UNITED STATES GOVERNMENT
MEMORANDUM

March 14, 2001

To: Public Information (MS 5034)

From: Plan Coordinator, FO, Plans Section (MS 5231)

Subject: Public Information copy of plan

Control #	-	N-07078
Type	-	Initial Development Operations Coordinations Document
Lease(s)	-	OCS-G21576 Block - 139 East Cameron Area
Operator	-	Spinnaker Exploration Company, L.L.C.
Description	-	Platform A and Well No. 1BP01
Rig Type	-	Not Found

Attached is a copy of the subject plan.

It has been deemed submitted as of this date and is under review for approval.

Michelle Griffitt
Plan Coordinator

Site Type/Name	Botm Lse/Area/Blk	Surface Location	Surf Lse/Area/Blk
CAIS/A		3529 FSL, 3510 FWL	G21576/EC/139
WELL/1BP01	G21576/EC/139	3529 FSL, 3510 FWL	G21576/EC/139

NOTED-SCHEXNAILDRE

ISS MAR19'01AM11:03

SPINNAKER EXPLORATION

March 7, 2001

UPS

Minerals Management Service
Gulf of Mexico - OCS Region
1201 Elmwood Park Boulevard
New Orleans, LA 70123-2394

Attention: Mr. Don Howard, MS 5200

Re: **EAST CAMERON AREA**
BLOCK 139, 0CS-G 21576
INITIAL DOCD

Gentlemen:

In accordance with the guidelines set forth in 30-CFR 250.203, Spinnaker Exploration Co., L.L.C. is submitting for your favorable review and approval a proposed Initial DOCD for East Cameron Block 139

Enclosed you will find nine (9) copies of the subject plan; five (5) of which contain "Proprietary Data" that are exempt from disclosure under the privacy Act (5 U.S.C. 552a) and the implementing regulations (43 CFR Part 2 Subpart D). Four (4) copies are considered "Public Information."

Construction operations are expected to commence on or before **April 15, 2001**.

Our $3,000,000 Areawide Development Bond number is RLB-0001151 and our $300,000 OCS Right-Of-Way Grant Bond number is B-7748. Spinnaker Exploration Co., L.L.C. acquired these bonds June 25, 1999 and September 25, 1998, respectively.

Review and approval of our DOCD at your earliest convenience is greatly appreciated. Spinnaker is attempting to secure an available lay barge to install the proposed pipeline in our plan.

Should you require any additional information, please feel free to contact Tom Becnel at 713/356-7534.

Sincerely,

SPINNAKER EXPLORATION CO., L.L.C.

Scott Broussard
Vice President Drilling & Production

tgb

enclosures

SPINNAKER EXPLORATION COMPANY, L.L.C.
1200 Smith Street, Suite 800
Houston, Texas 77002
Tel: 713/759-1770, Fax: 713/759-1773

INITIAL
DEVELOPMENT OPERATIONS COORDINATION DOCUMENT

EAST CAMERON AREA

BLOCK 139

OCS-G 21576

OFFSHORE, LOUISIANA

MARCH 2001

INITIAL
DEVELOPMENT OPERATIONS COORDINATION DOCUMENT

EAST CAMERON AREA
BLOCK 139
OCS-G 21576

SECTION A	Contents of Plan
SECTION B	General Information
SECTION C	Geological, Geophysical & H2S Information
SECTION D	Biological Information
SECTION E	Wastes and Discharge Information
SECTION F	Oil Spill Response and Chemical Information
SECTION G	Air Emissions Information
SECTION H	Environmental Report
SECTION I	CZM Consistency
SECTION J	OCS Plan Information Form

SECTION A

CONTENTS OF PLAN

LEASE DESCRIPTION/ACTIVITY

Lease OCS-G 21576 was acquired by Spinnaker Exploration Co., L.L.C. (Spinnaker) at the Central Gulf of Mexico Lease Sale No. 175 held on March 15, 2000. The subject lease was issued with an effective date of July 1, 2000, and primary term ending date of June 30, 2005.

Spinnaker is the designated operator of the subject oil and gas lease.

OBJECTIVE

SPINNAKER EXPLORATION CO., L.L.C. (Spinnaker) hereby submits an Initial DOCD for the installation of a Lease Term pipeline and the deck section on the previously driven free-standing caisson at our existing well No.1 location.

Well No.1 was previously approved under development plan **N-6973**. Our Temporary Caisson was approved January 30, 2001.

Spinnaker has drilled well No.1 (BP-1), approved under plan number **N-6973.** The well was completed and is presently shut-in awaiting facility and pipeline installation. A caisson was driven over the well and serve as a permanent structure once the deck section is set.

Plans call for the installation of a 4.5" Lease Term pipeline. The pipeline will be laid from our EC139-1 caisson to our EC138-A platform. There are no plans for any future drilling on block 139.

SCHEDULE

Install deck section .....April 15, 2001

Install 4.5" pipeline EC139-1 to EC138-A .....April 15, 2001

Hook-up facilities at EC139-1 ..... April 20, 2001
(Well No.1BP01)

Commence production..... May 1, 2001

WELL/STRUCTURE LOCATIONS

A table depicting the surface locations of the proposed activity and corresponding depths is included in Section J of this plan.

PRODUCTION FACILTIIES

The proposed structure will be of minimal design and unmanned. The production facilities at the EC139-1 structure will consist of a tree and departing pipeline. No additional equipment is required at the EC138-A Platform.

Maintenance or repairs that will be necessary to prevent pollution of offshore waters shall be undertaken immediately as needed. The proposed facilities will be designed, installed, and operated in accordance with current regulations, engineering documents incorporated by reference and industry practices in order to ensure protection of personnel, environment and the facilities.

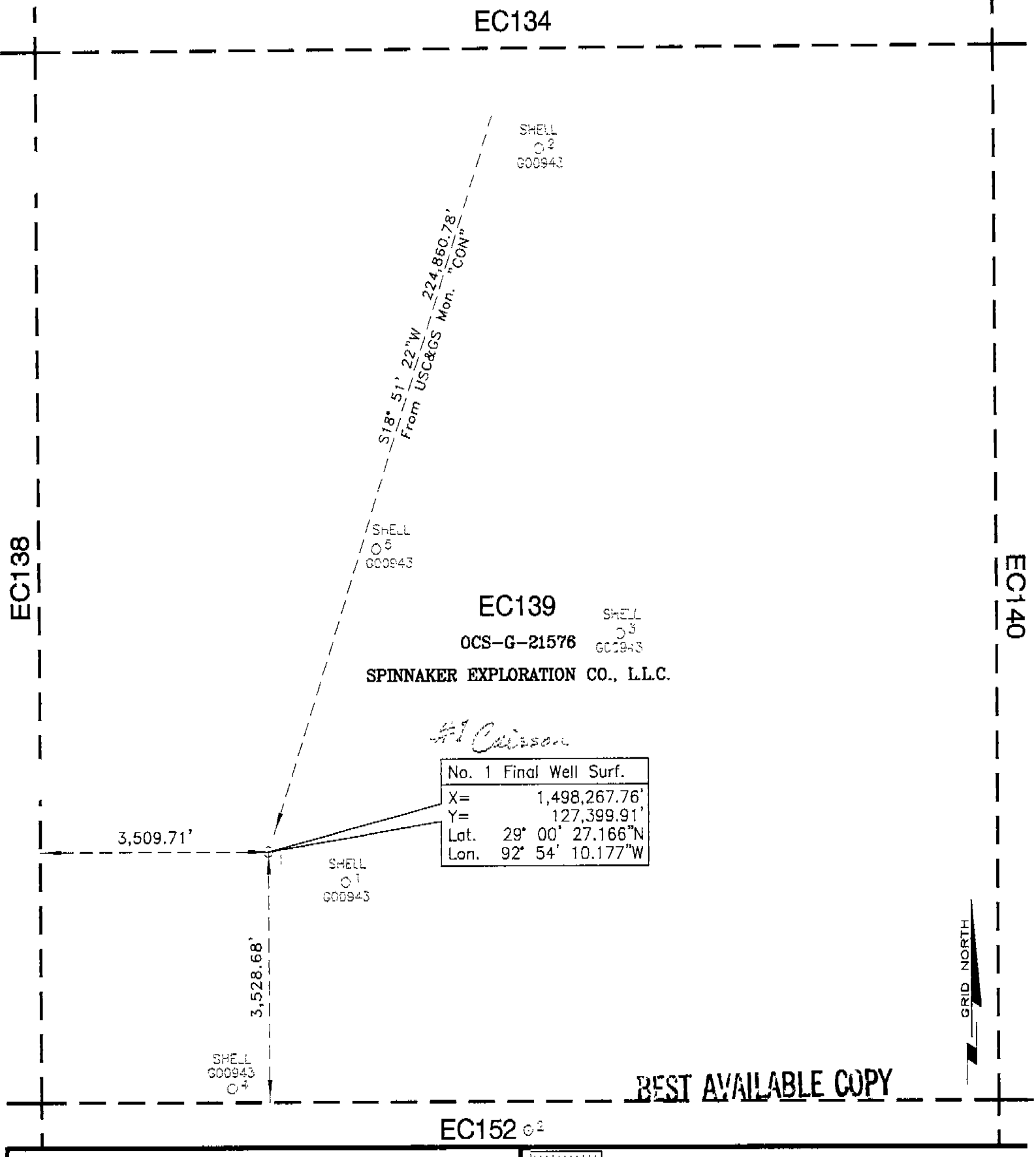
DRILLING UNIT

There are no plans to drill anymore wells on East Cameron Block 139.

In accordance with Title 30 CFR 250, Subpart O, an operator is to ensure Well Control Training is provided for lessee and contractor personnel engaged in oil and gas operations in the OCS Gulf of Mexico. Supervisory and certain designated personnel on-board the facility are to be familiar with the effluent limitations and guidelines for overboard discharges into the receiving waters, as outlined in the NPDES General Permit GMG 290000.

The operator is charged with the responsibility to not create conditions that will pose unreasonable risk to the public health, life, property, aquatic life, wildlife, recreation, navigation, commercial fishing, or other uses of the ocean. Some of these measures included installations of curbs, gutters, drip pans, and drains on drilling deck areas to collect all contaminants and debris.

The MMS is required to conduct onsite inspections of offshore facilities to confirm operators are complying with lease stipulations, operating regulations, approved plans, and other conditions, as well as to assure safety and pollution prevention requirements are being met. The National Potential Incident of Noncompliance (PINC) list serves as the guideline for these inspections. The MMS also inspects the stockpiles of equipment listed in the operator's approved Oil Spill Response Plans that would be used for the containment and cleanup of hydrocarbon spills.



I HEREBY CERTIFY THAT THE ABOVE FINAL WELL SURFACE IS CORRECT.

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

Lionel J. Cormier

REG. PROFESSIONAL LAND SURVEYOR NO. 4401
STATE OF LOUISIANA

Printed: 12/27/00

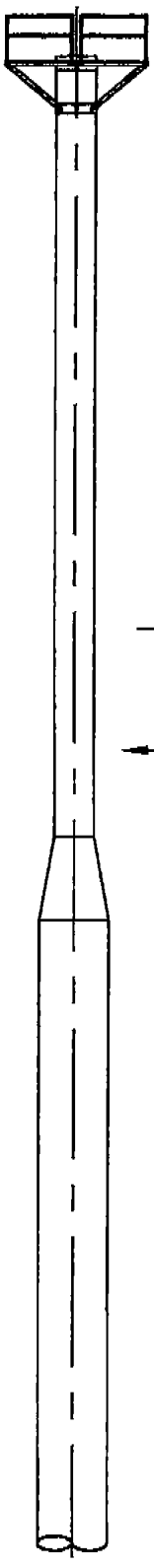
SPINNAKER EXPLORATION COMPANY, L.L.C.

FINAL LOCATION
OCS-G-21576 WELL #1

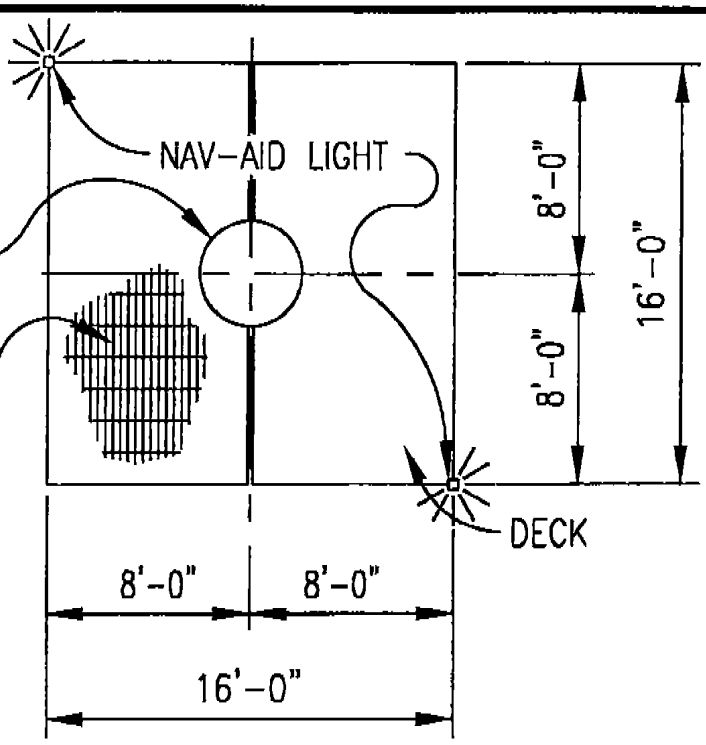
BLOCK 139
EAST CAMERON AREA
GULF OF MEXICO

JOHN E. CHANCE & ASSOCIATES, INC.

