in water depths less than 61 m. Although, Gulf fishermen are experiencing some economic loss from gear conflicts, the economic loss for a fiscal year has historically been less than 1 % of the valve of that same fiscal year's commercial fisheries landings. In addition, most financial losses from gear conflicts are covered by the Fishermen's Contingency Fund.

The effects on 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 pelagic eggs and larvae are present have the greatest potential to affect 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.

For OCS-related oil spills to have an effect on a commercial fishery resource, whether estuary dependent or not, eggs and larvae would have to be abnormally concentrated in the immediate spill area. There is no evidence at this time that commercial fisheries in the Gulf have been adversely affected on a regional population level by spills or chronic oiling. The effect of oil spills on commercial fisheries is expected to cause less than 1 % decrease in commercial

populations or in commercial fishing. At the expected level of effect, the resultant influence on Central Gulf fisheries is negligible and will be indistinguishable from natural population variations.

G. SHIP NAVIGATION

Very little interference can be expected between the drilling unit, structures and marine vessels utilized during exploratory operations and ships that use established fairways. However, at night and during rough weather, fog and heavy seas, ships not using established fairways could collide with the structures.

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

H. CULTURAL RESOURCES

Blocks with a high probability for the occurrence of prehistoric and historic or historic archaeological resources may be found in the Central Gulf. Blocks with a high probability for prehistoric resources may be found landward on a line that roughly follows the 45-m bathmetric contour. These are areas of the northern Gulf of Mexico that are considered to have a have probability for historic period shipwrecks.

The placement of drilling rigs, production platforms and pipelines have the potential to cause a physical impact to prehistoric and / or historic archaeological resources. It may be assumed that a standard rig in less than 457 m of water will directly disturb 1.5 ha of soft bottom, the average platform under the same conditions will directly disturb 2 ha. Pile driving associated with platform emplacement may also cause sediment liquefaction an unknown distance from the piling, disrupting stratigraphy in the area of liquefaction. Pipelines placed in water depths less than 61 m must be buried. Burial depths of 1 m are required with the exception of shipping fairways and anchorage areas, where the requirements are 3.0 m and 4.6 m respectively.

Oil spills have the potential to affect both prehistoric and historic archaeological resources. Impacts to historic resources would be limited to visual impacts and , possibly , physical impacts associated with spill cleanup operations. Impacts to prehistoric archaeological sites would be the result of hydrocarbon contamination of organic materials, which have the potential to date site occupation through radiocarbon dating techniques as well as possible physical disturbance associated with spill cleanup operations.

The greatest potential impact to an historic archaeological resource as a result of the proposed action would result from a contact between an OCS offshore activity (platform installation, drilling emplacement, dredging or pipeline project) and an historic shipwreck. An NTL for archaeological resource surveys in the Gulf of Mexico Region (NTL91-02) has increased the survey line-spacing density for historic shipwreck surveys from 150m to 50m.

Most other activities associated with the proposed action are not expected to impact historic archaeological resources. No new onshore infrastructure construction or pipeline landfalls are expected as a result of the proposed action. Ferromgnetic debris has the potential to make the magnetic signatures of historic shipwrecks. There is a small chance of contact from an oil spill associated with the proposed action. Furthermore, the major impact from an oil-spill contact on an historic coastal site , such as a fort or lighthouse, would be visual due to oil contamination. These impacts would be temporary and reversible. Maintenance dreading of navigation channels may result in impacts to historic shipwrecks; however, the percentage of OCS use of these channels under the proposed action ranges from less than 0.3% to 2.3% use.

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 historical archaeological information. Other factors associated with the proposed action are not expected to affect historic archaeological resources.

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

Petsec Energy 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 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 primary impact-producing factors associated with offshore oil and gas exploration and development, and most widely recognized as major threats to the enjoyment and use of recreational beaches, are oil spills, trash and debris. Additional factors such as the physical presence of platforms and drilling rigs can effect the aesthetics of beach appreciation and noise from aircraft can disturb the ambiance of the beach-related recreational experience. All these factors, either individually or collectively, may adversely affect the number and value of recreational beach visits.

Oil spills occurring in the Gulf of Mexico are estimated to dissipate rapidly and that only relatively small fractions are subject to tarball formation because of the chemical properties of many northern Gulf light crude oils. A recent investigation on the abundance and sources of tarballs on the recreational beaches of the CPA concludes that their presence along the Louisiana coastline is primarily related to marine transportation activities and their effect on recreational use is below the level of social an economic concern.

