UNITED STATES GOVERNMENT
MEMORANDUM

August 6, 2004

To: Public Information (MS 5034)

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

Subject: Public Information copy of plan

Control #	-	N-08166
Type	-	Initial Development Operations Coordinations Document
Lease(s)	-	OCS-G22605 Block - 51 Vermilion Area OCS-G22648 Block - 220 South Marsh Island Area
Operator	-	Bois d'Arc Offshore Ltd.
Description	-	Platform A
Rig Type	-	BARGE

Attached is a copy of the subject plan.

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

Robert Stringfellow
Plan Coordinator

Site Type/Name	Botm Lse/Area/Blk	Surface Location	Surf Lse/Area/Blk
FIXED/G22605		4504 FNL, 1500 FEL	G22605/VR/51
WELL/A-1	G22648/SM/220	4504 FNL, 1500 FEL	G22605/VR/51
WELL/A-2	G22648/SM/220	4504 FNL, 1500 FEL	G22605/VR/51
WELL/A-3	G22648/SM/220	4504 FNL, 1500 FEL	G22605/VR/51
WELL/A-4	G22648/SM/220	4504 FNL, 1500 FEL	G22605/VR/51

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PUBLIC COPY
August 4, 2004

JOINT INITIAL DEVELOPMENT OPERATIONS COORDINATION DOCUMENT

Lease Number (s):	OCS-G 22605 and 22618
Area/Block:	VR51 and SM220
Prospect Name:	N/A
Offshore:	Louisiana

Submitted by:

Bois d'Arc Offshore Ltd.
600 Travis; Suite 6275
Houston, Texas 77002

Greg Martin
(713) 228-0438
gmartin@boisdarcoffshore1.com

Estimated start up date: October 4, 2004

Authorized Representative:

Valerie Land
J. Connor Consulting, Inc.
16225 Park Ten Place, Suite 700
Houston, Texas 77084
(281) 578-3388
valerie.land@jccteam.com

No. Copies Being Submitted:

Proprietary:	5
Public Info:	4

For MMS:

Plan No.	
Assigned to:	

BOIS d'ARC OFFSHORT LTD.

JOINT INITIAL DEVELOPMENT

OPERATIONS COORDINATON DOCUMENT

LEASES OCS-G 22605/22648

VERMILION BLOCK 51/SOUTH MARSH ISLAND BLOCK 220

APPENDIX A	*Contents of Plan*
APPENDIX B	*General Information*
APPENDIX C	*Geological, Geophysical & H_2S Information*
APPENDIX D	*Biological and Physical Information*
APPENDIX E	*Wastes and Discharge Information*
APPENDIX F	*Oil Spill Information*
APPENDIX G	*Air Emissions Information*
APPENDIX H	*Environmental Impact Analysis*
APPENDIX I	*Coastal Zone Management Consistency Information*
APPENDIX J	*Plan Information Form*

APPENDIX A
CONTENTS OF PLAN

Bois d'Arc Offshore Ltd. (Bois d'Arc) is the designated operator of the subject oil and gas lease.

(A) DESCRIPTION, OBJECTIVES AND SCHEDULE

This DOCD provides for installation of Platform A over the existing surface location of Lease OCS-G 22648, Well No. 1 (to be renamed Well No. A-1) and Lease 22605, Wells No. 1, 2, and 3 (to be renamed Wells No. A-2, A-3, and A-4), installation of a lease term pipeline, and commencement of production from the target sands as detailed in Appendix C of this DOCD.

Appendix J contains a Plan Information Form, which provides a description of proposed activities, and a tentative schedule.

(B) LOCATION

Included as ***Attachments A-1 and A-2*** are the surface location map showing the existing location of the proposed facility and the well location table with additional well data.

(D) PRODUCTION FACILITIES

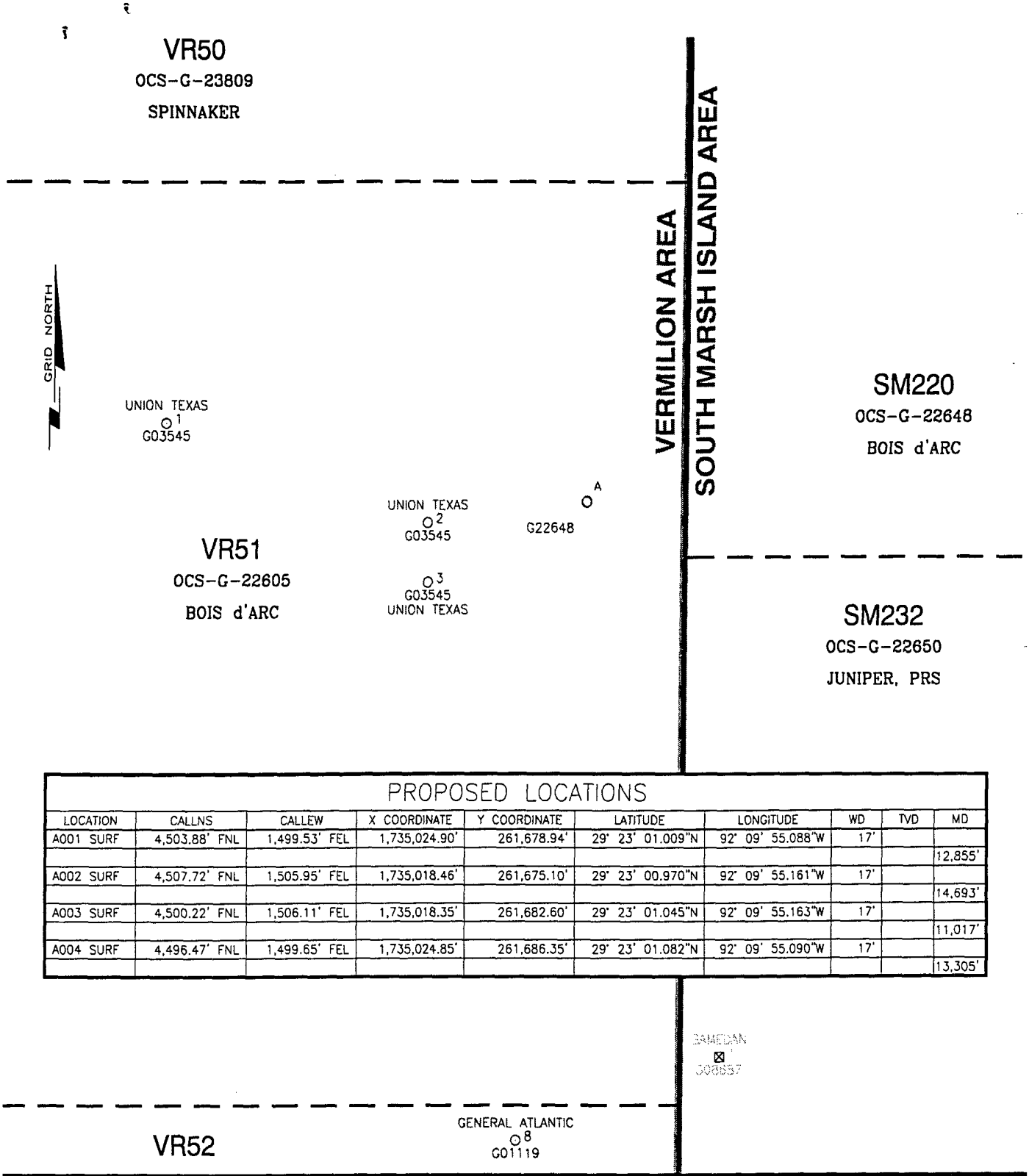
The subject wells will be protected by a 4-pile manned production platform to be designated as Platform A. This structure will support three deck levels including a main deck, cellar deck, sub-cellar deck and helideck. A typical 4-pile production schematic is included as ***Attachment A-3***.