GEODETIC DATUM: NAD 1927 PROJECTION: LOUISIANA SOUTH GRID UNITS: US SURVEY FEET	SCALE IN FEET 0 2,000'		
Job No.: 00-3768	Date: 12/22/00	Drwn: RDT	Chart: 1 Of: 1
Dwgfile: O:\CADBASE\WPERMIT\LASOUTH\EC\PERMIT\139F1			



ELEVATION



ELEVATION

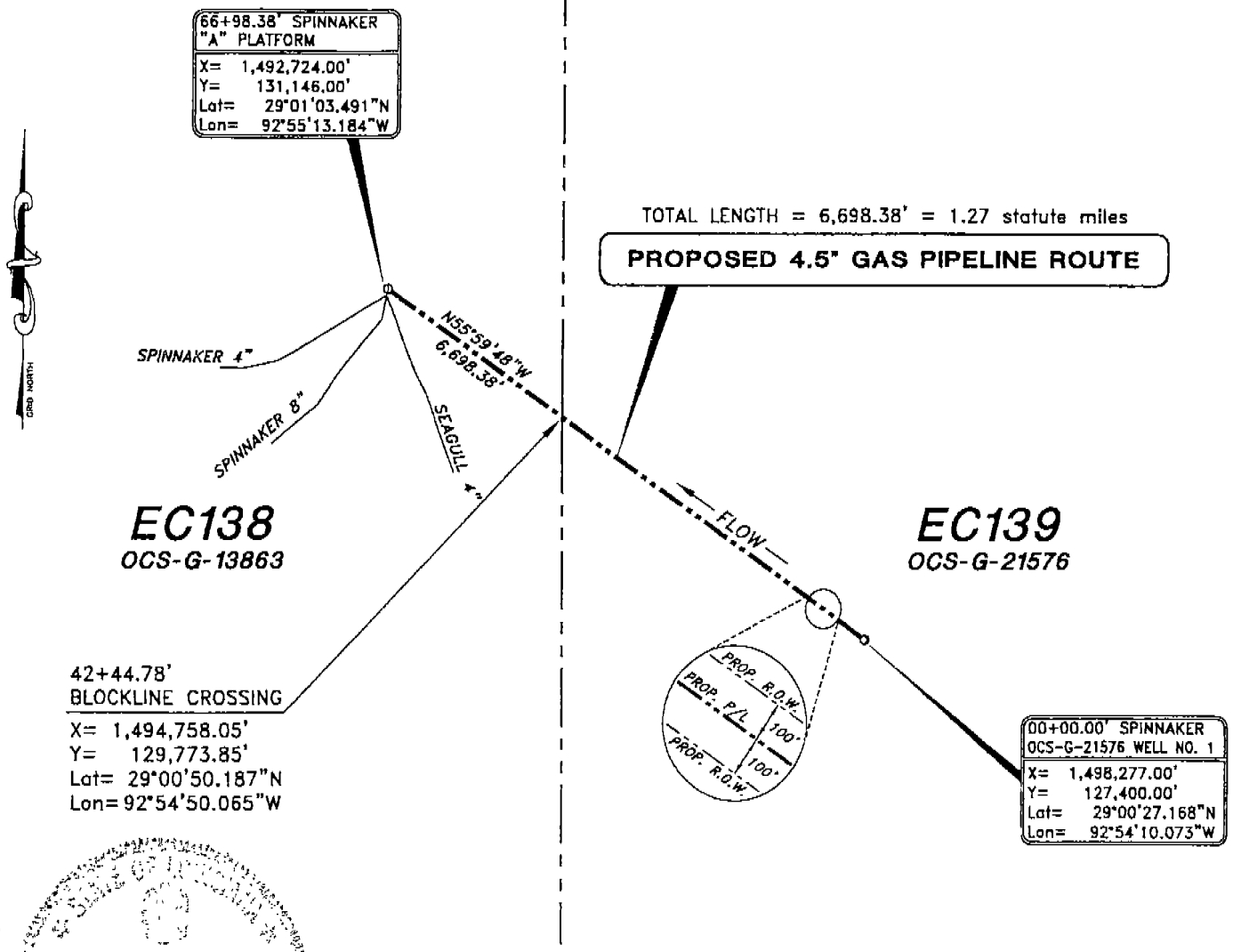
PLAN

SCALE: 1/8"=1'-0"

BEST AVAILABLE COPY

NOTE:

Spinnaker Exploration Co.
No. 1 CAISSON
EAST CAMERON BLK 139
PROJECT NO: 01018-01
SCALE: 1"=20' (VERTICAL)



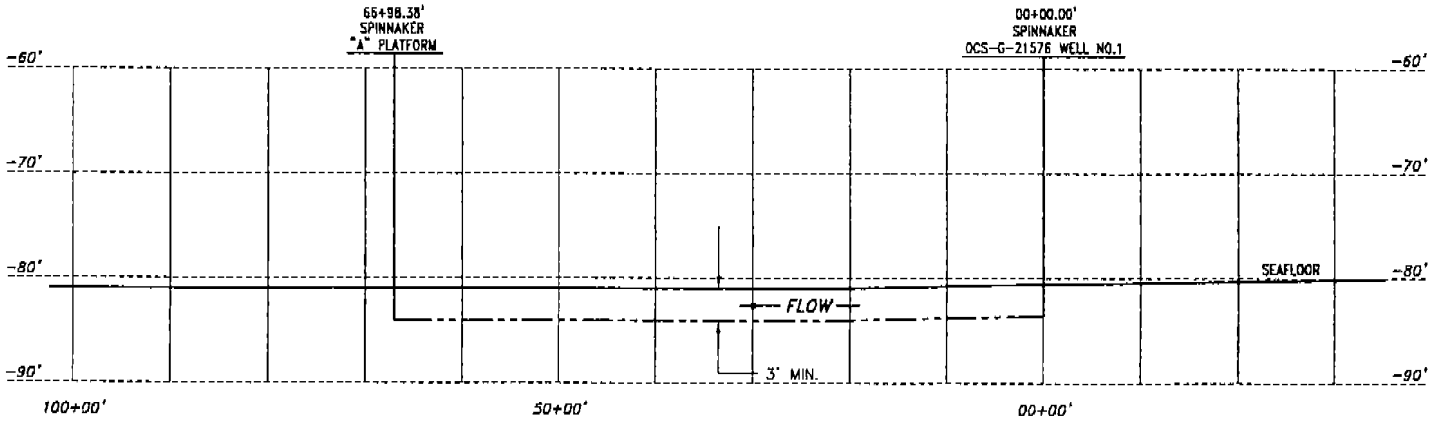
RIGHT OF WAY OF THE PROPOSED PIPELINE IS ACCURATELY REPRESENTED.

RALPH A. COLEMAN
PROFESSIONAL LAND SURVEYOR
LOUISIANA REGISTRATION No. 4691

PLAN A

2000' 0' 2000'
SCALE IN FEET

GEODETIC DATUM: NAD27
ELLIPSOID: CLARKE 1866
GRID UNITS: FEET
PROJECTION: LAMBERT
ZONE: LOUISIANA SOUTH
CENTRAL MERIDIAN: 91° 20' W
FALSE EASTING: 2,000,000 ft. at C.M.
FALSE NORTHING: 0.00 ft. at 28° 40' N



PROFILE A

HORIZONTAL SCALE: 0' 2,000'
VERTICAL SCALE: 0' 20'

DATE: 03/05/2001 TIME: 15:14 FILENAME: J:\2070\2070PRM.DWG

VERTICAL EXAGGERATION = 100

SPINNAKER EXPLORATION

SPINNAKER EXPLORATION COMPANY
1200 SMITH STREET, SUITE 800
HOUSTON, TEXAS 77002

PROPOSED 4.5" GAS PIPELINE ROUTE
BLOCK 139 to BLOCK 138
EAST CAMERON AREA

PREPARED BY:
C&C Technologies
SURVEY SERVICES
730 E. KALISTE SALOOM ROAD LAFAYETTE LA (337) 261-0660

JOB No.: 2070	REVISED:	DATE: 03/05/2001
FILENAME: 2070PRM.DWG		SHEET 2 of 2

SECTION B

GENERAL INFORMATION

CONTACT

Thomas G. Becnel
Spinnaker Exploration Co., L.L.C.
1200 Smith Street, Suite 1200
Houston, Texas 77002
713/356-7534
E-mail address: tbecnel@spinexp.com

PROJECT NAME

None.

NEW OR UNUSUAL TECHNOLOGY

Spinnaker does not propose the use of any new or unusual technology in the activities provided for in this plan.

PRODUCTION RATES AND LIFE OF RESERVES

The Initial Production Rate from Spinnaker's East Cameron Block 139 "A" Platform is expected to be 10 MMCFPD and 200 BCPD. The projected Reserve Life is five (5) years.

BONDING INFORMATION

In accordance with regulations contained in Title 30 CFR Part 256 and further clarified by Notice to Lessees (NTL 99-G04) pertaining to general lease surety bonds, Spinnaker has on file with the Minerals Management Service a $3,000,000 Area wide Development Bond.

Additionally, Notice to Lessees (NTL 98-18N) provides clarification on the method MMS utilizes to require additional security to cover full plugging, site clearance and other associated lease liabilities that may be in excess of the federal lease surety bonds. These activities are reviewed on a case-by-case basis, and if deemed warranted, Minerals Management Service will provide such notification to Spinnaker.

ONSHORE BASE AND SUPPORT VESSELS

Spinnaker's shore base at Cameron, Louisiana will serve as the onshore support base facilities during the activities planned for East Cameron Block 139. This will serve as port of debarkation for supplies and crews. Typical supply and crew boats will be utilized throughout the drilling, completion, construction and hook-up operations. Boat and helicopter travel to and from the base will be over the most direct routes. No additional personnel will be required to conduct the proposed construction and hook-up operations.

A Vicinity Plat showing the location of East Cameron Block 139 relative to the shoreline and onshore base is included in this plan. The respective distances to the nearest shoreline and to our shore base are depicted on the vicinity map. **(Attachment B-1)**

No onshore expansion or construction of our support base 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. The base will also serve as a loading for tools, equipment and machinery to be delivered to the MODU, crew change and transportation base, and temporary storage for materials and equipment. The facilities typically include outdoor storage, forklift, and crane service, dock, trailer facilities, and parking, as well as 24-hour service, a radio tower with a phone patch.

FREQUENCY OF TRAVEL

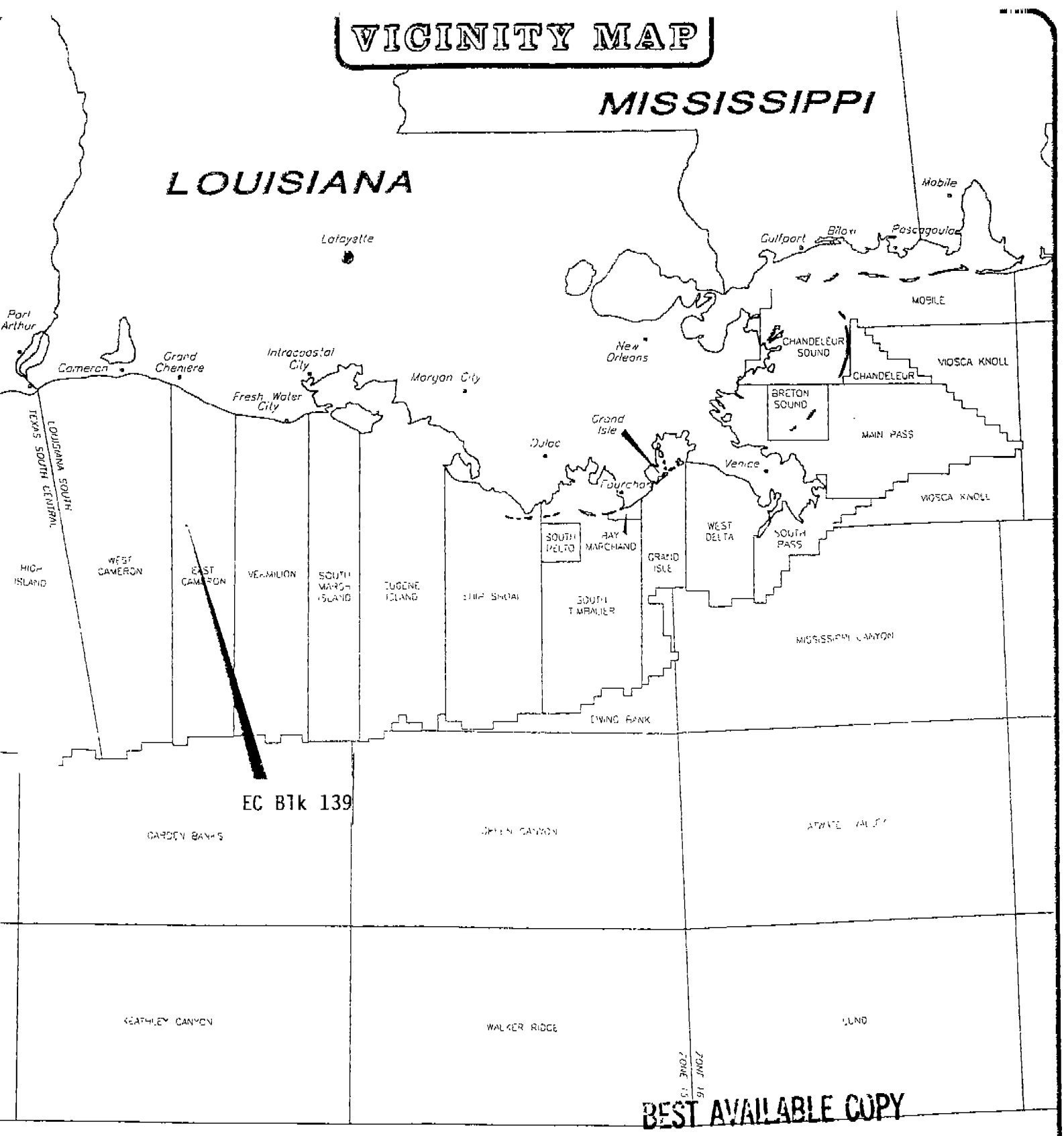
Support Vessel & Aircraft	Construction Operations Trips Per Week	Support Vessel & Aircraft	Production Operations Trips Per Week
Crew Boat	5	Crew Boat	2
Supply Boat	3	Supply Boat	0
Helicopter	1	*Helicopter	0

*A Helicopter will only be utilized in the event of an operational or personnel emergency.