The proposed action is expected to result in pollution events and neashore operations that may adversely affect the enjoyment of some beach uses on the Louisiana and / or Texas beaches. However, these will have little effect on the number of beach users.

IV. SUMMARY

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

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

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

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

D. The proposed activities described in detail in the Initial Plan of Exploration will comply with Louisiana's Coastal Management Program and will be conducted in a manner consistent with such Programs.

E. Operations will be conducted per 33 CFR 322 as related to oil and gas exploration activities near or within a designated shipping fairway

REFERENCES

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

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

3. Final Environmental Impact Statement, Proposed Oil and Gas Lease Sales 113, 112, and 116, Gulf of Mexico OCS Region, OCS EIS, MMS 87-0077.

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

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

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

7. Final Environmental Impact Statement, Proposed Oil and Gas Lease Sales 157 and 161, Gulf of Mexico OCS Region, OCS EIS, MMS 95-0058.

8. Final Environmental Impact Statement, Proposed Oil and Gas Lease Sales 147, 150, and 137, Gulf of Mexico OCS Region, OCS EIS, MMS 90-0065.

9. Final Environmental Impact Statement, Proposed Oil and Gas Lease Sales 157 and 161, Gulf of Mexico OCS Region, OCS EIS, MMS 95-0058.

10. Final Environmental Impact Statement, Proposed Oil and Gas Lease Sales 169, 172, 175, 178 and 161, Gulf of Mexico OCS Region, OCS EIS, MMS 97-0010.

STATEMENT

THE PROPOSED ACTIVITIES WILL BE CARRIED OUT AND COMPLETED WITH THE GUARANTEE THAT:

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.

All operations will be covered by an approved oil spill response plan.

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

PETSEC ENERGY INC.

COASTAL ZONE MANAGEMENT

CONSISTENCY CERTIFICATION

INITIAL DEVELOPMENT OPERATIONS COORDINATION DOCUMENT

WEST CAMERON BLOCKS 462 AND 480

OCS-G-14337 AND OCS-G-13845

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

Arrangements have been made with the State-Times in Baton Rouge, Louisiana to publish a public notice of the proposed activities no later than December 21, 1998.

Additionally, arrangements have been made with the Cameron Parish Pilot in Cameron Parish to publish a public notice of the proposed activities no later than December 21, 1998.

PETSEC ENERGY INC
LESSEE OR OPERATOR

Howard Wilson
Vice President, Operations

12-11-98
Date

ATTACHMENT "I"

143 Ridgeway Drive, Suite 113 • Lafayette, LA 70503-3402 • (318) 989-1942 • Fax (318) 989-2517

PETSEC ENERGY INC.

December 11, 1998

Morning Advocate State Times
Legal Ad Department - Public Notice
525 Lafayette Street
Baton Rouge, Louisiana 70804

Dear Ms. Thompson:

Please publish the following as a legal ad no later than December 21, 1998.

Public Notice of Federal Consistency review of a Development Operations Coordination Document by the Coastal Management Section/Louisiana Department of Natural Resources for the Plan's consistency with the Louisiana Coastal Resources Program.

Applicant: Petsec Energy Inc.
143 Ridgeway Drive, Suite 113
Lafayette, Louisiana 70503-3402

Location: Petsec Energy Inc.
Lease OCS-G-14337 and OCS-G-13845
West Cameron Blocks 462 & 480
Offshore, Louisiana

Description: Proposed activities include: The completion of two wells, installation of two caisson well support structures, with minimum production facilities, the laying of two pipelines and commencement of production operations from OCS-G-14337 and 13845, West Cameron Blocks 462 and 480. Development activities shall include the transport of crews and equipment by helicopter and/or cargo vessel from an onshore base located in Cameron, Louisiana. No ecologically sensitive species or habitats are expected to be affected by these activities.

143 Ridgeway Drive, Suite 113 • Lafayette, LA 70503-3402 • (318) 989-1942 • Fax (318) 989-2517

A copy of the plan described above is available for inspection at the Coastal Management Division Office located on the 10th floor of the State Lands and Natural Resources Building, 625 North 4th Street, Baton Rouge, Louisiana. Office hours: 8:00 AM to 5:00 PM, Monday through Friday.