Bois d'Arc Offshore Ltd. anticipates installing minimal processing equipment on this structure. All hydrocarbon handling equipment installed for testing and production operations will be designed, installed and operated to prevent pollution.

The facility and associated pipeline will be installed utilizing a derrick barge to install the facility. Copies of the anchor pattern plot are enclosed as ***Attachment A-4, A-5, and A-6***.

An 8" gas/condensate lease term pipeline will be installed to transport produced hydrocarbons from the subject structure to an existing pipeline 16" TGP pipeline in South Marsh Island Block 220. No new nearshore or onshore pipelines or facilities will be constructed.

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



PROPOSED LOCATIONS

LOCATION	CALLNS	CALLEW	X COORDINATE	Y COORDINATE	LATITUDE	LONGITUDE	WD	TVD	MD
A001 SURF	4,503.88' FNL	1,499.53' FEL	1,735,024.90'	261,678.94'	29° 23' 01.009"N	92° 09' 55.088"W	17'		
									12,855'
A002 SURF	4,507.72' FNL	1,505.95' FEL	1,735,018.46'	261,675.10'	29° 23' 00.970"N	92° 09' 55.161"W	17'		
									14,693'
A003 SURF	4,500.22' FNL	1,506.11' FEL	1,735,018.35'	261,682.60'	29° 23' 01.045"N	92° 09' 55.163"W	17'		
									11,017'
A004 SURF	4,496.47' FNL	1,499.65' FEL	1,735,024.85'	261,686.35'	29° 23' 01.082"N	92° 09' 55.090"W	17'		
									13,305'

PUBLIC INFORMATION

DIGITAL COPY
ORIGINAL PLAT 8/02/04

Printed: 8/2/04

BOIS d'ARC OFFSHORE LTD.

SUPPLEMENTAL DEVELOPMENT & PRODUCTION PLAN
OCS-G-22605 WELL A001,A002,A003,A004
BLOCK 51 VERMILION AREA
GULF OF MEXICO

FUGRO CHANCE INC.
200 Dulles Dr. Lafayette, Louisiana 70506-3001 (337) 237-1300

GEODETIC DATUM: NAD27
PROJECTION: LOUISIANA SOUTH
GRID UNITS: US SURVEY FEET

SCALE IN FEET 0 2,000'

Job No.: 04-2579 | Date: 8/02/04 | Drwn: AML | Chart: 1 Of: 1

Dwgfile: O:\WellPermit\LAs\VE\Permit\51dpp

ATTACHMENT A-1

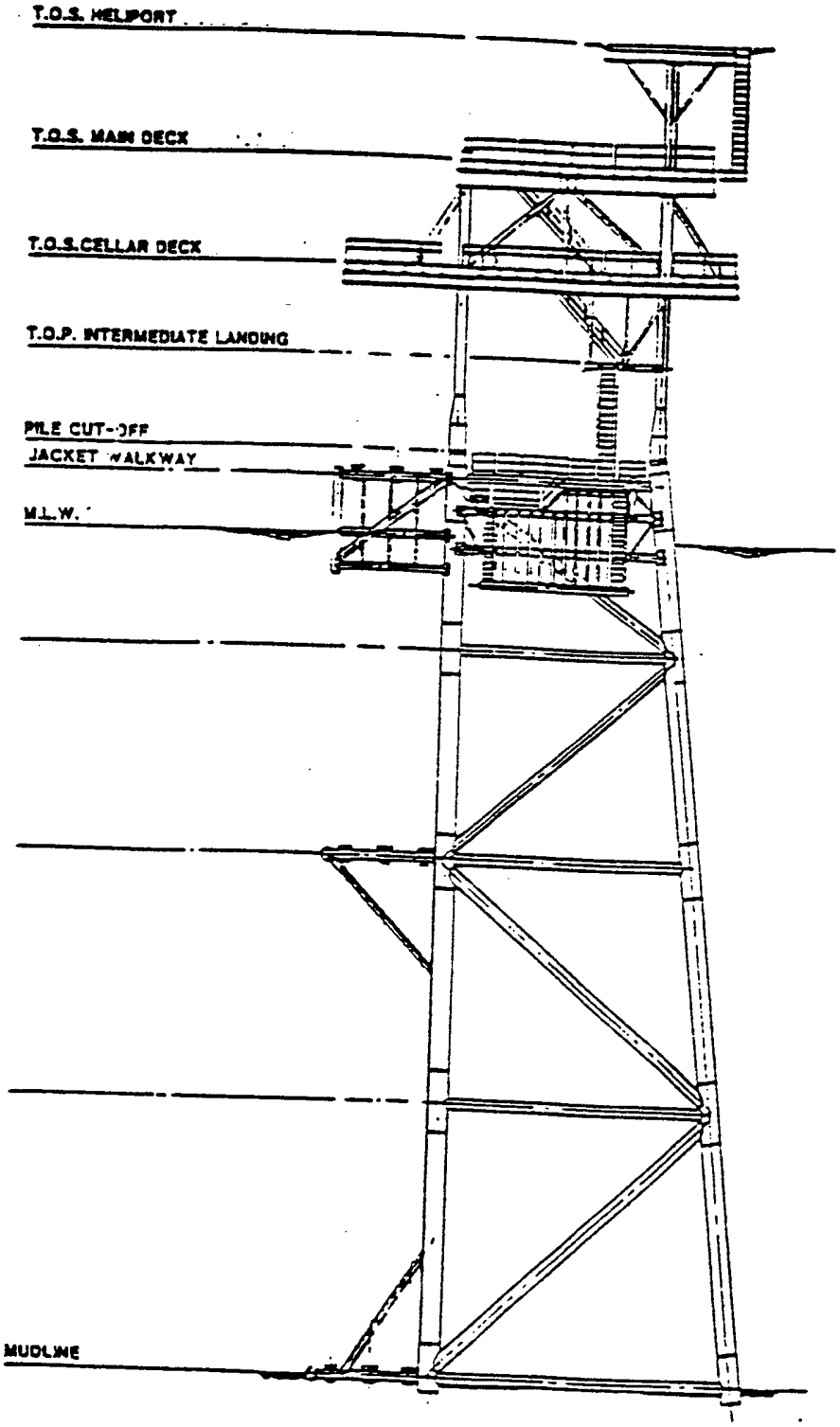
WELL INFORMATION FORM
(USE SEPARATE FORM FOR EACH LEASE)