Personal vehicles will be the main means of transportation to carry rig personnel from various locations to the Cameron, Louisiana area. They will then be transported to the MOD U by the crew boat. A helicopter will be issued to transport small supplies, and occasionally, personnel. The most practical, direct route permitted by the weather and traffic conditions will be utilized.

During the proposed operations, Spinnaker and contractor personnel will be employed on the MODU conducting the drilling and potential completion operations. During these periods of time, approximately 35 – 50 personnel may be engaged in designated

VICINITY MAP



ATTACHMENT B-1

SPINNAKER EXPLORATION COMPANY
1200 SMITH STREET, SUITE 800
HOUSTON, TEXAS 77002

INITIAL DOCD
BLOCK 139, OCS-G 21576
EAST CAMERON AREA

PREPARED BY: C&C Technologies
SURVEY SERVICES

JOB No.: 2070
FILENAME: 2070PRM_VC.DWG
REVISED
DATE: 03/05/2001
SHEET 1 of 2

March 7, 2001

Naval Air Station – JRB
400 Russel Avenue
Box 27
New Orleans, Louisiana 70143-0027

Attention: **Commander – OG/CC**
Military Warning Area
W-59

Re: **EAST CAMERON AREA**
BLOCK 139, 0CS-G 21576
INITIAL DOCD

Gentlemen:

In accordance with the guidelines set forth in Stipulation 3 (c) of the lease agreement for East Cameron Block 139, Spinnaker is notifying you of our estimated vessel and aircraft traffic proposed in the above referenced initial DOCD. The proposed frequency and mode of travel is given in the table below:

Support Vessel & Aircraft	Construction Operations Trips Per Week	Support Vessel & Aircraft	Production Operations Trips Per Week
Crew Boat	5	Crew Boat	2
Supply Boat	3	Supply Boat	0
Helicopter	1	Helicopter	1

Enclosed is a listing of the location(s) where the proposed activity will take place.

Construction operations are expected to commence on or before **April 15, 2001**.

Should you require any additional information, please feel free to contact Tom Becnel at 713/356-7534.

Sincerely,

SPINNAKER EXPLORATION CO., L.L.C.

Scott Broussard
Vice President Drilling & Production

tgb

enclosures

SPINNAKER EXPLORATION COMPANY, L.L.C.
1200 Smith Street, Suite 800
Houston, Texas 77002
Tel: 713/759-1770, Fax: 713/759-1773

SPINNAKER EXPLORATION CO., L.L.C.
EAST CAMERON BLOCK 139
OCS-G 21576

WELL TABLE

WELL	X-COORDINATE	Y-COORDINATE	LATITUDE	LONGITUDE
1BP01	1,498,267.76'	127,399.91'	29° 00' 27.166"	92° 54' 10.177"

activities. Personnel engaged in onshore operations will be the dispatchers as the per-determined support base, contract personnel for off loading equipment and materials required to support the activities, as well as the personnel needed to transport same to the offshore facility.

The proposed operations do not mandate any immediate measures for land acquisitions or expansion of the existing onshore base facilities.

Dredging and filing operations will not be required for the operations, nor will any new construction or expansion of onshore facilities be involved for the operations proposed n this Plan.

LEASE STIPULATIONS

Oil and gas exploration activities on the OCS are subject to stipulations developed before the lease sale; these are attached to the lease instrument, as necessary, in the form of mitigating measures. The MMS is responsible for ensuring full compliance with lease stipulations.

The military warning area stipulation has been applied to blocks in military warning areas to mitigate potential multiple-use conflicts. The stipulation reduces potential impacts, primarily those associated with safety, by curtailing OCS operations and support activities in areas where military operations are being conducted. One of the requirements of this stipulation is that the operator notify the military prior to conducting oil and gas activities and, if required, enter into an agreement to provide for positive control of boats, ships and aircraft operating into the warning areas.

Spinnaker will file a notification with the Naval Air Station in New Orleans, Louisiana with regard to vessel and aircraft traffic in MWA W-59 prior to conducting operations on East Cameron Block 139.

SECTION C

GEOLOGICAL, GEOPHYSICAL AND H_2S INFORMATION

STRUCTURE CONTOUR MAPS

The structure contour maps were submitted and approved under plans **N-6973.** An updated structure map is included as **ATTACHMENT C-1.**

INTERPRETED SEISMIC LINES

The EC139-1 (Well 1BP-1) and Caisson No.1 location was previously approved under Plans **N-6973,** therefore interpreted deep seismic lines are not required for the proposed activities. A Hazard Survey along the proposed pipeline was shot by C&C Technologies and submitted with our pipeline application March 7, 2001.

GEOLOGICAL STRUCTURE CROSS-SECTIONS

Well No.1 was approved under plan **N-6973**. An updated cross-section depicting wellbores No.1 and No.1(BP01) is included as **ATTACHMENT C-3.**

SHALLOW HAZARDS REPORT

A high-resolution geophysical survey was conducted across East Cameron Block 139 and was previously submitted under Plan **N-6973. No change.**

SHALLOW HAZARDS ASSESSMENT

A shallow hazards analysis was prepared and previously submitted under Plan **N-6973** for the existing surface location. **No change.**

HIGH RESOLUTION SEISMIC LINES

Copies of the high-resolution seismic lines, applicable to the existing surface location addressed in this plan, was submitted under separate cover with a previously approved under EP (**N-6973**). **No change.**

HYDROGEN SULFIDE INFORMATION

Spinnaker is requesting the sands penetrated in East Cameron Block 139 by wells OCS-G 21576 1 and 1BP01 be classified as absent of hydrogen sulfide. In accordance with 30 CFR 250.67, Spinnaker Exploration Co., L.L.C. requests that East Cameron Block 139 be classified as being in a "Zone Where the Absence of H_2S has been Confirmed." (Previously approved under plan **N-6973**).

SECTION D

BIOLOGICAL INFORMATION

The seafloor disturbing activities proposed in this Plan will be at a water depth of 83 feet at each location. The seafloor is flat to within 0.5 feet across the block.

MAPS

Submitted under separate cover are the maps prepared using high resolution seismic information and/or 3-D seismic data to depict bathymetry, seafloor and shallow geologica features and the surface location of each proposed well and structure.

ANALYSIS

Submitted under separate cover is the analysis of seafloor features and areas that could be disturbed by the activities proposed in this Plan.

TOPOGRAPHIC INFORMATION

MMS and the National Marine Fisheries Service (MNFS) have entered into a programmatic consultation agreement for Essential Fish Habitat that requires that no bottom disturbing activities, including anchors or cables from a semi-submersible drilling rig, may occur within 500 feet of the no-activity zone of a topographic feature. If such proposed bottom disturbings are within 500 feet of a no activity zone, the MMS is required to consult with the NMFS.

The activities proposed in this Plan are not affected by a topographic feature.

SECTION E

DISCHARGES

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 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. If any wastes are classified as hazardous, they are to be properly transported using a uniform hazardous waste manifest, documented, and disposed at an approved hazardous waste facility.

A National Pollutant Discharge Elimination System (NPDES) permit, based on effluent imitation guidelines, is required for any discharges 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 uncontaminated seawater. Minor discharges from the offshore oil and gas industry include drilling-waste chemicals, fracturing and acidizing fluids, and well completion and work over fluids; from production operations - deck drainage and miscellaneous well fluids (cement, BOP fluid); and other sanitary and domestic wastes, gas and oil processing wastes, and miscellaneous discharges.

All offshore discharges associated with Spinnaker's proposed operations will be conducted in accordance with the NPDES permit covering the Lease **OCS-G 21576**.

Spinnaker has requested coverage under EPA Region VI NPDES General Permit GMG290000 for discharges associated with drilling and production activities. The types of discharges included in the permit application and the estimated average flow volumes are listed in the Environmental Report.

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

All discharges associated with drilling and completing the subject wells (previously approved under plan **N-6973**) were in accordance with regulations implemented by Minerals Management Service (MMS), U.S. Coast Guard (USCG) and the U.S. Environmental Protection Agency (EPA).

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

EPA's NPDES General Permit No. GMG290000 regulates overboard discharges, restrictions and limitations of waste generated form Oil and Gas operations in the Western Gulf of Mexico. Included as **Attachment E-1, (Was previously submitted under plan N-6973.)**, is the estimated quantity and rates of discharges applicable to the drilling fluids/cuttings based on hole size interval and washout.

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 location 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 EPA. **Typical mud components are included as Attachment E-2. (Was previously submitt d under plan N-6973.)**

The major operational solid waste in the largest quantities generated form the proposed operations will be the drill cuttings and drilling fluids. Other major wastes generated will include waste chemicals, cement wastes, sanitary and domestic waste, trash and debris, ballast water, storage displacement water, rig wash and deck drainage, hydraulic fluids, used oil, oily water and filters, and other miscellaneous minor discharges.

These wastes are generated into categories, being solid waste (trash and debris), non-hazardous oilfield waste (drilling fluids, non-hazardous waste including cement and oil filters), and hazardous wastes (waste paint or thinners).
MARPOL 73/78, implemented by the U.S. Coast Guard, requires preparation, monitoring and record keeping requirements for garbage generated on floating and fixed facilities in OCS Federal Waters. The drilling contractor will maintain a Waste Management Plan, in addition to preparation of a Daily Garbage Log for the handling of these types of waste. MODU's are equipped with bins for temporary storage of certain garbage. Other types of waste, such as food, may be discharged overboard if the discharge can pass through 25-millimeter type mesh screen. Prior to off loading and/or overboard disposal, an entry will be made in the Daily Garbage Log stating the approximate volume, the date of action, name of the vessel, and destination point.

Domestic wastes such as wastewater originating from sinks, showers, laundries, and galleys are typically discharged overboard, and may be routed through a comminuter so that the discharge will not result in any floating solids. Sanitary wastes are composed of human body waste from toilets and urinals. The MODU and marine supply vessels are equipped with sewage treatment facilities. A typical MODU may discharge approximately 25 gal/man/day of domestic and treated sanitary waste. These wastes are expected to rapidly dilute and disperse.

Rig wash and deck drainage discharges are monitored for visual sheens, and in some nstances by the oil and grease content. The quantities from the MODU should be relatively low during the proposed drilling and completion operations.

The ballast water used in the pre-loading of certain rig types is a one-time event, and is estimated to run at approximately 1,200,000 gallons. The seawater is isolated and not ex0posed to contaminants. Cooling water for the drilling rig is designed to there is no contact with machinery. It is expected that approximately 336,000 gallons per day will

be discharged.

Operational discharges from the supply vessels include bilge and ballast waters and potential fuel oil releases. MARPOL 73/78 has significantly limited operational discharges. The support vessel may still discharge oily bilge water, but their treatment process must severely limit the oil content. Approximately 22,000 liters/day could potentially be discharged from these vessels.

OIL SPILL RESPONSE AND CHEMICAL INFORMATION

Spinnaker Exploration Co., L.L.C.s's Regional Oil Spill Response Plan was approved on **May 27, 1999**. Activities proposed in this SDOCD will be covered by the Regional Oil Spill Response Plan. Spinnaker Exploration Co., L.L.C. is the only entity provided for in the Regional Oil Spill Response Plan.

Spinnaker's primary equipment provider is the National Response Corporation (NRC) and Clean Gulf Associates (CGA). MSRC's STARS network will provide closest available personnel, as well as an MSRC supervisor to operate the equipment.

The liquid hydrocarbons production from the activities proposed in this plan will be transported by the proposed 4.5" gas/liquids pipeline departing Caisson No.1, and terminating at Spinnaker's EC138-A Platform.

In the event of a spill, mechanical response equipment located in Cameron, Louisiana will be uitilzed.