The public is requested to submit comments to the Louisiana Department of Natural Resources Coastal Management Division, Attention: OCS Plans, Post Office Box 44487, Baton Rouge, Louisiana 70804-44487. Comments must be received within 15 days of this notice or 15 days after the Coastal Management Section obtains a copy of the plan and it is available for public inspection. This public notice is provided to meet the requirements of the NOAA Regulations on Federal Consistency with approved Coastal Management Programs.

A copy of the published notice and bill should be submitted to the attention of the undersigned:

Mr. Howard H. Wilson, Jr.
Vice President, Operations
Petsec Energy Inc.
143 Ridgeway Drive, Suite 113
Lafayette, Louisiana 70503-3402

If you have any questions please notify the undersigned.

With kindest regards,

Howard H. Wilson, Jr.
Vice President, Operations

HHW/jvd

ATTACHMENT "J"

PETSEC ENERGY INC.

December 11, 1998

Cameron Parish Pilot
P. O. Box 995
DeQuincy, Louisiana 70633
Attention: Legal Ad Department

Gentlemen:

Please publish the following as a legal ad no later than December 21, 1998.

Public Notice of Federal Consistency review of a Proposed Development Operations Coordination Document by the Coastal Management Section/Louisiana Department of Natural Resources for the Plan's consistency with the Louisiana Coastal Resources Program.

Applicant: Petsec Energy Inc.
143 Ridgeway Drive, Suite 113
Lafayette, Louisiana 70503-3402

Location: Lease OCS-G-14337 and OCS-G-13845
West Cameron Blocks 462 and 480
Offshore, Louisiana

Description: Proposed activities include: The completion of two wells, installation of two caisson well support structures, with minimum production facilities, the laying of two pipelines and commencement of production operations from OCS-G-14337 and 13845, West Cameron Blocks 462 and 480. Development activities shall include the transport of crews and equipment by helicopter and/or cargo vessel from an onshore base located in Cameron, Louisiana. No ecologically sensitive species or habitats are expected to be affected by these activities.

A copy of the plan described above is available for inspection at the Coastal Management Division Office located on the 10th floor of the State Lands and Natural Resources Building, 625 North 4th Street, Baton Rouge, Louisiana. Office hours: 8:00 AM to 5:00 PM, Monday through Friday. The public is

requested to submit comments to the Louisiana Department of Natural Resources Coastal Management Division, Attention: OCS Plans, Post Office Box 44487, Baton Rouge, Louisiana 70804-44487. Comments must be received within 15 days of this notice or 15 days after the Coastal Management Section obtains a copy of the plan and it is available for public inspection. This public notice is provided to meet the requirements of the NOAA

Regulations on Federal Consistency with approved Coastal Management Programs.

A copy of the published notice and bill should be submitted to the attention of the undersigned:

Mr. Howard H. Wilson, Jr.
Vice President, Operations
Petsec Energy Inc.
143 Ridgeway Drive, Suite 113
Lafayette, Louisiana 70503-3402

If you have any questions please notify the undersigned.

With kindest regards,

Howard H. Wilson, Jr.
Vice President, Operations

HHW/jvd

ATTACHMENT "K"

ENG FORM 4343, FEB. 94 EDITION OF SEP 91 IS OBSOLETE.

Petsec Energy Inc. 12-11-98-98
WC 480, Form ENG 4345

Included and made part of the permit application being filed is a copy of the October 03, 1996 approval letter whereby Petsec was granted approval for the installation of a structure with 500 feet of the Shipping Fairway for the surface location of the West Cameron Block 480, OCS-G-13845, Well No. 2. It is requested that your office review this permit application and grant approval for the Petsec to install a permanent structure within 500 feet of a Shipping Fair, thereby allowing Petsec to continue it's oil and gas operations proposed for West Cameron Block 480.

Should you have any questions or need additional information related to this matter, please contact J. V. Delcambre at (318) 989-1942.

Sincerely,

Howard H. Wilson, Jr.
Vice President, Operations

18. NATURE OF ACTIVITY (Description of project, include all features)

INSTALL A CAISSON WELL SUPPORT STRUCTURE TO SUPPORT WELL WC 480, OCS-G-13845, WELL # 2 PRIOR TO WELL COMPLEITON OPERATIONS. PLACE A MODU (mobile offshore drilling unit) WITHIN 500 FEET OF A SHIPPING FAIRWAY LANE TO COMPLETE FOR PRODUCTION WELL #2, OCS-G-13845, WEST CAMERON BLOCK 480 .
(See attached drawings, cross section of a typical MODU and caisson support structure)

19. PROJECT PURPOSE (Describe the reason or purpose of the project, see instructions)

CONDUCT OIL AND GAS EXPLORATION AND PRODUCTION OPERATIONS.