PROPOSED WELL/STRUCTURE LOCATIONS

WELL / STRUCTURE NAME	SURFACE LOCATION	BOTTOM-HOLE LOCATION (FOR WELLS)
Well No. A-1	CALLS: 4503.88 F N L and 1499.53' F E L OF LEASE OCS 22605 , Vermilion AREA, BLOCK 51	CALLS: F L and F L OF LEASE OCS , AREA, BLOCK
	X: 1,735,024.90' Y: 261,678.94'	X: Y:
	LAT: 29° 23' 01.009" N LONG: 92° 09' 55.088" W	LAT: LONG:
	TVD (IN FEET): MD (IN FEET): WATER DEPTH (IN FEET): 17'	
Well No. A-2	CALLS: 4507.72' F N L and 1505.95' F E L OF LEASE OCS 22605 , Vermilion AREA, BLOCK 51	CALLS: F L and F L OF LEASE OCS , AREA, BLOCK
	X: 1,735,018.46' Y: 261,675.10'	X: Y:
	LAT: 29° 23' 00.970" N LONG: 92° 09' 55.161" W	LAT: LONG:
	TVD (IN FEET): MD (IN FEET): WATER DEPTH (IN FEET): 17'	
Well No. A-3	CALLS: 4500.22' F N L and 1506.11' F E L OF LEASE OCS 22605 , Vermilion AREA, BLOCK 51	CALLS: F L F L OF LEASE OCS , AREA, BLOCK
	X: 1,735,018.35' Y: 261,682.60'	X: Y:
	LAT: 29° 23' 01.045" N LONG: 92° 09' 55.163" W	LAT: LONG:
	TVD (IN FEET): MD (IN FEET): WATER DEPTH (IN FEET): 17'	
Well No. A-4	CALLS: 4496.47' F N L and 1499.65' F E L OF LEASE OCS 22605 , Vermilion AREA, BLOCK 51	CALLS: F L and F L OF LEASE OCS , AREA, BLOCK
	X: 1,735,024.85' Y: 261,686.35'	X: Y:
	LAT: 29° 23' 01.082" N LONG: 92° 09' 55.090" W	LAT: LONG:
	TVD (IN FEET): MD (IN FEET): WATER DEPTH (IN FEET): 17'	