The worst-case discharge calculated for the proposed activities is less than **1800** barrels and does not change the worst case discharge that is provided in the approved Regional Oil Spill Response Plan.

Since Spinnaker has the capability to respond to the WCD spill scenario included in its Regional OSRP, I hereby certify that Spinnaker has the capability to respond, to the maximum extent practicable, to a WCD resulting from the activities proposed in our DOCD

SECTION F

OIL SPILL RESPONSE AND CHEMICAL INFORMATION

The Regional Oil Spill Response Plan (OSRP) for Spinnaker was submitted to the MMS on March 30, 1999, and was approved on **May 27, 1999**. Activities proposed in this DOCD will be covered by the Regional OSRP.

Spinnaker's primary equipment provider is Clean Gulf Associates (CGA). The Marine Spill Response Corporation's (MSRC) STARS network will provide closest available personnel, as well as an MSRC supervisor to operate the equipment.

In the event of a spill, mechanical response equipment located at CGA's base in Cameron, Louisiana would be transported to a staging area in Cameron, Louisiana.

The worst case discharge (WCD) proposed in this DOCD is great r than 1000 barrels but does not supercede the WCD as approved in our Regional OSRP. If our evaluation reveals that this WCD does in fact have the potential of having a more adverse impact than our currently identified WCD in our existing Regional OSRP, then Spinnaker will amend the Regional OSRP as required.

Activities proposed in this DOCD are considered far-shore (>10 miles from the shoreline). The Worst Case Discharge (WCD) scenario from the proposed activities in this DOCD and the WCD in the Regional OSRP on file with the MMS are compared below:

Comparison of WCD in OSRP to Proposed Operations

PROPRIETARY DATA

Worst-Case Discharge

Spinnak r submitted a new worst-case scenario to the GOMR **November 8, 2000** for inclusion in our regional OSRP. It is pending approval.

Since **Spinnaker** has the capability to respond to the worst case spill scenario included in its approved (**May 27, 1999**) regional OSRP **as amended November 8, 2000**, and since the worst-case scenario determined for our **DOCD** does not replace the worst case scenario in our regional OSRP, I hereby certify that **Spinnaker** has the capability to respond, to a worst case discharge, or a substantial threat of such a discharge, resulting from the activities proposed in our **DOCD**.

Spinnaker's Vermilion Block 375 "A" Platform does not have any storage tanks or vessels. Full well stream production goes to PetroQuest's "A" Platform in Vermilion Block 376 for processing and metering.

SECTION G

AIR EMISSIONS INFORMATION

Offshore air, emissions related to the proposed activities result mainly from the drilling rig operations 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 oil spills or blowouts.

Primarily air pollutants associated with OCS activities are nitrogen oxides, carbon monoxide, sulfur oxides, volatile organic compounds, and suspended particulates.

Included in this section is the projected Air Quality Emissions Report prepared in accordance with Appendix H of Notice to Lessees (NTL) No. 2000-G10) addressing the installation of the deck on Caisson No.1 and the installation of a Lease Term pipeline. Production operations at Caisson No.1 will also be addressed.

The gas/condensate production from Block 139 flows to our EC138-A production facility for processing and metering. The increased production from EC139 will not require any modifications to the EC138-A facility. **(Attachment G-1)**

Not : All emissions associated with the drilling and completion of well No.1 were submitted and approved under plans N-6973. No change.

DOCD AIR QUALIT REENING CHECKLIST

OMB Control Nc x-xxxx
Expiration Da ending

COMPANY	**SPINNAKER EXPL. CO., L.L.C.**
AREA	**East Cameron**
BLOCK	**139**
LEASE	**OCS-G 21576**
PLATFORM	**SEC-EC139-1**
WELL	**1BP01**
COMPANY CONTACT	**THOMAS G. BECNEL**
TELEPHONE NO.	**713/356-7534**
REMARKS	**PLATFORM A IS A FREE-STANDING CAISSON.**

"Yes"	"No"	**Air Quality Screening Questions**
	X	1. Is the concentration of H_2S expected greater than 20 ppm?
	X	2. Is the burning of produced liquids proposed?
	X	3. Is gas flaring or venting which would require Regional Supervisor of Production and Development approval under Subpart K proposed?
	X	4. Does the facility process production from 8 or more active wells?
	X	5. Is the facility within 200km of the Breton Area?
	X	6. Will the proposed activity be collocated at (same surface location), or bridge attached to, a previously approved facility?
	X	7. Is the proposed activity within 25 miles of shore?
	X	8. Are semi-submersible activities involved and is the facility within 75 miles of shore?
	X	9. Are drillship operations involved and is the facility within 145 miles of shore?

If ALL questions are answered "No":
Fill in the information below about your lease term pipelines and submit only this coversheet with your plan.

If ANY question is answered "Yes":
Prepare and submit a full set of spreadsheets with your plan.

LEASE TERM PIPELINE CONSTRUCTION INFORMATION:		
YEAR	NUMBER OF PIPELINES	TOTAL NUMBER OF CONSTRUCTION DAYS
1999		
2000		
2001	1	10
2002		
2003		
2004		
2005		
2006		
2007		
2008		
2009		

SECTION H

ENVIRONMENTAL INFORMAITON

Included in this section is the Environmental Report prepared in accordance with Appendix H of the Notice to Lessees No. 2000-G10. **(Attachment H-1)**

INITIAL
DEVELOPMENT OPERATIONS COORDINATION DOCUMENT

ENVIRONMENTAL REPORT

EAST CAMERON BLOCK 139

LEASE OCS-G 21576

OFFSHORE, LOUISIANA

TABLE OF CONTENTS

1. DESCRIPTION OF PROPOSED ACTION

The proposed **Initial DOCD** provides for **the installation of a permanent structur on East Cam ron Block 139 and the installation of a 4.5" bulk gas pipelin to our East Cameron Block 138 A Platform.**

At this time, the planned commencement date for proposed activities is **April 15, 2001**.

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 Theodore, Alabama, however, boats operating in the field may travel from other facilities nearby. Following is an estimate of trips to the proposed operation.

Construction

Crew Boats	**5 Trip/Week**
Supply Boats	**3 Trips/Week**
***Helicopters**	**1 Trips/Week**

Production

Crew Boats	**2 Trip/Week**
Supply Boats	**0 Trips/Week**
***Helicopters**	**0 Trips/Week**

***(H licopters will be used only in the event of an operational or p rsonnel emergency.)**

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 the creation of new jobs is expected to result from the work planned in conjunction with this block.

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

Vessels currently under charter to **Spinnaker** are expected to support the proposed operations. No additional manpower is anticipated.

C. New Onshore Construction or Expansion of Support Facilities

The proposed operations do not mandate any immediate measures for land acquisitions or expansion of the existing onshore base facilities.

Dredging and filling operations will not be required for the operations, nor will any new construction or expansion of onshore facilities be involved for the operations proposed in the **Initial DOCD.**

D. New or Unusual Technology

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

E. Vicinity Map

East Cameron Block 139 is located approximately **42** miles from the nearest shoreline. **Spinnaker's onshore support base is located in Cam ron, Louisiana.** The **water depth** at the proposed drilling locations is **85 f et.** A field Layout Drawing depicting the locations of the proposed wells is included in the proposed **Initial DOCD.**

II. DESCRIPTION OF AFFECTED ENVIRONMENT

PHYSICAL ENVIRONMENT

A. Commercial Fishing

The Gulf of Mexico provides nearly 20% of the commercial fish landings in the continental United States. During 1993, commercial landings of all fisheries in the Gulf totaled nearly 1.7 billion pounds valued at about $631 million.

Menhaden, with landings of 1.2 billion pounds, valued at $59.2 million, was the most important Gulf species in quantity landed during 1993. Shrimp, with landings of 206.4 million pounds, valued at $335 million, was the most important Gulf species in value landed during 1993. The 1993 Gulf oyster fishery accounted for 41% of the national total with landings of 20 million pounds of meats, valued at about $51.6 million. The Gulf blue crab fishery accounted for

25% of the national total with landings of 63.3 million pounds, valued at $32.3 million.

Alabama ranked last among Central and Western Gulf states in total commercial landings for 1993 with 20.3 million pounds landed, valued at $34.2 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, shark, black mullet, red mullet roe, flounder, and the American oyster. Alabama had about 3,470 and 2,515 commercial saltwater, licensed fisherman and 942 and 1103 commercial fishing craft during 1992 and 1993, respectively.

Mississippi ranked third among Central and Western Gulf states in total commercial fishery landings for 1993 with an estimated 35.2 pounds landed, valued at $18.4 million. Shrimp was the highest value shellfish, with 87.6 million pounds landed, valued at $158 million. In addition, during 1993, the following four species each accounted for landings valued at over $125,000: black mullet, red snapper, blue crab, and the American oyster. In 1992 and 1993, Mississippi had about 3,329 and 2,515 commercial saltwater, licensed fishermen and 1906 and 1888 commercial fishing craft, respectively.

Louisiana ranked first among Central and Western Gulf states in total commercial fishery landings for 1993, with nearly 1.4 billion pounds landed, valued at $274.6 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 1993, the following 12 species each accounted for landings valued at over $1 million: black drum, flounder, black mullet, red mullet roe, Atlantic sheepshead, red snapper, vermilion snapper, spotted sea trout, swordfish, yellowfin tuna, blue crab, and the American oyster. In 1992 and 1993, Louisiana had about 19,923 and 19,241 commercial saltwater, licensed fishermen and 12,731 and 11,741 commercial fishing craft, respectively.

Texas ranked second among Central and Western Gulf states in total commercial fishery landings for 1993 with nearly 93.1 million pounds landed, valued at $156.7 million. In quantity and value, shrimp ranked first, with about 78 million pounds, valued at $141.9 million. In addition, during 1993, the following seven species each accounted for landings valued at over $500,000: black drum, red snapper, vermilion snapper, swordfish, yellowfin tuna, blue crab, and the American oyster. In 19092 and 1993, respectively, Texas had about 17,483 and 14,519 commercial saltwater, licensed fishermen and 5,410 and 5,093 commercial fishing craft.

The Gulf of Mexico yielded the nation's second largest regional commercial fishery by weight in 1993. The Gulf fisheries landings 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 over fished 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, spiny lobster, and mackerel, have declined over the past decade despite substantial increases in fishing effort. Commercial landings of recent fisheries, such as shark, black drum, and tuna, have increased exponentially over the past five years, and those fisheries are thought to be in need of conservation. The Gulf of Mexico shrimp fishery is the most valuable in the United States accounting for 71.5% of the total domestic production. Three species of shrimp--brown, white, and pink--dominate the landings. The status of the 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 over fishing occurring; and (3) pink shrimp yields are at or beyond maximum sustainable levels.

B. Shipping

The Ports and Waterways Safety Act (Section 33 USCG 1223) authorizes the Coast Guard (USCG) to designate safety fairways, fairway anchorages, and traffic separation schemes (TSS's) to provide unobstructed approaches through oil fields for vessels using Gulf of Mexico ports. The USCG provides listings of designated fairways, anchorages, and TSS's in 33 CFR 166 and 167, along with special conditions related to oil and gas production in the Gulf of Mexico. In general, no fixed structures, such as platforms, are allowed in fairways. Temporary underwater obstacles, such as anchors and attendant cables or chains attached to floating or semisubmersible drilling rigs may be placed in a fairway under certain conditions. Fixed structures may be placed in anchorages, but the number of structures is limited.

A traffic separation scheme is a designated routing measure that is aimed at the separation of opposing streams of traffic by appropriate means and by the establishment of traffic lanes (33 CFR 167.5). The Galveston Bay approach traffic separation scheme and precautionary areas is the only TSS established in the Gulf of Mexico.

Fairways play an important role in the avoidance of collisions on the OCS, particularly in the case of the larger oceangoing vessels, but not all vessels stay within the fairways. Many others, such as fishing boats and OCS support vessels, travel 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.

The rig and each marine vessel servicing these operations will be equipped with all U.S. Coast Guard required navigational safety aids to alert ships of its presence in all weather conditions.

The proposed operations in East Cameron Block 139 are not located in the proximity of a shipping fairway.

Impacts on Navigation

Spinnaker will utilize a supply boat, crew boat, and helicopter to support the proposed drilling and testing operations. Vessels will use the most practical, direct routes to the site from the shore base. This minimal vessel traffic is insignificant when compared with the marine traffic in **Cameron, Louisiana**.

C. Pleasure Boating, Sport Fishing and Recreation

The northern Gulf of Mexico coastal zone is one of the major recreational regions of the United States, particularly for marine fishing and beach activities. Gulf Coast shorelines offer a diversity of natural and developed landscapes and seascapes. Major recreational resources include coastal beaches, barrier islands, estuarine bays and sounds, river deltas, and tidal marshes. Other resources include publicly owned and administered areas, such as national seashores, parks, beaches, and wildlife lands, as well as designated preservation areas, such as historic and national sites and landmarks, wilderness, 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.

The Gulf States from Texas to Alabama account for about 1.3 million registered motorboats and over 3.5 million paid fishing license holders. The two major recreational areas most directly associated with the offshore leasing and potentially affected by it are the offshore marine environment and the coastal storefront of the adjoining states. The major recreational activity occurring on the OCS is offshore marine recreational fishing and diving. Studies, reports, and conference proceedings published by MMS and others have documented a substantial recreational fishery, including scuba diving, directly associated with oil and gas platforms. 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 percent of the nation's 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 are 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 States' economics. The marine recreational fishing industry accounts for an estimated $769 million in sales (equipment, transportation, food, lodging, insurance, and services) and employment for over 15,000 people, earning more than $158 million annually in the CPA and WPA.