USE BLOCKS 20-22 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. REASON(S) FOR DISCHARGE

N/A

21. TYPE(S) OF MATERIAL BEING DISCHARGED AND AMOUNT OF EACH TYPE IN CUBIC YARDS

N/A

22. SURFACE AREA IN ACRES OF WETLANDS OR OTHER WATERS FILLED (see instructions)

N/A

23. IS ANY PORTION OF THE WORK ALREADY COMPLETED? YES ___ NO __X__ YES, DESCRIBE THE COMPLETED WORK

24. ADDRESS OF ADJOINING PROPERTY OWNERS, LESSEES, ETC., WHOSE PROPERTY ADJOINS THE WATERBODY (if more than can be entered here, please attach a supplemental list)

MINERALS MANAGEMENT SERVICE
1201 ELMWOOD PARK BLVD.
NEW ORLEANS, LOUISIANA 70123-2394

25. LIST OF OTHER CERTIFICATIONS OR APPROVALS/DENIALS RECEIVED FROM OTHER FEDERAL, STATE OR LOCAL AGENCIES FOR WORK DESCRIBED IN THIS APPLICATION.

ISSUING AGENCY	TYPE APPROVAL	IDENTIFICATION NO	DATE OF APPLICATION	DATE OF APPROVAL	DATE OF DENIAL
MINERALS MGT. SERVICE	DOCD	APPLIED	12/1/98		

To the best of my knowledge the proposed activity described in my permit application complies with and will be conducted in a manner consistent with the Louisiana Coastal Management Program.

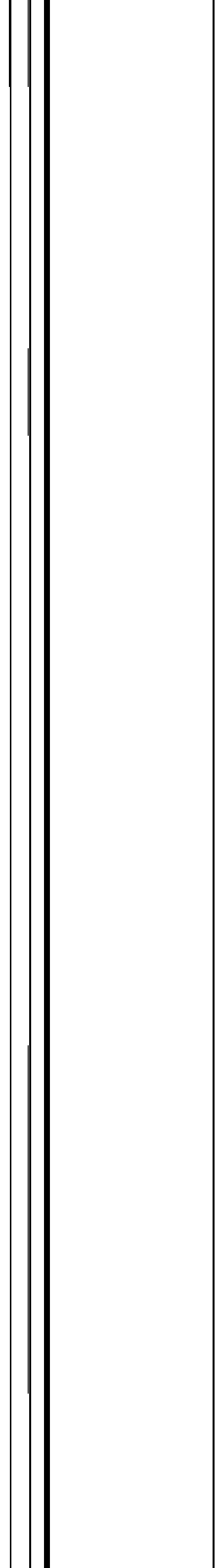
26. Application is hereby made for a permit or permits to authorize the activities described herein. I certify that I am familiar with the information contained in the application and that to the best of my knowledge and belief such information is true, complete and accurate. I further certify that I possess the authority to undertake the proposed activities or I am acting as the duly authorized agent of the applicant.

SIGNATURE OF APPLICANT	DATE	SIGNATURE OF AGENT	DATE
[signature]	12-11-98		

The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 3 has been filled out and signed.

18 U. S. C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of The United States knowingly and willfully falsifies, conceals, or covers up by any trick, scheme, or device a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false fictitious or fraudulent statement or entry, shall be fined not more than $10,000 or imprisoned not more than five years, or both.