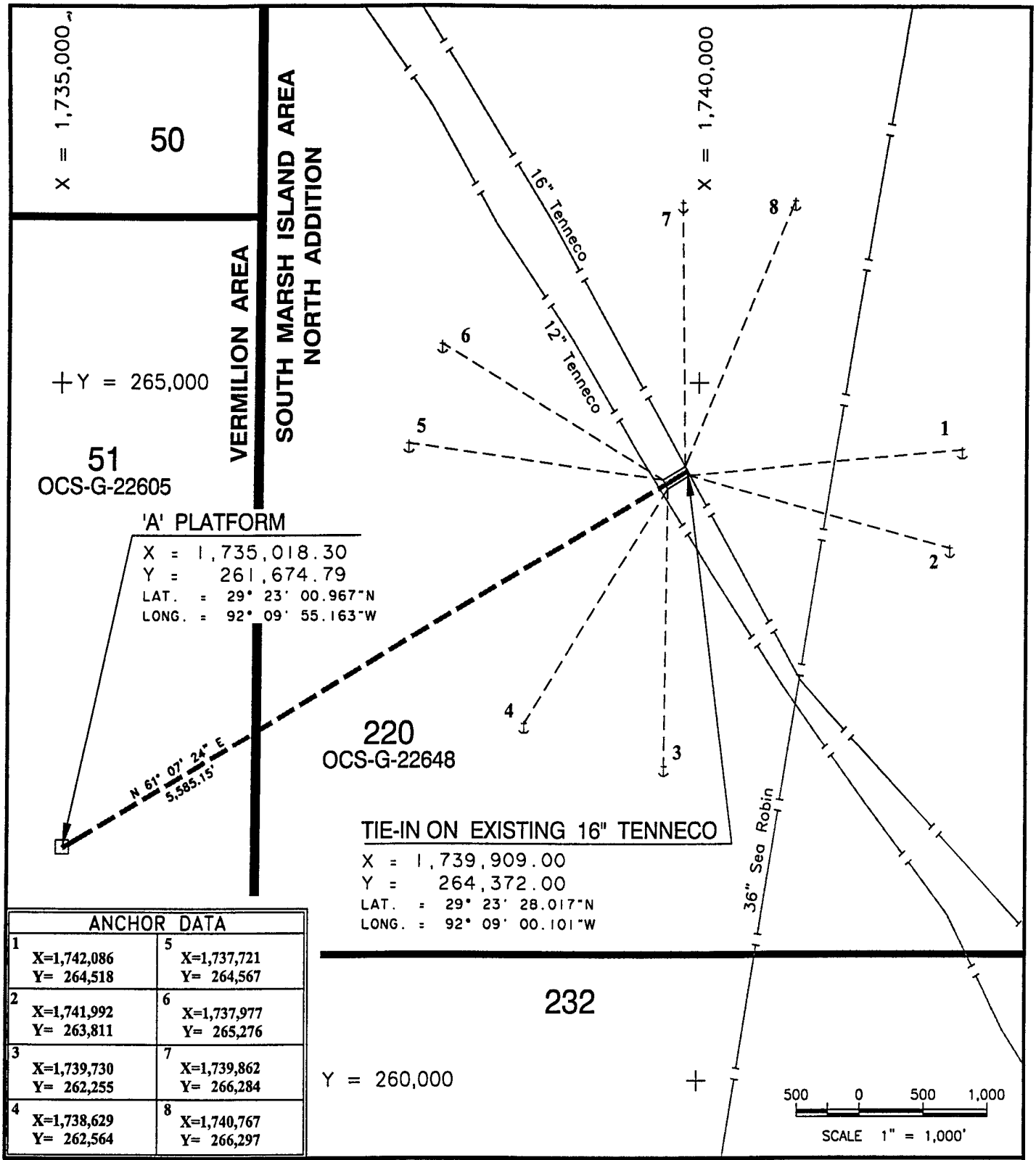
Attachment A-2

TYPICAL 4-PILE PRODUCTION PLATFORM SCHEMATIC



SCALE: 1/16"-1'-0"

Attachment A-3



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2 X=1,741,992 Y= 263,811	6 X=1,737,977 Y= 265,276
3 X=1,739,730 Y= 262,255	7 X=1,739,862 Y= 266,284
4 X=1,738,629 Y= 262,564	8 X=1,740,767 Y= 266,297

THIS MAP WAS PREPARED FROM VARIOUS DATABASES, PRIMARILY OF PUBLIC RECORD, INCLUDING INFORMATION DERIVED FROM "AS-BUILT" AND "PROPOSED PIPELINE" DRAWINGS PREPARED BY OTHERS. TESLA OFFSHORE, L.L.C. ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE PUBLIC RECORD DATA.
THIS MAP DOES NOT ATTEMPT TO SHOW THE LOCATION OR EXISTENCE OF ANY COMMUNICATION AND/OR POWER CABLES.

DATUM:	NAD 27
SPHEROID:	CLARKE 1866
PROJECTION:	LAMBERT
ZONE:	LOUISIANA SOUTH

TESLA OFFSHORE
36499 Perkins Road
Prairieville, Louisiana 70769
Tel: 225-673-2163
Fax: 225-744-3116

BOIS d'ARC OFFSHORE LTD.