The coastal shorelines of the CPA and WPA contain extensive public park and recreation areas, private resorts, and commercial lodging. Most of the outdoor recreational activity focused on the Gulf storefront is associated with accessible beach areas. 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 storefront, but are focused where public beaches are close to major urban centers. Beach use is a major economic factor for many Gulf coastal communities, especially during peak-use seasons in the spring and summer. Tourism in the central 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 has previously contacted the State Historic Preservation Officers for all Gulf Coast States and requested them to provide a list of those National Register of Historic Places that are in their State's coastal zones and that could potentially be affected by OCS leasing activities.

With the exception of the Ship Shoal Lighthouse, historic archaeological resources on the OCS consist of shipwrecks. A 1977 MMS archaeological resource baseline study for the northern Gulf of Mexico indicated that 2% of the pre-20th century shipwrecks and 10% of all wrecks reported lost between 1500 and 1945 have known and/or verified locations. Management of this resource was accomplished by establishing a high-probability zone for the occurrence of historic shipwrecks. This zone was delineated by using geographic and cultural factors as indicators of high shipwreck potential. An MMS-funded study by Texas A&M University (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.

In November, 1990, the MMS Gulf of Mexico OCS Region issued a Letter to Lessees (LTL) that redefined those blocks in the Gulf of Mexico that are considered to have a high probability for the occurrence of historic period shipwrecks. The LTL reduced the total number of blocks with a high probability for historic shipwrecks from 3,410 to 2,263. The redefined high-probability zone consists of three subzones--a zone defined as occurring from the shoreline to 10 km from shore; 21 0.5-degree square high probability quadrants associated with cultural and geographic features (such as historic ports, barrier islands, reefs, etc.); and specific high-probability search polygons associated with shipwrecks located outside of the two aforementioned zones.

A Notice to Lessees (NTL No. 91-02) concerning archaeological resources in the Gulf of Mexico Region became effective on February 17, 1992. The NTL changed survey parameters for historic shipwreck surveys in the Gulf from a survey line spacing of 150 m to 50 m. Other methodological changes that were made include the use of a dual trace magnetometer recording device and the redefinition of the total area required for site-specific archeological surveys.

Remote sensing surveys required by MMS have recorded evidence of approximately 69 potential shipwrecks. Most have been identified on side-scan sonar. In addition, defined areas of clustered magnetic anomalies (reminiscent of magnetic patterns associated with buried historic shipwrecks) have been noted and recommended for avoidance.

Geomorphic features that have a high probability for associated prehistoric sites in the Central and Western Gulf include barrier islands and back-barrier embayments, river channels and associated floodplains and terraces, and salt dome features. Recent investigations in Louisiana and Florida indicate that mound building activity by prehistoric inhabitants may have occurred as early as 6200 B.P. Therefore, man-made features, such as mounds, may also exist in the shallow inundated portions of the OCS.

There is no evidence for early mound building in the Western Gulf. The western portion of the WPA contains Holocene deltaic deposits of the Colorado and Brazos Rivers. Lease-block surveys have recorded geomorphic features with a high probability for the occurrence of preservation of prehistoric archaeological sites.

Regional geological mapping studies by MMS allow interpretations of specific geomorphic features and assessments of archaeological potential in terms of age, the type of system the geomorphic features also be considered as an integral part of the predictive model. In general, sites protected by sediment overburden have a high probability for preservation from the destructive effects

of marine transgression. The same holds true for sites submerged in areas subjected to low wave energy and for sites on relatively steep shelves during periods of rapid rise in sea level. Though lease-block surveys have identified many specific areas in the Gulf as having a high potential for prehistoric sites, oil and gas exploration has generally avoided rather than investigated these high-probability areas for archaeological content.

Our location in East Cameron Block 139 is not within 1000 feet of any of th se high probability areas.

E. Ecologically Sensitive Features

Coastal barriers of the Western and Central Gulf Coast consist of relatively low land masses that can be divided into several interrelated environments. The beach consists of the foreshore and backshore. The nonvegetated foreshore slopes up from the ocean to the beach berm-crest. The backshore may occasionally be absent due to storm activity. If present, the backshore is found between the beach berm-crest and the dunes and may be sparsely vegetated. The dune zone of the barrier landform can consist of a single dune ridge, several parallel dunes 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 course sediments that have been transported and deposited by waves, currents, storm surges, and winds.

When Gulf water levels are elevated by storms, water will overwash a coastal barrier. This action will create overwash fans or terraces behind and between the dunes. With time, these terraces will be vegetated by opportunistic species. Along more stable barriers, the area behind the dunes consists of broad flats that support scrubby woody vegetation. Saline or freshwater ponds may be found among the dunes or 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 areas where no bay or lagoon separates barrier landforms from the mainland, the barrier vegetation grades into scrub or forest habitat of the mainland.

Habitats found among the coastal barrier landforms provide a variety of niches that support many avian, terrestrial, aquatic and amphibian species, some of which are endangered or threatened.

Habitat stability is primarily dependent upon rates of geodynamic change in each coastal vicinity. The major sources of pressure causing barrier landforms to change along the Gulf coast are storms, subsidence, delta abandonment, deltaic sedimentation, and human activity. Configurations of barrier landforms continually adjust 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.

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 form on terrestrial sediments. In contrast, a regressive sequence is one in which terrestrial sediments is 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. Transgressive coastal landforms have a predominantly low-profile morphology. These barriers are characterized by narrow widths; low sparsely vegetated and discontinuous dunes; and numerous, closely spaced, active washover channels. Transgressive barriers are usually being actively eroded. Landward retreat of a shoreline may be caused by subsidence, sea-level rise, storm erosion, or removal of sediment from the longshore drift by channels, groin, or jetties. The passage and intensity of cold fronts and tropical storms do not occur at a steady rate. Hence coastal retreat is not a steady process.

Regressive barriers, in contrast, have high and broad dune morphologies. Such sand dunes are continuous and well vegetated with few, if any, washover channels. These thick accumulations of sand form parallel accretion ridges. Seaward advance of a shoreline may be caused by geologic uplift of deltaic land-building processes, which transport sediments into coastal waters where they are deposited.

Interruptions of longshore sediment transport will cause a localized accumulation of sediments on the up-drift side of the obstruction, causing an accretion and seaward building of the shoreline. Because sediments down-drift of the interruption do not stop moving and new sediment is prevented from adequately replacing this departing sediment, interruptions of sediment drift cause or accelerate shoreline retreat downdrift of the obstruction. Man-made obstructions include jetties, groins, breakwaters, and bulkheads.

From east to west, headlands found on the barrier coasts of the Western and Central Gulf include Baldwin County Headland in Alabama, the barrier islands of Mississippi Sound, the Chandeleur Islands, the Modern Mississippi River Delta and its developing barrier islands, the Bayou Lafourche Headland and accompanying barrier islands, Isles Dernieres, the Chenier Plain of Louisiana and Texas, Trinity River Delta, Brazos-Colorado River Delta and its accompanying barrier islands, barrier islands of Espiritu Santo Bay and Laguna Madre and the Rio Grande Delta.

The Mississippi Sound barrier islands are relatively young, having formed some three to four thousand years ago as a result of shoal-bar agradation. The

islands are well vegetated by a southern maritime climax forest of pine and palmetto. The islands generally are regressive with high beach ridges and prominent sand dunes. These islands are generally stable, with no trend toward erosion or thinning, although they do migrate westwardly in response to predominantly westward-moving longshore currents. An exception to this general rule is Dauphin Island, Alabama, which is essentially a low-profile transgressive barrier island, except for a small Pleistocene core at its eastern end. The western end is a Holocene spit that is characterized by small dunes and washover fans with marsh deposits and tree stumps exposed in the surf zone. 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 the 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). More recent analyses reveal that Louisiana shorelines are retreating at an average rate of 4.2 m/yr, ranging from a gain of 3.4 m/yr to a loss of 15.3 m/yr (U.S. Geological Survey, 1988). In comparison, the average shoreline retreat rates for the Gulf of Mexico, Atlantic seaboard, and Pacific seaboard were reported at 1.8. - 0.8 and 0.0 m/yr, respectively.

In Louisiana, the highest reported rates of coastal retreat occurred along the coastal plain of the Mississippi River. 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 Isles Dernieres retreated landward at an average rate of 16.8 m/yr during the period of 1890 through 1988 (Williams et al., 1992). Whiskey Island, part of the Isles Dernieres, retreated at an average rate of 26.3 m/yr during the same period. Barrier beaches along the deltaic plain in Louisiana fit into one of three categories, depending on the stage of the deltaic cycle that the nearby landmass is experiencing. When a major distributary of the Mississippi River is abandoned, submergence due to subsidence and sea-level rise transforms the abandoned delta into an erosional headland with flanking arcs of barrier sand spits that generates barrier islands as washover channels occur. The Bayou Lafourche Headland is an example of a transgressive headland. Isles Dernieres is a more advanced example of a transgressive headland where subsidence has caused the barrier arc of islands to separate from the headland (Penland and Suter, 1988). With continued subsidence and no source of sediment, Isles Dernieres will eventually submerge and form a submarine inner-shelf shoal (Penland and Boyd, 1985).

The coast of the Chenier Plain is fronted by sand beaches and coastal mudflats. The source of the mud is discharge of the Mississippi and Atchafalaya Rivers.

Their fine sediments drift westward with prevailing nearshore currents. Fluid mud extends from the seaward edge of the marsh grasses to a few hundred meters offshore. The mud is an extremely effective wave-energy absorber. Consequently, the mainland shore is rarely exposed to effective wave action except during storms. Although only these 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 caliche nodules make up beaches that are migrating poorly developed sand dunes. The barrier islands and spits of the rest of the Texas Coast were formed and are maintained by sediments supplied from the three deltaic headlands listed above.

Wetland habitat types occurring along the Gulf Coast include fresh, brackish, and saline marshes; forested wetlands; and small areas of mangroves. Wetland habitats occur as narrow bands or broad expanses. They can support sharply delineated botanical zones of monotonous stands of single species or mixed communities of plants.

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, including 20-25% of North America's puddle duck population. The region supports the largest fur harvest in North America, producing 40 to 65% of the nation's total each year (Olds, 1984).

Louisiana contains most of the Gulf coastal wetlands. These wetlands occur in two physiographic settings -- the Mississippi River Deltaic Plain and the Chenier Plain. Wetlands on the deltaic plain are situated on a series of overlapping riverain deltas that have extended on the continental shelf over the past 6,000 years. The alluvial and organically-rich sediments found on these areas are subject to high, natural-subsidence rates. The effects of subsidence are compounded by sea-level rise, both of which have been occurring during the past several millennia.

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 land loss on the Deltaic Plain area of the Louisiana coast has decreased

to about 90 km2 per year for the period of 1972 to 1988 (Britsch and Kemp, 1990).

Several factors contribute to wetlands loss in coastal Louisiana. The suspended-sediment load of the Mississippi River has been reduced by 50% since the 1950's, due to channelization and farmland soil conservation efforts. However, the primary cause of reduced sedimentation rates is levee construction. Levees exclude river-borne sediment from the flanking deltaic wetlands. Subsidence and sea-level rise have caused submergence of lower wetland areas. Construction of rig levees have allowed drainage and exploration of extensive wetlands. Exploratory activities in low areas, outside levee areas, have caused the filling of wetlands. Construction of canals converts wetlands to increased tidal influence and salinities in freshwater and low-salinity wetlands, which in turn increase erosion and sediment export.

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

Most of the wetlands in Alabama occur on the Mobile River delta or along northern Mississippi Sound. Between 1955 and 1979, fresh marshes and estuarine marshes declined in these areas by 69% and 29%, respectively. Major causes of non-fresh wetland losses were industrial exploration and navigation, residential and commercial exploratory, natural succession, erosion and subsidence. The loss of fresh marsh was mainly attributable to commercial and residential exploratory and silviculture (Roach et al., 1987).

In Texas, coastal marshes occur along bays, on rivers and their deltas, and on the inshore side of barrier islands. Salt marshes consisting primarily of smooth cord grass occur at lower elevations and at higher salinities. Brackish marshes occur in less saline areas inward of salt marshes. Broad expanses of emergent wetland vegetation do not commonly occur south of Baffin Bay, at the northern edge of Kennedy County, because of the arid climate and hypersaline waters. Dominant salt-marsh plants there include more salt-tolerant species such as Batis Maritime and Salicornia sp. (White et al., 1986).

Wetland changes observed in Texas during the past several decades appear to be driven by subsidence and sea-level rise. 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 magnitude of these wetland acreage changes in most of Texas have not been determined at the present time. In the Freeport, Texas area, along the Louisiana border, wetlands loss is occurring at rates similar to those occurring in adjacent parts of the Louisiana Chenier Plain. In the Sabine Basin area of coastal Texas, for example, 20548 ha of wetlands were lost between 1952 and 1974 (Gosselink et al., 1979).

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

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 1955/56 to 1978.