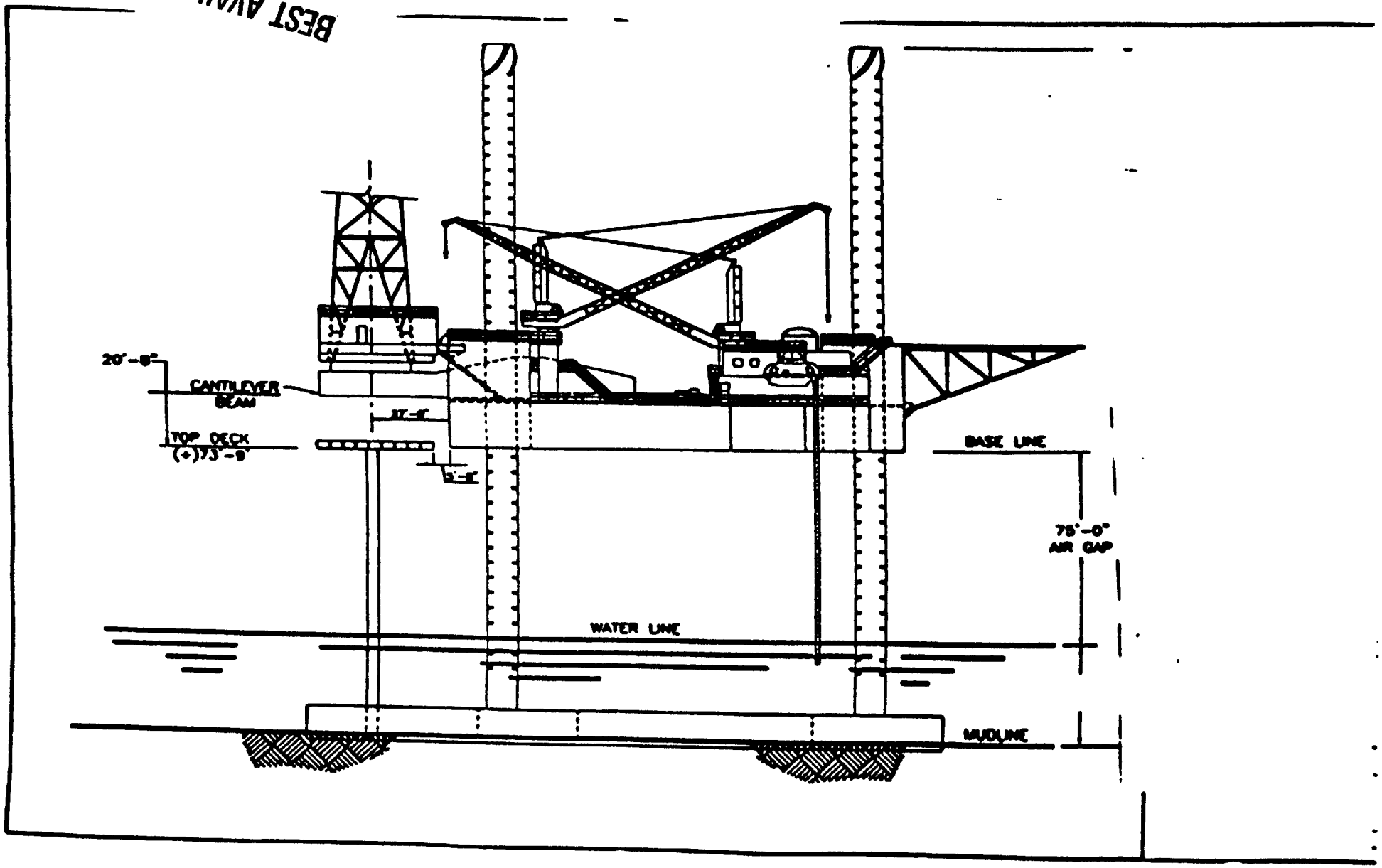
U. S. Government Printing Office 1994 -520-478/82018



PETSEC ENERGY INC.

WEST CAMERON BLOCK 480
OCS-G-13845

TYPICAL MOBILE OFFSHORE DRILLING UNIT



DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

REPLY TO ATTENTION OF:

October 3, 1996

Orig → W/C 480 Gen File #2 Sec #1
cc: LT JVD
Nicole → W/C 480 permit book

Operations Division
Western Evaluation Section

SUBJECT: N968151

Petsec Energy, Inc.
143 Ridgeway Drive, Suite 113
Lafayette, Louisiana 70503-3402

Gentlemen:

This is in regards to your permit application, dated September 23, 1996, requesting approval to place a mobile offshore drilling unit within 500 feet of a Shipping Fairway to drill 3 exploratory wells and install a Mantis type structure to support the wells after completion of drilling operations, in the Gulf of Mexico, offshore, Louisiana, in West Cameron Block 480, OCS-13845.

This office has made the determination that your project is authorized by Nationwide Permit Number 8, as specified in 33 CFR Part 330, dated November 22, 1991. Enclosed is a copy of the nationwide permit and the general conditions with which you must comply.