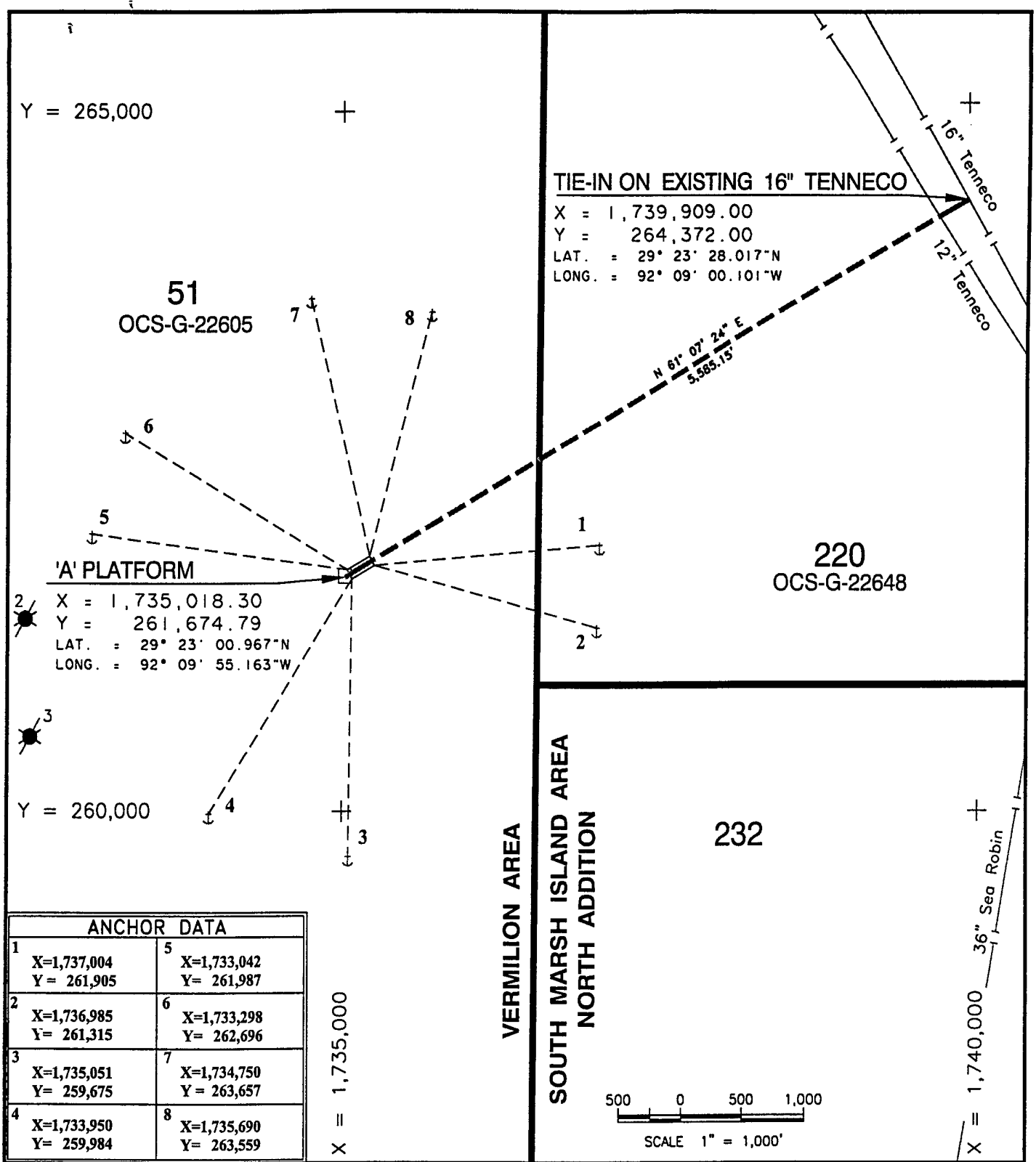
PROPOSED ANCHOR SPREAD

'A' PLATFORM, BLOCK 50 VERMILION AREA TO SSTI ON EXISTING 16" TENNECO, BLOCK 220 SOUTH MARSH ISLAND AREA, NORTH ADDITION

GULF OF MEXICO

DRAWN BY:	DATE:	CHECKED BY:	DRAWING No.:
M. TRIPP	06/08/2004		ANCHOR_3
REV. DATE:	REV. No.:	SCALE:	JOB No.:
		AS-SHOWN	04-166

Attachment A-4



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2 X=1,736,985 Y= 261,315	6 X=1,733,298 Y= 262,696
3 X=1,735,051 Y= 259,675	7 X=1,734,750 Y= 263,657
4 X=1,733,950 Y= 259,984	8 X=1,735,690 Y= 263,559

THIS MAP WAS PREPARED FROM VARIOUS DATABASES, PRIMARILY OF PUBLIC RECORD, INCLUDING INFORMATION DERIVED FROM "AS-BUILT" AND "PROPOSED PIPELINE" DRAWINGS PREPARED BY OTHERS. TESLA OFFSHORE, L.L.C. ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE PUBLIC RECORD DATA.
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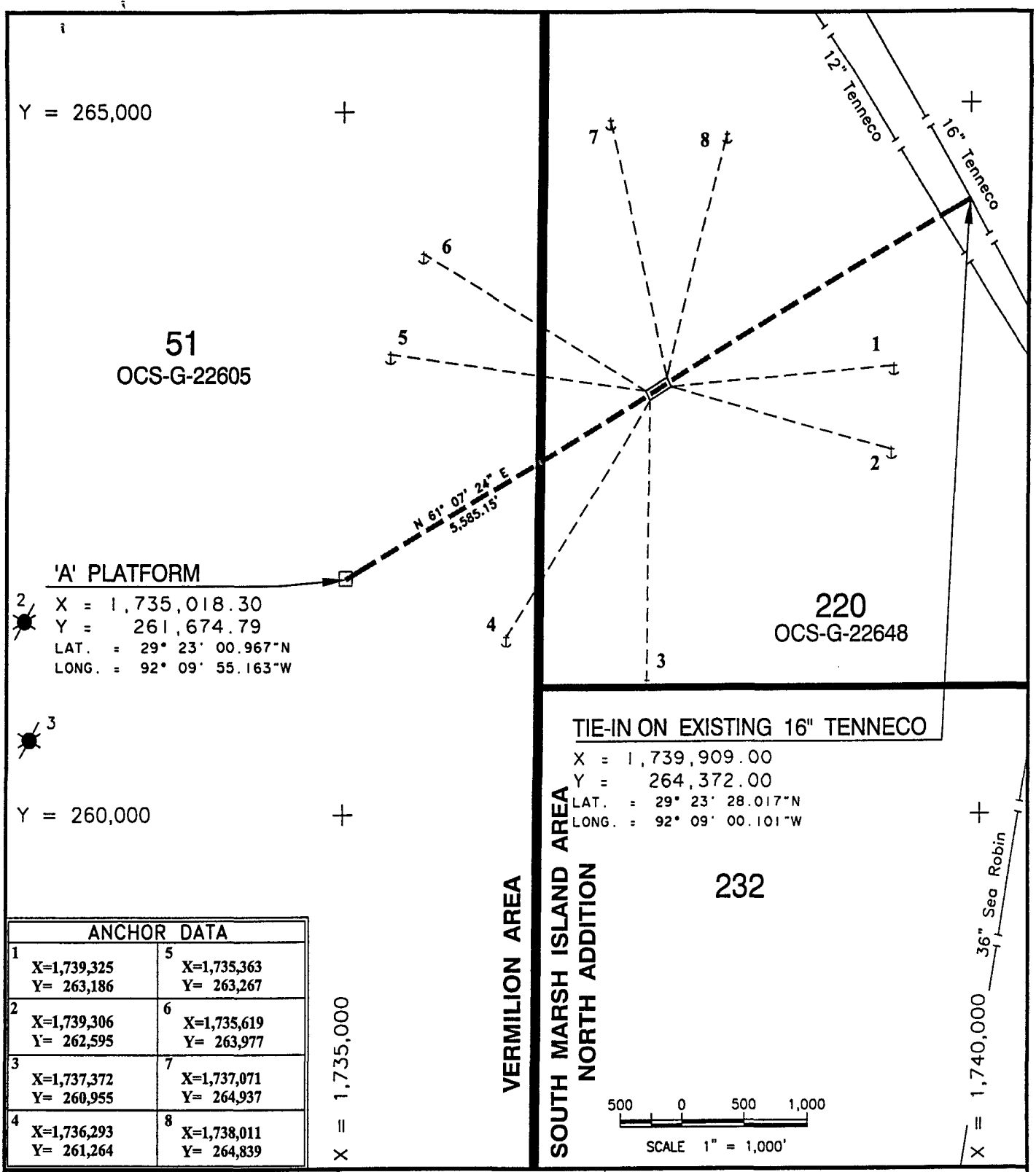
'A' PLATFORM, BLOCK 50 VERMILON AREA TO SSTI ON EXISTING 16" TENNECO, BLOCK 220 SOUTH MARSH ISLAND AREA, NORTH ADDITION