Three million hectares of submerged sea grass beds are estimated to exist in exposed, shallow coastal waters of the northern Gulf of Mexico. An additional 166,000 ha are found in protected, natural embayments and are not considered exposed to OCS impacts. The area of Florida contains approximately 98.5% of all coastal sea grasses in the northern Gulf of Mexico. Texas and Louisiana contain approximately 0.5%. Mississippi and Alabama have the remaining 1% of sea grass beds. Sea grass 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, turbidity, salinity, turbulence, and substrate suitability. Primarily because of low salinity and high turbidity, robust sea grass beds and the accompanying high diversity of marine species are found only within a few

scattered, protected locations in the Central and Western Gulf of Mexico. Inshore sea grasses provide important habitat for immature shrimp, black drum, spotted sea trout, juvenile southern flounder, and several other fish species; and they provide a food source for several species of wintering waterfowl.

Sea grasses dominate the aquatic floral habitat of low-salinity, inshore estuarine communities along the Texas coast. Dominant species include shoal grass and widgeon grass. Laguna Madre and Copana-Aransas estuaries account for the major portion of sea grass populations in Texas. Sea grasses are less common in Corpus Christi Bay due to greater water depth. These species occur in abundance due to their tolerance of salinity variations.

Turbid waters and soft highly organic sediments of Louisiana's estuaries and offshore areas limit widespread distribution of higher salinity sea grass beds. Consequently, only a few areas in offshore Louisiana support sea grass beds. The most extensive beds occur in Chandeleur Sound. In Mississippi and Alabama, sea grasses occur within Mississippi Sound.

The distribution of sea grass beds in the Central and Western Gulf have diminished during recent decades. Primary factors believed to be responsible include hurricanes, dredging, dredged material disposal, trawling, water quality degradation, a combination of flood protection levees that have directed freshwater away from wetlands, saltwater intrusion that moved beds closer inland, and freshwater diversions from the Mississippi River into coastal areas during flood stage.

The term sensitive offshore resources refers both to the water column and the seafloor.(benthic) habitats are the most likely to be adversely affected by offshore oil and gas operations, especially live-bottom areas, deep-water benthic communities, and topographic features.

The benthos has both floral and faunal components; the floral representatives being bacteria, algaes, and sea grasses. The abundance of benthic algaes is limited by the scarcity of suitable substrates and light penetration. In exceptionally clear waters, benthic algae, especially coralline red algaes, are known to grow in water depths to at least 180 m. Offshore sea grasses are not conspicuous in the Central and Western Gulf; however, fairly extensive beds may be found in estuarine areas behind the barrier islands throughout the Gulf. Sea grasses would be continuous around the entire periphery of the Gulf if it were not for the adverse effects of turbidity and low salinity of the Mississippi River effluent from the delta to Galveston (Humm, 1973).

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 polycheates. Benthic habitats on the continental shelf at most risk

to potential impacts from oil and gas operations are 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 to major pinnacles, as well as ridges, scarps, and relict patch reefs. It has been postulated that these features were built during lower stands of the sea during the rise in sea level following the most recent ice age. The heavily indurated pinnacles provide a surprising amount of surface area for the growth of sessile invertebrates and attract large numbers of fish.

Additional hard bottom features, which are located outside the actual pinnacle trend, have been described nearby on the continental shelf. Several hard-bottom areas on the Alabama-Northwest Florida inner-shelf; these areas are located in water depths ranging form 20 to 35 m.

Continental Shelf Associates, Inc. (CSA 1992a) investigated another portion of the Mississippi-Alabama continental shelf. They found three types of hard bottom features that were identified for biological characterization. These were (1) pinnacle features present in approximately 80 to 90 m water depths; (2) deepwater pinnacles and associated hard bottom located in approximately 110-130 m water depths; and (3) suspected low-relief, hard-bottom features in the central and eastern portions of the upper Mississippi-Alabama shelf in water depths shallower than 75 m.

The pinnacles are found at the outer edge of the Mississippi -Alabama shelf between the Mississippi River and DeSoto Canyon. The bases of the pinnacles rise from the seafloor between 50 and 100 m with vertical relief occasionally in excess of 20 m. These features exist in turbid water and contain limited biotal coverage. Pinnacles photographed in 11185 showed biota similar to the transitional antipatharian-zone assemblage described by Rezak (CSA, 1985). These pinnacles may provide structural habitat for pelagic fish.

East Cameron Block 139 is not a pinnacle trend block; therefore Lease Stipulation 2 does not apply to this block.

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

Chemosynthetic clams, mussels, and tube worms, similar to the hydrothermal vent communities of the eastern Pacific have been discovered in association with hydrocarbon seeps in the northern Gulf of Mexico. Initial discoveries of cold-water seep communities indicated that they are primarily associated with seismic wipe-out zones and hydrocarbon and H2S seep areas (Kennicutt and Gallaway,, 1985; Brooks et al, 1986a). The occurrence of chemosynthetic organism dependent on hydrocarbon seepage has been documented in water depths as shallow as 290 m (Robert et al., 1990), but the most dense aggregations of these organisms have been found at water depths of around 500 m and beyond.

Among various community types, chemosynthetic communities are distributed across a wide range of environmental conditions, but in all cases, their presence strongly indicates active localized seepage (MacDonald, 1992). Submersible data analyzed by researchers from Texas A&M University indicates a characteristic aggregation size of about 100 m for vestimentiferan and mytitlid communities and 100-300 m for clam communities. This has led them to speculate that communities separated by less than 300 m probably share a common hydrocarbon reservoir. Analysis of multi-channel seismic data indicates that communities separated by greater than 1 m are not supported by seepage from a common reservoir.

To date, there are 43 sites across the northern Gulf of Mexico continental slope where the presence of chemosynthetic metazoans (dependent on hydrocarbon seepage) has been definitively documented. The envelope of occurrence suggests that the potential number of communities is much larger than those found to date. Preliminary results indicate extensive natural oil seepage in the Gulf, especially in water depths greater than 1000 m. This preliminary evidence considerably increases the area where chemosynthetic communities dependent on hydrocarbon seepage may be expected, and suggests a useful approach for studying natural oil seepage in the future.

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 benthia, high diversity, and high numbers of plant and animal species; they support, either as shelter, food, or both, large numbers of commercially and recreationally important fishes; they are unique to the extent that they are small isolated areas of communities in the vast Gulf of Mexico; they provide a relatively pristine area suitable for scientific research; and they have an aesthetically attractive intrinsic value.

Seven distinct biotic zones on the banks of the Gulf have been identified. None of the banks contain all of the seven zones. The zones are divided into four categories dependent upon the degree of reef-building activity in each zone.

The Central Gulf of Mexico lists 16 topographic features and the western Gulf of Mexico lists 23 topographic features. **Th proposed op rations in East Cameron Block 139 are not located n ar any of these featur s.**

Operations conducted under the proposed plan will be conducted in accordance with Subparts C, D, E, G and O of Title 30 CFR Part 250, which address drilling and testing operations. To ensure compliance, **Spinnaker's** company representative and contractor personnel assigned to this project will be familiar with current regulations and policies of MMS, EPA, and the USCG.

F. Pipelines and Cables

Pipelines are the primary method used to transport liquids and gasses between OCS production sites and onshore facilities where nay combination of metering, distribution and processing may occur. A variety of products are transported by pipe in the GOM. These products include unprocessed bulk oil and bulk gas, mixtures of gas and condensate, mixtures of as an oil, processed condensate, oil or gas, produced water, methanol, liquid propane, fuel oil and a variety of chemical used the OCS industry offshore.

As of February 1997, a total of 87 pipeline systems were operating in the Gulf, 72 of which were the Central Panning Area and 15 of which were in the Western Planning area. In the Eastern Gulf, pipelines are projected to be constructed to support future oil and gas activities from the Destine Dome area, however, no pipelines currently exist.

There is an existing pipeline crossing the extreme southwest corner of East Cameron Block 139. It is will not interfere with the installation of our deck at the EC139 caisson and our proposed 4.5" pipeline to our EC138-A Platform. Spinnaker will utilize differential GPS to avoid the pipeline and position the lay and derrick barges.

As a prudent operator, **Spinnaker Exploration Co., L.L.C. (Spinnaker)** will conduct its operations in accordance with the provisions specified in Minerals Management Service Notice to Lessees 98-20 in order to avoid all pipelines and/or cables in the vicinity of the proposed operations.

Production will be transported to our EC138 A Platform. The initial production rate is expected to be 10 MMCFPD and 200 BCPD. The expected reserves life is five (5) years.

G. Other Mineral Uses

The activities proposed for East Cameron Block 139 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 (MARPOL). Most of the law's regulatory provisions became effective on December 31, 1988. Under provisions of the law, all ships and watercraft, ncluding 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 aw and has developed final rules for its implementation, calling for adequate trash reception facilities at all ports, docks, marinas, and boat launching facilities.

Final rules published under MPPRCA explicitly state that fixed and floating platforms, drilling rigs, manned production platforms, and support vessels operating under a Federal oil and gas lease are required to develop Waste Management Plans and to post placards reflecting MARPOL, Annex V dumping restrictions. Waste Management Plans will require oil and gas operators to describe procedures for collecting, processing, storing, and discharging garbage and to designate the person who is in charge of carrying out the plan. These rules also apply to all oceangoing ships of 40 ft or more in length that are documented under the laws of the U.S. or numbered by a State and that are equipped with a galley and berthing. Placards noting discharge limitations and restrictions, as well as penalties for noncompliance, apply to all boats and ships 26 ft or more in length. Furthermore, the Shore Protection Act of 11188 requires ships transporting garbage and refuse to assure that the garbage and refuse is properly contained on board so that it will not be lose in the water from inclement wind or water conditions.

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

The direct disposal of operational wastes into offshore waters is limited by USEPA under the authority of the Clean Water Act. And, when injected

underground, oil and gas operational wastes are regulated by USEPA's third program, the Underground Injection Control program.

A general NPDES, 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 work over fluids; and from production operations, deck drainage, and miscellaneous well fluids (cement, BOP fluid); and other sanitary and domestic wastes, gas and oil processing wastes, and miscellaneous discharges.

Spinnaker currently has coverage under EPA's Regional VI General NPDES GMG 290000 Permit for discharges associated with drilling and production activities. The types of discharges included in the permit application and the estimated average flow volumes are listed below.

I. Endangered and Threatened Species and Critical Habitat

Twenty-eight 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 (bule, fin, sei, Bryde's, minke and humpback).

Twenty-one species of toothed whales have been reported in the Gulf of Mexico. These include the sperm whale, pygmy and dwarf sperm whales; four species of beaked whales (Cuvier's, Gervais', Blainville's and Sowerby's); killer whale; false and pygmy killer whale; short-finned pilot whale, Risso's dolphin; melon-headed whale; and eight other species of dolphins (bottlenose, Atlantic spotted, Pantropical spotted, spinner, Clymene, striped, Fraser's and rough-toothed). Many of these species are distributed in warm temperate to tropical waters throughout the world.

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

The Alabama, Choctawhatchee, and Perdido Key beach mice, subspecies of the old field mouse, occupy restricted habitats in the mature coastal dunes of Florida and Alabama. Their population has declined as a result of habitat from coastal exploratory, competition, loss of genetic diversity, disease, and predation. 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 population 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 sea grasses and algae are plentiful. In coastal Texas, green turtles demonstrated site fidelity, remaining in one location for several months (NMFS Newsbreaker, 1993). Leatherbacks, the largest and most oceanic of the marine turtles, seasonally enter coastal and estuarine habitats where jellyfish are plentiful. Leatherbacks have unique deep diving abilities, a specialized jellyfish diet, and unique physiological properties that distinguish them from other sea turtles. Their nesting is concentrated on coarse-grain beaches in the tropical latitudes.

The hawksbill is the least commonly reported marine turtle in the Gulf. Stranded turtles are regularly reported in Texas and recently in Louisiana; these tend to be either hatchlings or yearlings. Hawksbill turtles prefer reefs and shallow coastal waters where marine invertebrates are abundant.

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. Natural nesting is supplemented by a NMFS hatchling and rearing program on Padre Island National Seashore.

In the Gulf, Kemp's ridleys inhabit nearshore areas, and have also been recorded off the mouth of the Mississippi River. Although adult Kemp's ridleys primarily inhabit the Gulf of Mexico, subadults range on the Atlantic coast to Massachusetts.

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.

The recently designated Archie Carr National Wildlife Refuge in Brevard and Indian River Counties, Florida, hosts the largest concentration of nesting loggerhead and green sea turtles in the United States. It is believed to be the second largest nesting beach for loggerheads in the world.

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

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

The piping plover is a distinctive ringed plover of central and eastern North America and is currently declining in numbers. It nests on sandy beaches along coasts or inland lakeshores, preferring areas with scant vegetation and cover. Preliminary information indicates that Texas is the most important wintering area. In Louisiana, barrier islands appear to provide the most favorable habitat for this species. 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 Aransas, Calhoun, and Matagorda Counties. Portions of these counties and the Aransas National Wildlife Refuge have been designated as critical habitat for the whooping crane.

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

The bald eagle is the only species of sea eagle regularly occurring on the North American continent. The bulk of the bald eagle's diet is fish, combined with opportunistic capture of a variety of vertebrate species. The historical nesting range of the bald eagle within the southeast U.S. included the entire coastal plain and along major rivers and lakes. There were 90 active nests in Louisiana during 1994 with 131 fledged.