In addition to the conditions found at 33 CFR Part 330, the following additional conditions are being made a part of this authorization:

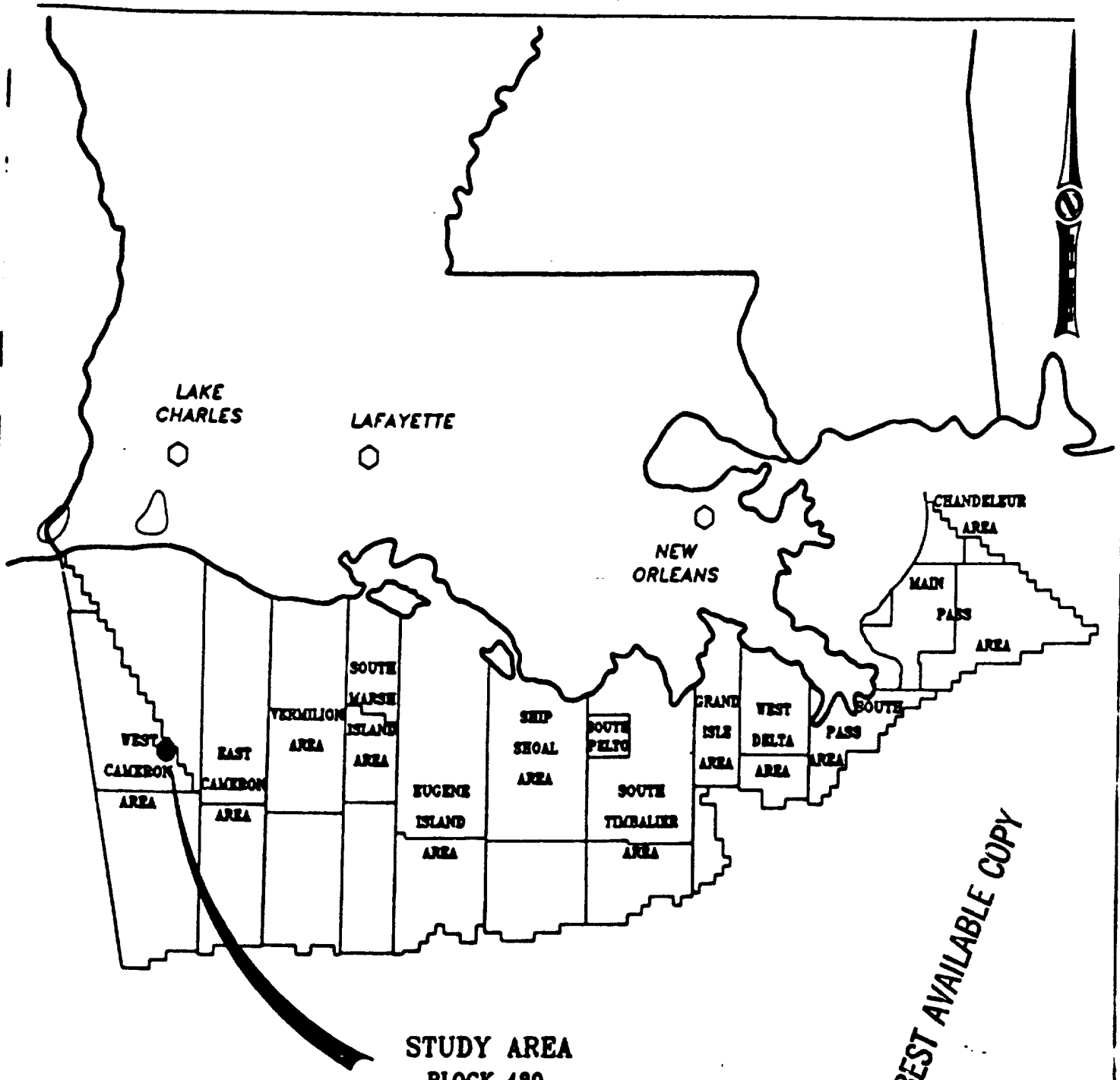
a. No temporary or permanent structures shall be placed within the Shipping Fairway.

b. The proposed project must comply with the fairway regulations in 33 CFR 322.5(l).

c. Your use of the permitted activity must not interfere with the public's right to free navigation on all navigable waters of the United States.

d. You must install and maintain at your expense, any safety lights and signals prescribed by the United States Coast Guard, through regulations or otherwise, on your authorized facilities.

cochrane
TECHNOLOGIES, INC.



STUDY AREA
BLOCK 480
WEST CAMERON AREA

G U L F O F M E X I C O

0 25 50 100
SCALE IN MILES

ATTACHMENT "M"

3913 HWY. 90 EAST BROUSSARD, LA. 70518 TELEPHONE 318/837-3334 FACSIMILE 318/837-7134