GULF OF MEXICO

DRAWN BY:	DATE:	CHECKED BY:	DRAWING No.:
M. TRIPP	06/08/2004		ANCHOR_1
REV. DATE:	REV. No.:	SCALE: AS-SHOWN	JOB No.: 04-166

ATTACHMENT A-5



ANCHOR DATA	
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2 X=1,739,306 Y= 262,595	6 X=1,735,619 Y= 263,977
3 X=1,737,372 Y= 260,955	7 X=1,737,071 Y= 264,937
4 X=1,736,293 Y= 261,264	8 X=1,738,011 Y= 264,839

THIS MAP WAS PREPARED FROM VARIOUS DATABASES, PRIMARILY OF PUBLIC RECORD, INCLUDING INFORMATION DERIVED FROM "AS-BUILT" AND "PROPOSED PIPELINE" DRAWINGS PREPARED BY OTHERS. TESLA OFFSHORE, L.L.C. ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE PUBLIC RECORD DATA.
THIS MAP DOES NOT ATTEMPT TO SHOW THE LOCATION OR EXISTENCE OF ANY COMMUNICATION AND/OR POWER CABLES.

DATUM:	NAD 27
SPHEROID:	CLARKE 1866
PROJECTION:	LAMBERT
ZONE:	LOUISIANA SOUTH

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BOIS d'ARC OFFSHORE LTD.

PROPOSED ANCHOR SPREAD

'A' PLATFORM, BLOCK 50 VERMILON AREA TO SSTI ON EXISTING 16" TENNECO, BLOCK 220 SOUTH MARSH ISLAND AREA, NORTH ADDITION

GULF OF MEXICO

DRAWN BY:	DATE:	CHECKED BY:	DRAWING No.:
M. TRIPP	06/08/2004		ANCHOR_2
REV. DATE:	REV. No.:	SCALE: AS-SHOWN	JOB No.: 04-166

ATTACHMENT A-6

APPENDIX B
GENERAL INFORMATION

(A) CONTACT

Inquiries may be made to the following authorized representative:

Valerie Land
J. Connor Consulting, Inc.
16225 Park Ten Place, Suite 700
Houston, Texas 77084
(281) 578-3388
E-mail address: valerie.land@jccteam.com

(B) PROJECT NAME

Bois d'Arc does not typically name their projects.

(C) PRODUCTION RATES AND LIFE OF RESERVOIR – Propietary Copy

(D) NEW OR UNUSUAL TECHNOLOGY

Bois d'Arc does not propose to use any new or unusual technology to carry out the proposed development/production activities. New or unusual technology is defined as equipment and/or procedures that:

1. Function in a manner that potentially causes different impacts to the environment than the equipment or procedures did in the past;
2. Have not been used previously or extensively in an MMS OCS Region;
3. Have not been used previously under the anticipated operating conditions; or
4. Have operating characteristics that are outside the performance parameters established by 30 CFR 250.

(E) BONDING INFORMATION

The bond requirements for the activities and facilities proposed in this DOCD are satisfied by an area wide bond, furnished and maintained according to 30 CFR 256, Subpart I; NTL No. N2000-G16, "Guidelines for General Lease Surety Bonds", dated September 7, 2000.

(F) ONSHORE BASE AND SUPPORT VESSELS

A Vicinity Map is included as ***Attachment B-1*** showing Vermilion Block 51 located approximately 11.3 miles from the nearest shoreline and approximately 88 miles from the onshore support base in Dulac, Louisiana.

The existing onshore base provides 24-hour service, a radio tower with a phone patch, dock space, equipment, and supply storage area, drinking and drill water, etc. The base serves as a loading point for tools, equipment, and machinery, and temporary storage for materials and equipment. The base also supports crew change activities. The proposed operations do not require expansion or major modifications to the base.

During the proposed activities, support vessels/helicopters and travel frequency are as follows:

Type	Weekly Estimate (No.) of Roundtrips	
	Drilling & Completion	Production Operations
Crew Boat	NA	1
Supply Boat	NA	0
Helicopter	NA	7

The most practical, direct route from the shorebase as permitted by the weather and traffic conditions will be utilized.

(G) LEASE STIPULATIONS

The MMS did not invoke lease stipulations for Lease OCS-G 22605, Vermilion Block 51.

ARCHAEOLOGY SURVEY BLOCKS

Vermilion Block 51 has been determined to have a high potential for containing pre-historic archaeological properties.

Review of the data obtained during the shallow hazard study does not indicate the presence of any historic period shipwrecks.