The eastern brown pelican is one of two species of pelicans in North America. It s a colonial nesting species that feeds entirely upon fishes captured by plunge

diving in coastal waters. During the 1993 nesting season, there were more than 5,000 brown pelican nests in Louisiana, with more than 8,500 pelicans fledged. Nesting in Louisiana is currently limited to North Grand Gosier Island and North Island (Chandeleur Islands), Queen Bess Island, and Isles Dernieres. A survey conducted in April 1994 recorded 80 active pelican nests on North Island and 4,600 active nests on North Grand Gosier Island.

Results from the Annual Christmas Bird Count for 1990 showed quantities of individual brown pelican sightings on the coasts of Alabama (925), Louisiana (212), and Texas (553), but only 23 sightings in Mississippi.

Populations of the least tern occurring within the Mississippi basin have been eliminated as a result of destruction and alteration of nesting habitat along the Mississippi River and its tributaries. In Alabama, the least tern nests sporadically along the coast in colonies of less than 25 individuals. Least terns are the only nesting tern species in Louisiana to use mainland beaches, and they will use human-made and managed spoil sites as well.

J. Socioeconomic

The Gulf of Mexico impact area for population, labor, and employment is defined as that portion of the Gulf of Mexico coastal zone whose social and economic well being (population, labor, and employment) is directly or indirectly affected by the OCS oil and gas industry.

Currently, about one-half the United States population resides in coastal areas. The Gulf of Mexico region accounted for 13% of that coastal population in 1988 (USDOC, NOAA, 1990). The Central and Western zones of the Gulf Region vary substantially in socioeconomic patterns, ranging from low density, undeveloped rural areas to high-density developed urban centers.

The Gulf area in 1990 reflects a modest to significant recovery from the high unemployment levels experienced after the 1986 downturn of the oil and gas industry. Ironically, the Gulf Coast is experiencing a shortage of skilled labor in the oil and gas industry due to "the restructuring of the oil industry to centralize management, finance, and business services, and the use of computer technology. The Central Gulf of Mexico's unemployment rate of 6.3% is still somewhat over the national average.

The production of oil and gas has been a major source of revenue in the study area since 1954. Data from the 1990 Census shows that the average annual payroll associated with oil and gas activities amounts to approximately $3.3 billion for the Gulf of Mexico Region. 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 exploratory of

oil and gas in the Gulf of Mexico coastal region are estimated at approximately $267.9 million.

Job estimates as of August 1994 show that 30,900 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 25,000 workers in the Central Gulf, and 5,900 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) Intracoastal City, Morgan City, Intracoastal City, and Cameron, Louisiana. **The onshore support base for operations in East Cameron Block 139 is Cameron, Louisiana.**

The MMS sponsored a socioeconomic workshop in September, 1992 designed to provide a recommended social and economic studies agenda for the region. A total of 18 proposed studies were designed by participants in hopes of defining gaps in the understanding of social and economic impacts in the OCS oil and gas industry in the Region and to provide a mechanism to provide this information to decision makers.

III. UNAVOIDABLE ADVERSE ENVIRONMENTAL IMPACTS

A. Water Quality

Water quality in coastal waters along the Gulf may be altered by a number of OCS-related activities. Discharges, runoff, and spills from onshore support facility construction, routine operations, and support vessel traffic; turbidity and saltwater intrusion from channel dredging, bank erosion, pipeline emplacement, and canal widening; and surface and groundwater contamination from the mproper disposal on OCS-related oil-field wastes and trash may occur. Also, spills from offshore operations may reach coastal waters. Changes to the physical surroundings because of these activities may have secondary effects on water quality.

B. Effects on Marine Organisms

A number of OCS-related factors may cause adverse impacts to the pinnacle trend communities and features. Damage caused by oil spills, blowouts,

anchoring, structure emplacement and removal, drilling discharges, and pipeline emplacement cans cause immediate death of numerous organisms or the alteration of sediments to the point that recolonization of the affected areas may be delayed or impossible.

The most serious impact-producing factor threatening the chemosynthetic communities is physical disturbance of the bottom, which would destroy the organisms comprising these communities. Seafloor disturbance is considered to be a threat only to the high-density (Bush-Hill-type) communities; the widely distributed low-density communities would not be at risk. The provisions of NTL 88-1, currently in effect, requiring surveys and avoidance prior to drilling, greatly reduce the risk.

Drilling discharges and resuspended sediments have a potential to cause minor, mostly sublethal, impacts to chemosynthetic communities. Because of low productivity and widespread distribution of low-density communities, these impacts would result in minor disruption of ecological function of these communities, with no impacts to the ecological relationships with the surrounding benthos. High-density communities would experience minor disruption of ecological function with recovery occurring within 2 years. Minor impacts to the ecological relationships with the surrounding benthos would also be likely.

C. Threatened and Endangered Species

The major impact-producing factors related to the proposed action that may affect Alabama, Choctawhatchee, and Perdido Key beach mice include oil spills, oil-spill response activities, beach trash and debris, and coastal habitat degradation. Because the preferred habitat of Alabama, Choctawhatchee, and Perdido Key beach mice is behind the barrier dunes, and oil spill would have to breach the dunes to reach either the mice or their preferred habitat. This could occur only if an oil spill coincided with a storm surge.

Therefore, the proposed action is not expected to harm the Alabama, Choctawhatchee, and Perdido Key beach mice or their habitats unless an oil spill would occur in conjunction with a strong storm surge. Since the probability of such a spill is estimated to be less than 0.5%, no contact of beach mice or their habitats with oil is expected.

The major impact-producing factors related to the proposed action that may affect Gulf marine turtles include structure installation, dredging, operational discharges, vessel traffic, explosive platform removals, OCS-related trash and debris, oil-spill response activities, oil spills, blowouts, and water quality and coastal environmental degradation.

Major impact-producing factors that impact marine birds in the offshore environment include air emissions, oil and fuel spills, spill-response activities,

and discarded trash and debris from service vessels, coastal infrastructure, and offshore structures, disturbances from OCS inshore and coastal service and transport operations; habitat loss, modification, and degradation from onshore infrastructure and degradation of water quality.

Activities resulting from the proposed action are expected to affect coastal and marine birds of the CPA. It is expected that the majority of effects from the major impact-producing factors on coastal and marine birds are sublethal, causing temporary disturbances and displacement of localized groups inshore. Chronic sublethal stress, however, is often undetectable in birds. Lethal effects result primarily from uncontained inshore oil spills and associated spill-response activities. Spills occurring in biologically sensitive areas are expected to kill a number of individuals from any and all groups. The net effect will be the alteration of the species composition of the affected area(s) and possibly the reduction of the overall carrying capacity of these area(s) in general. Recovery of affected area is expected to take up to several years.

Endangered and threatened birds include the brown pelican, Arctic peregrine falcon, bald eagle, piping plover, and least tern. Air emissions, oil spills, oil spill-response activities, degradation of water quality resulting from OCS discharges, OCS helicopter and service-vessel traffic and noise, habitat loss or modification resulting from pipeline landfalls and coastal facility construction, and discarded trash and debris from service-vessels and OCS structures are sources of potential adverse impacts. Any effects are especially critical for intensively managed populations such as endangered and threatened species that need to maintain a viable reproductive population size or that depend upon a few key habitat factors. Species of special concern are often populations at the edge of their range. These populations may be more vulnerable to impacts than populations of the same species living near the center of their range.

Endangered and threatened birds may encounter periodic displacement of individuals and/or localized groups from proposed activities. Decreases in numbers of adults and/or nests could occur as a result of OCS-related oil spills and spill-related coastal habitat loss. The major impact-producing factors associated with OCS activities that could affect barrier beaches include oil spills, pipeline emplacements, navigation canal dredging and maintenance dredging, and support infrastructure construction. The loss of individuals represents a serious loss to the regional population(s); restoration of numbers to a pre-disturbance state would require up to several years, depending on the species and existing conditions.

D. Wetlands and Beach

Wetlands include forested wetlands (bottomland and swamps), tidal marshes, and sea grasses. Swamps and marshes occur throughout the coastal zone.

Sea grasses are restricted in distribution to small areas behind barrier islands in Mississippi and Chandeleur Sounds.

The OCS oil and gas activities, facilities, and events that could adversely affect wetlands and sea grass beds include oil spills, pipeline construction, pipeline canals, dredging of new navigation channels, maintenance dredging and vessel usage of navigation channels, and construction and maintenance of onshore facilities. 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 wetlands or sea grasses in the CPA.

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 exploratory; service vessel operation; evaporation of volatile hydrocarbons from surface oil slicks; and fugitive emissions during hydrocarbon venting and offloading.

Emissions of pollutants into the atmosphere for these activities are likely to have minimum impact on offshore air quality because of the prevailing atmospheric conditions, emission 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 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

Effects on commercial fisheries from activities associated with OCS oil and gas activities 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 waters, and naturally occurring radioactive material (NORM).

Since approximately 92% of the 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 result from the loss of Gulf wetlands as nursery habitat and from functional impairment of existing habitat through decreased water quality. The conversion of wetlands into open water may initially cause an appreciable increase called the "edge effect" in the population of a commercially harvested shellfish, such as shrimp (Keithly and Baron-Mounce, 1993; Louisiana Department of Wildlife and Fisheries, 1992).

Operations resulting from OCS oil and gas activities would have the potential to cause detrimental effects on CPA commercial fisheries. Activities such as seismic surveys, subsurface blowouts, pipeline trenching, and OCS discharge of drilling muds, produced water, and NORM will cause negligible impacts and will not deleteriously affect CPA commercial fisheries. Operations such as production platform emplacement, underwater OCS impediments, explosive platform removal, oil spills, and activities that result in coastal environmental degradation will cause greater impacts on CPA commercial fisheries. However, the effects on CPA commercial fisheries from these major impact-producing factors will be inconsequential and rare. At the expected level of effect, the resultant influence on CPA commercial fisheries will be indistinguishable from natural population variations. As a result, there will be little discernible disturbance to CPA commercial fisheries.

G. Ship Navigation

Very little interference can be expected between the drilling unit, structures and marine vessels utilized during associated development 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 EC139-1 caisson and on all marine vessels servicing these operations in accordance with USCG regulations.

H. Cultural Resources

Several OCS-related, impact producing factors may cause adverse impacts to archaeological resources. Offshore exploratory could result in a drilling rig, platform, pipeline, dredging activity or anchors having an impact on an historic shipwreck. This direct physical contact with a wreck site could destroy fragile ship remains, such as hull and wooden or ceramic artifacts, and could disturb the site context. The result would be the loss of archaeological data on ship construction, cargo, and the social organization of the vessel's crew, and the

concomitant of loss of information on maritime culture for the time period for which the ship dates.

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.

Spinnaker Exploration Co., L.L.C., 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. **There are no diagnostic features for prehistoric human sit s highlighted on the sub-bottom profiler data.**

I. Recreation and Aesthetic Values

Major recreational beaches are defined as those frequently visited sandy areas along the shoreline that are exposed to the Gulf of Mexico and that support a multiplicity of recreational activity, most of which is focused at the land and water interface. Included are Gulf Islands National Seashore, State parks and recreational areas, county and local parks, urban beaches, private resort areas, and State and private environmental preservation and conservation areas.

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

IV. SUMMARY

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

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

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

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

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

REFERENCES

1. U. S. Department of the Interior, Minerals Management Service. Gulf of Mexico Sales 157 and 161. Final Environmental Impact Statement, OCS EIA/EA MMS 95-0058, Gulf of Mexico Region, New Orleans, La

2. U. S. Department of the Interior, Minerals Management Service. Gulf of Mexico Sales 166 and 168. Final Environmental Impact Statement, OCS EIA/EA MMS 96-0058, Gulf of Mexico Region, New Orleans, La

3. U. S. Department of the Interior, Minerals Management Service. August, 1996. Outer Continental Shelf Oil & Gas Leasing Program: 1997 - 2002, Final Environmental Impact Statement

4. U. S. Department of the Interior, Minerals Management Service. Gulf of Mexico Leas Sales 169, 172, 175, 178, and 182. Central Planning Area. Final Environmental Impact Statement, OCS EIA/EA MMS 97-0033, Gulf of Mexico Region, New Orleans, La

5. U. S. Department of the Interior, Minerals Management Service. Gulf of Mexico Lease Sales 171, 174, 177, and 180. Western Planning Area. Final Environmental Impact Statement, OCS EIA/EA MMS 98-0008, Gulf of Mexico Region, New Orleans, La

SECTION I

COASTAL ZONE CONSISTENCY CERTIFICATION

Issues identified in the Louisiana Coastal Zone Management Program include the following: general coastal use guideline, levees, linear facilities (pipelines); dredged soil deposition; 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.

The Certificate of Coastal Zone Management Consistency for the State of Louisiana is enclosed as **Attachment I-1**. A copy of the Public Notice request for publication in The Advocate Newspaper is included as **Attachment I-2**, as well as the appropriate Parish Journal being included as **Attachment I-3**.