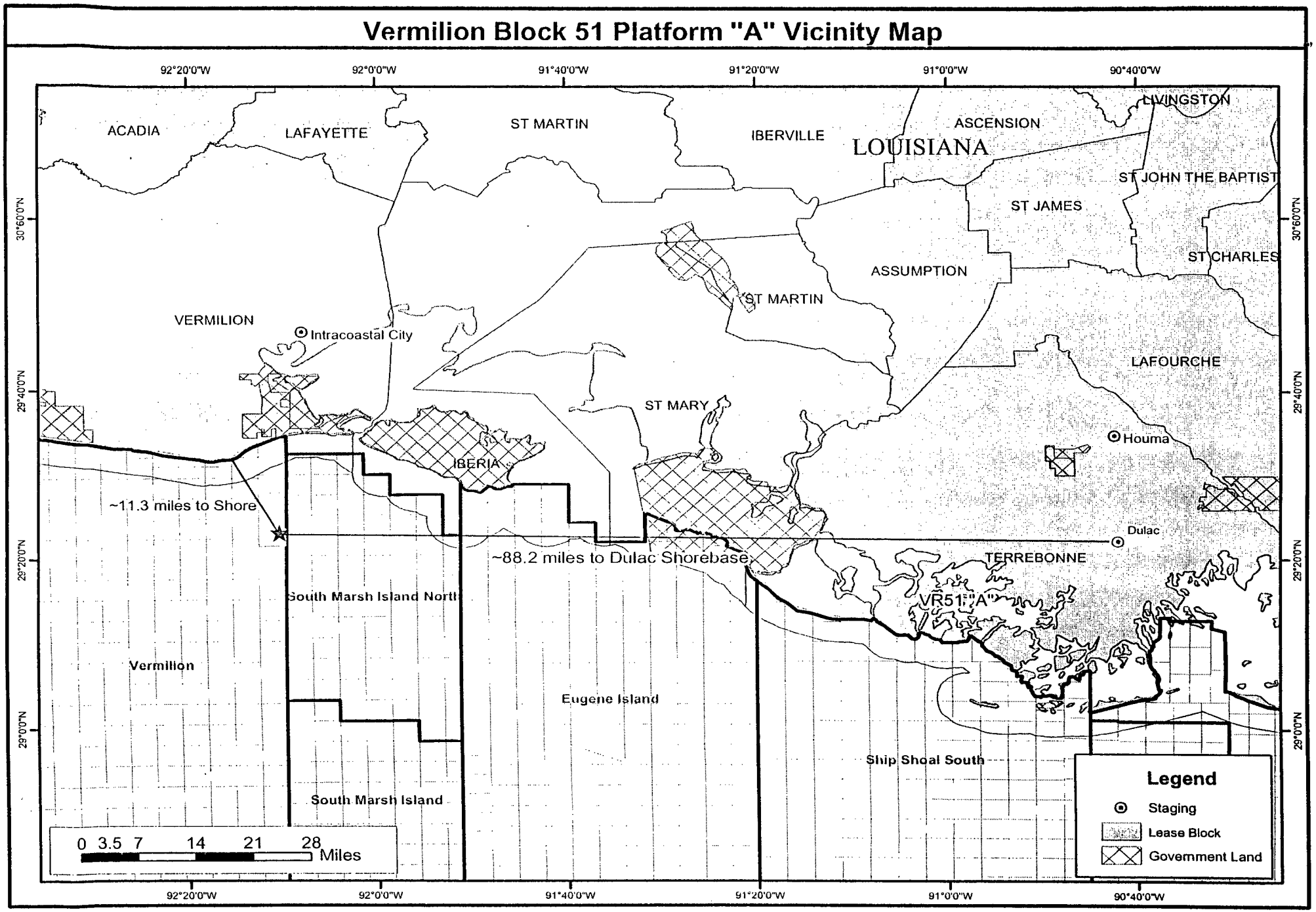
(H) RELATED OCS FACILITIES AND OPERATIONS

Bois d'Arc proposes to install a lease term pipeline that will tie into the existing 16" TGP pipeline in South Marsh 220. There are no other OCS facilities relating to this project.

(I) TRANSPORTATION INFORMATION

There will be no new construction of transportation pipelines or any other method of transportation of product to shore. Produced hydrocarbons from Vermilion Block 51 will be delivered to the Bluewater System onshore.

Vermilion Block 51 Platform "A" Vicinity Map



ATTACHMENT B-1

APPENDIX C
GEOLOGICAL, GEOPHYSICAL, AND H_2S INFORMATION

(A) STRUCTURE CONTOUR MAPS

Current structure contour maps drawn on the top of the productive hydrocarbon sand, showing the entire lease block the location of the existing well, and the locations of geological cross-sections is included as ***Attachment C-1 and C-2.***

(B) HYDROGEN SULFIDE INFORMATION

By letters dated December 16, 2003, and March 3, 2004, MMS has determined that Vermilion Block 51 is an area known to be absent of H_2S.

APPENDIX D
BIOLOGICAL AND PHYSICAL INFORMATION

CHEMOSYNTHETIC INFORMATION

This DOCD does not proposed activities that could disturb seafloor areas in water depths of 400 meters (1312 feet) or greater, therefore chemosynthetic information is not required.

TOPOGRAPHIC FEATURES INFORMATION

The activities proposed in this plan will not take place within 500 feet of any identified topographic feature, therefore topographic features information is not required.

LIVE BOTTOM (PINNACLE TREND) INFORMATION

Vermilion Block 51 is not located within 100 feet of any pinnacle trend feature with vertical relief equal to or greater than 8 feet; therefore, live bottom information is not required.

APPENDIX E
WASTES AND DISCHARGES INFORMATION

DISCHARGES

All discharges associated with operations proposed in this Development Operation Coordination Document will be in accordance with regulations implemented by Minerals Management Service (MMS), U. S. Coast Guard (USCG) and the U.S. Environmental Protection Agency (EPA).

Discharge information is not required per NTL No. 2003-G17.

WASTES

For disposed wastes, the type and general characteristics of the wastes, the amount to be disposed of (volume, rate, or weight), the daily rate, the name and location of the disposal facility, a description of any treatment or storage, and the methods for transporting and final disposal are provided in tabular format in ***Attachment E-1*** For purposes of this Appendix, disposed wastes describes those wastes generated by the proposed activities that are disposed of by means other than by releasing them in to the waters of the Gulf of Mexico at the site where they are generated. These wastes can be disposed of by offsite release, injection, encapsulation, or placement at either onshore or offshore permitted locations for the purpose of returning them back to the environment.

Disposal Table Example (Wastes to be disposed of, not discharged)

Type of Waste Approximate Composition	Amount*	Rate per Day	Name/Location of Disposal Facility	Treatment and/or Storage, Transport and Disposal Method
Spent oil-based drilling fluids and cuttings	0 bbl/well	0 bbl/day	NA	No drilling proposed under this plan
Spent synthetic-based drilling fluids and cuttings	0 bbl/well	0 bbl/day		No drilling proposed under this plan
Oil-contaminated produced sand	25 bbl/yr	0.06 bbl/day	Newpark Environmental, Fannett, TX	Transport to shore in 25 bbl cutting boxes and truck to disposal facility
Waste Oil	2 gal/mont	0.06 gal/day	Newpark Environmental, Fannett, TX	Transport to shore in 25 bbl cutting boxes and truck to disposal facility
Produced water	0 bbl/yr	0 bbl/day	NA	NA
Produced water	0 bbl/yr	0 bbl/day	NA	NA
Norm-contaminated wastes	0 ton	Not applicable	NA	NA
Trash and debris	0.5 yd^3/mth	.0163 yd^3/day	Newpark Environmental, Fannett, TX	Transport to shore in 25 bbl cutting boxes and truck to disposal facility
Chemical product wastes	0 bbl/yr	0 bbl/day	NA	NA
Chemical product wastes	0 bbl	0 bbl/day	NA	NA
Workover fluids	200 bbl/well	0.548 bbl/day	U.S. Liquids, Fourchon, LA	Transport to shore in 25 bbl pill tanks and truck to disposal facility