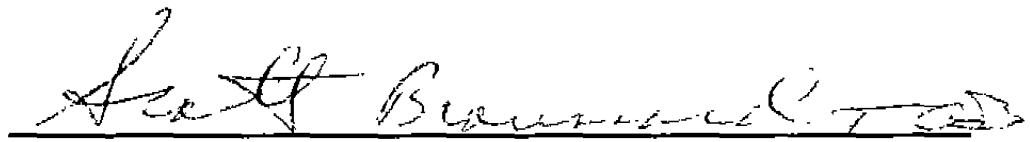
CONSISTENCY CERTIFICATION
INITIAL
DEVELOPMENT OPERATIONS COORDINATION DOCUMENT

EAST CAMERON BLOCKS 139

OCS-G 21576

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

SPINNAKER EXPLORATION CO., L.L.C.
LESSEE OR OPERATOR



Scott Broussard
Vice President Drilling & Production
CERTIFYING OFFICIAL

March 7, 2001
DATE

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Public Notice of Federal Consistency Review of a Proposed Development Operations Coordination Document (DOCD) by the Coastal Management Division/Louisiana Department of Natural Resources for the Plan's Consistency with the Louisiana Coastal Resources Program

Applicant: Spinnaker Exploration Co., L.L.C.
1200 Smith Street, Ste 800
Houston, TX 77002

Location: East Cameron Area, Lease OCS-G 21576
Block 139
Lease offering date: March 15, 2000

Description: Proposed DOCD for the above area provides for the installation of a well-protector and 4.5-inch bulk gas pipeline. Construction activities shall include working from pipe lay and derrick barges and transporting of barge crews and equipment by helicopter and/or cargo vessel from an onshore base located at Cameron, LA. No ecologically sensitive species or habitats are expected to be located near or affected by these activities.

A copy of the plan described above is available for inspection at the Coastal Management Division Office located on the 10 floor of the State Land and Natural Resources Building, 625 North 4 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 Coastal Management Division, Attention: OCS Plans, P. O. Box 44487, Baton Rouge, Louisiana 70804-4487. Comments must be received within 15 days of the date of this notice or 15 days after the Coastal Management Division obtains a copy of the plan and it is available for public inspection. This public notice is provided to meet the requirements of the NOAA Regulations on Federal Consistency with approved Coastal Management Programs.

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Attachment I-2

SPINNAKER EXPLORATION

March 8, 2001

VIA FAX # (337) 786-8131

CAMERON PARISH PILOT
LEGAL AD DEPARTMENT
P. O. Box 995
DeQuincy, Louisiana 70633

Attention: Public Notices

Re: PUBLIC NOTICE OF PROPOSED
DEVELOPMENT OPERATIONS COORDINATION DOCUMENT

Gentlemen:

Please publish the attached legal ad in the ***Cameron Parish Pilot*** on or before March 12, 2001. Send the proof of publication and invoice to:

Spinnaker Exploration Co., L.L.C.
Attention: Mr. Tom Becnel
1200 Smith Street, Suite 800
Houston, TX 77002

Should you require any additional information, please call Tom Becnel at 713/356-7534.

Sincerely,

SPINNAKER EXPLORATION CO., L.L.C.

Scott Broussard TGB

Scott Broussard
Vice President Drilling & Production

tgb

BEST AVAILABLE COPY

enclosure

SPINNAKER EXPLORATION COMPANY, L.L.C.
1200 Smith Street, Suite 800
Houston, Texas 77002
Tel: 713/759-1770, Fax: 713/759-1773

EC139\EP\Lgladcam

ATTACHMENT I-3

SPINNAKER EXPLORATION

March 8, 2001

VIA FAX # (225) 388-0164

The Advocate
LEGAL AD DEPARTMENT
525 Lafayette Street
Baton Rouge, Louisiana 70802

Attention: Public Notices

Re:
PUBLIC NOTICE OF PROPOSED
DEVELOPMENT OPERATIONS COORDINATION DOCUMENT

Gentlemen:

Please publish the attached legal ad in ***The Advocate*** on or about March 10, 2001. Send the proof of publication and invoice to:

Spinnaker Exploration Co., L.L.C.
Attention: Mr. Tom Becnel
1200 Smith Street, Suite 800
Houston, TX 77002

Should you require any additional information, please call Tom Becnel at 713/356-7534.

Sincerely,

SPINNAKER EXPLORATION CO., L.L.C.

Scott Broussard TGB

Scott Broussard
Vice President Drilling & Production

tgb

enclosure

SECTION J

PLAN INFORMATION FORM

Included in this section is the Plan Information Form prepared in accordance with Appendix J of Notice to Lessees NTL 2000-G10. (**Attachment J-1**)

The well table is included as **Attachment J-2**. The bathymetry map with surface and PBHL's locations is included as **Attachment J-3**.

OMB Control No. 1010-0049
Expiration Date:

OCS PLAN INFORMATION FORM
(USE SEPARATE FORM FOR EACH LEASE)

EXPLORATION PLAN	X	DEVELOPMENT OPERATIONS COORDINATION DOCUMENT		DEVELOPMENT & PRODUCTION PLAN	

OPERATOR: SPINNAKER EXPLORATION CO., L.L.C.	ADDRESS: 1200 SMITH STREET, SUITE 800
MMS OPERATOR NO.: 02169	HOUSTON, TEXAS 77002
CONTACT PERSON: TOM BECNEL	PHONE NO. (713) 356-7534

PROPOSED START DATE: 04-15-01	RIG TYPE: JU SS PF DS OTHER	DISTANCE TO CLOSEST LAND (IN MILES): 42

NEW OR UNUSUAL TECHNOLOGY	YES	NO X	ONSHORE SUPPORT BASE (S): CAMERON, LOUISIANA

NARRATIVE DESCRIPTION OF PROPOSED ACTIVITIES: SET THE DECK SECTION AT THE NO.1 LOC. ON THE CAISSON PREVIUOSLY DRIVEN OVER THE WELL. LAY A 4.5 " LEASE TERM PIPELINE FROM EC139-1 TO EC138-A.

PROJECT NAME, IF APPLICABLE:

PROPOSED WELL/STRUCTURE LOCATIONS

WELL/ STRUCTURE NAME	SURFACE LOCATION	BOTTOM-HOLE LOCATION (FOR WELLS)
Platform X or Well X Name: 1BP01	CALLS: 3529 F S L & 3510 F W L OF LEASE OCS-G 21576, EAST CAMERON AREA, BLOCK 139 X: 1,498,267.76' Y: 127,399.91' LAT: 29° 00' 27.166' LONG: 92° 54' 10.177" TVD (IN FEET MD (IN FEET): 8892 WATER DEPTH (IN FEET): 85	CALLS: LEASE: BLOCK: X: Y: LAT: LONG:
Platform __ or Well X Name: 1	CALLS: 3529 F S L & 3510 F W L OF LEASE OCS-G 21576, EAST CAMERON AREA, BLOCK 139 X: 1,498,267.76' Y: 127,399.91' LAT: 29° 00' 27.166' LONG: 92° 54' 10.177" TVD (IN FEET MD (IN FEET): 7728 WATER DEPTH (IN FEET):	CALLS: LEASE: BLOCK: X: Y: LAT: LONG:
Platform __ or Well __ Name:	CALLS: LEASE: BLOCK: X: Y: LAT: LONG: TVD (IN FEET): MD (IN FEET): WATER DEPTH (IN FEET):	CALLS: LEASE: BLOCK: X: Y· LAT: LONG:
Platform __ or Well __ Name:	CALLS: LEASE: BLOCK: X: Y: LAT: LONG: TVD (IN FEET): MD (IN FEET): WATER DEPTH (IN FEET :	CALLS: LEASE: BLOCK: X: Y: LAT· LONG:

ATTACHMENT J-1

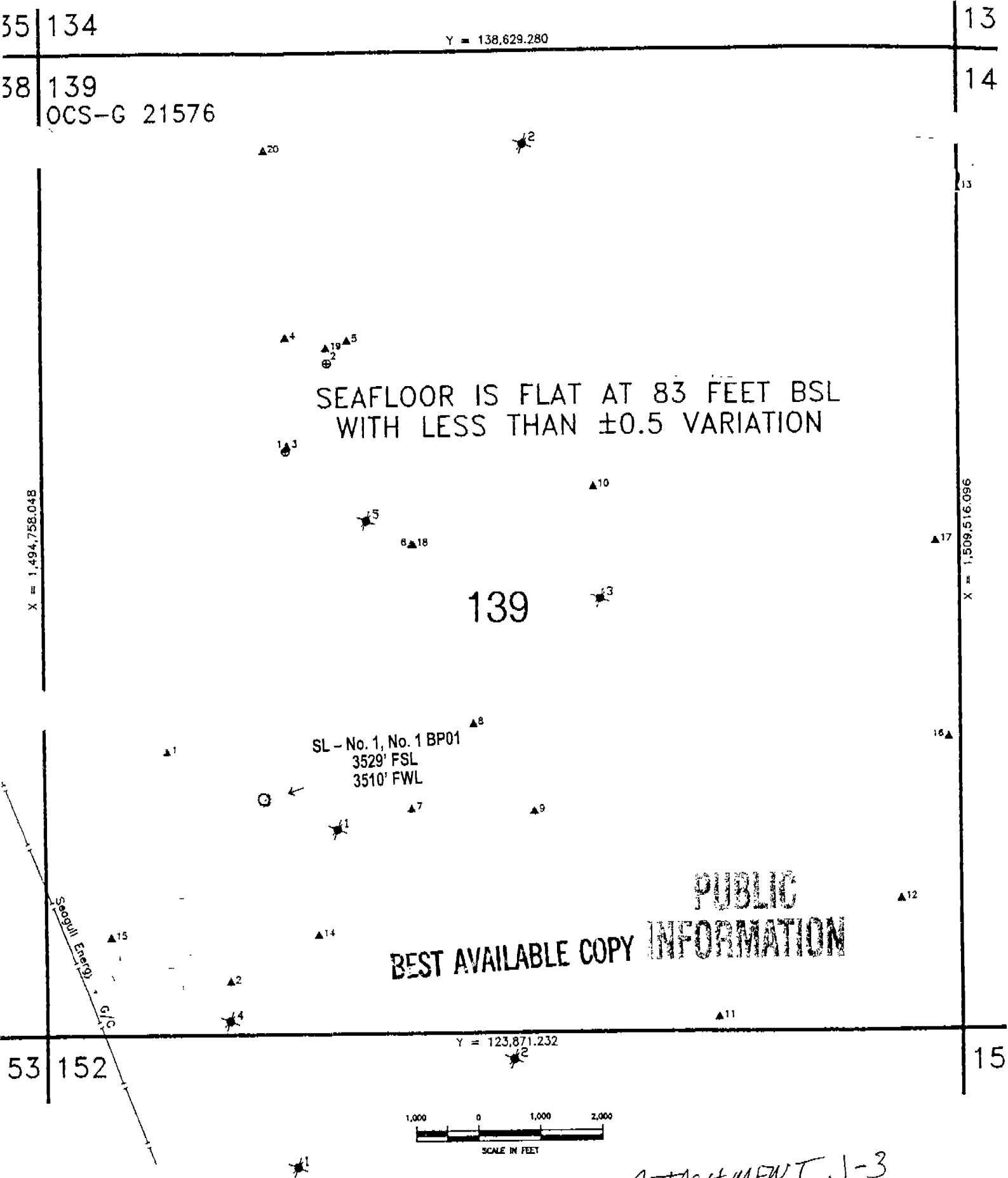
SPINNAKER EXPLORATION CO., L.L.C.
EAST CAMERON BLOCK 139
OCS-G 21576

WELL TABLE

WELL	PSL	MD	WD
1BP01	3529' FSL & 3510' FWL	8892'	85'
1	3529' FSL & 3510' FWL	7728'	85'

WELL	X-COORDINATE	Y-COORDINATE	LATITUDE	LONGITUDE
1BP01	1,498,267.76'	127,399.91'	29° 00' 27.166"	92° 54' 10.177"
1	1,498,267.76'	127,399.91'	29° 00' 27.166"	92° 54' 10.177"

PUBLIC INFORMATION



ATTACHMENT J-3

LEGEND:

	PIPELINE (EXISTING)
	WELL (ABANDONED)
FEET	WATER DEPTH – VERTICAL DATUM FOR BATHYMETRY IS BELOW SEA LEVEL (BSL).
▲1	UNIDENTIFIED MAGNETIC ANOMALY – NUMBER REFERS TO ANOMALY ID NUMBER (SEE TABLE).
⊕1	SIDE SCAN SONAR TARGET – NUMBER REFERS TO SONAR TARGET ID NUMBER.

SEE FIGURE 1 FOR GENERAL NOTES

NOTE: GRID, LOUISIANA (LAMBERT), SOUTH ZONE (NAD 27) CLARKE 1866.

GEOPHYSICAL SURVEY

BATHYMETRY AND SURFICIAL FEATURES MAP

BLOCK 139
EAST CAMERON AREA
OFFSHORE LOUISIANA

SPINNAKER EXPLORATION COMPANY, L.L.C.

KC OFFSHORE, L.L.C.
A THOMSON-CSF RACAL COMPANY
OFFSHORE
36498 PERKINS RD., PRAIRIEVILLE, LOUISIANA 70769

DRN. RJ	PREP. JWP	CAL. TAO	APP. KAC	FILE NO.	11-00-267		
CHK. KAC	CHK. KAC	CHK. KAC	DATE 9/12/00	FIG. NO.			

ATTACHMENT D-1