*can be expressed as a volume, weight, or rate

APPENDIX F
OIL SPILL INFORMATION

1. SITE-SPECIFIC OSRP

N/A

2. REGIONAL OSRP INFORMATION

Bois d'Arc's Regional Oil Spill Response Plan (OSRP) was approved on June 11, 2003, and most recently updated on January 21, 2004. Activities proposed in this DOCD will be covered by the Regional OSRP.

3. OSRO INFORMATION

Bois d'Arc'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.

4. WORST-CASE SCENARIO COMPARISON

Category	Regional OSRP WCD	DOCD WCD
Type of Activity	Production >10 miles from shore	Production >10 miles from shore
Facility Location (Area/Block)	PL22	VR51
Facility Designation	B	Platform "A"
Distance to Nearest Shoreline (miles)	13	11.3
Volume		
Storage tanks (total)	150	210
Flowlines (on facility)	0	0
Lease pipelines	150	155
Uncontrolled blowout	3400	480
Total Volume	3700	845
Type of Oil(s) (crude, condensate, diesel)	Condensate	Condensate
API Gravity	35	46

Bois d'Arc has determined that the worst-case scenario from the activities proposed in this DOCD does not supercede the worst-case scenario from our approved regional OSRP production for far-shore activities.

Since Bois d'Arc has the capability to respond to the worst-case spill scenario included in its regional OSRP approved on June 11, 2003, 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 Bois d'Arc has the capability to respond, to the maximum extent practicable, to a worst-case discharge, or a substantial threat of such a discharge, resulting from the activities proposed in our DOCD.

5. FACILITY TANKS, PRODUCTION VESSELS

All facility tanks of 25 barrels or more.

Type of Storage Tank	Type of Facility	Tank Capacity (bbls)	Number of Tanks	Total Capacity (bbls)	Fluid Gravity (API)
Fuel Oil (Marine Diesel)	Derrick Barge	275	2	550	.83
Production	Platform A	33	6	198	46

6. SPILL RESPONSE SITES

Primary Response Equipment Location	Preplanned Staging Location
Lake Charles, La	Cameron, La

7. DIESEL OIL SUPPLY VESSELS

a. Size of fuel supply vessel:	180'
b. Carrying capacity of fuel supply vessel:	50,000
c. Frequency of fuel transfers:	2 – 4
d Route fuel supply vessel will take:	Dulac, LA to VR51

8. SUPPORT VESSELS FUEL TANKS

The estimated total storage capacity (maximum per class of vessel in the field at any given time) of fuel tanks on the vessels supporting activities in this Plan are as follows:

Type of Vessels	Number in Field Simultaneously	Estimated Maximum Fuel Tank Storage Capacity
b. Supply Vessels	0	0
b. Crew Vessels	1	30,000 gal

9. PRODUCED LIQUID HYDROCARBONS TRANSPORTATION VESSELS

Bois d'Arc does not propose transfer of stored production and/or hydrocarbons from well testing activities under this DOCD.

10. BLOWOUT SCENARIO

Should a blowout occur, the formation types present in the GOM tend to bridge over in most cases. If the wellhead and BOP system is still in tact, wellbore intervention should be possible in as little as 7 to 10 days. In a relief well scenario, rig availability is typically not an issue. The time required to drill a relief well would be in the 10 day range depending on the well intersection depth.

11. SPILL RESPONSE DISCUSSION FOR NEPA ANALYSIS

For the purpose of NEPA and Coastal Zone Management Act analysis, the largest spill response originating from the proposed activity would be a well blowout during drilling operations, estimated to be 480 BOPD of condensate with an API gravity of 46°.

Land Segment and Resource Identification

Trajectories of a spill and the probability of it impacting a land segment have been projected utilizing information in MMS Oil Spill Risk Analysis Model (OSRAM) for the Central and Western Gulf of Mexico available on the MMS website. The results are shown in Figure F-1.

The MMS OSRAM identifies a 24% probability of impact to the shorelines of Cameron Parish, Louisiana within 10 days. Cameron Parish includes the east side of Sabine Lake, Sabine National Wildlife Refuge, Calcasieu Lake, Lacassine National Wildlife Refuge (inland) and Grand Lake; along the Gulf beach from Sabine Pass to Big Constance Lake in Rockefeller Wildlife Refuge. This region is composed of open public beaches, marshlands and swamps. It serves as a habitat for numerous birds, finfish and other animals, including several rare, threatened and endangered species. Additional discussion of protection strategies for potentially affected resources is included in Bois d'Arc's Regional Oil Spill Response Plan.

Response

Bois d'Arc will make every effort to respond to the Worst Case Discharge as effectively as possible. A description of the response equipment available to contain and recover the Worst Case Discharge is shown in Figure F-2.

Using the estimated chemical and physical characteristics of diesel fuel, an ADIOS weathering model was run on a similar product from the ADIOS oil database (Condensate with an API 46.3°). The results indicate 60% of the product would be evaporated/dispersed within 12 hours, leaving approximately 192 barrels on the water.

Figure F-2 outlines equipment, personnel, materials and support vessels as well as temporary storage equipment to be considered in order to cope with an initial spill of 480 bbls. The list estimates individual times needed for procurement, load out, travel time to the site and deployment. If appropriate, 1 sortie (2,000 gallons) from the DC-4 should disperse approximately 857 barrels of oil.

Offshore response strategies may also include attempting to skim utilizing the CGA HOSS barge, one (1) Fast Response Unit (FRU), and the R/V Bastian Bay spill response vessel, with a total derated skimming capacity of 51,400 barrels. Temporary storage associated with the identified skimming equipment equals 4,395 barrels. If additional temporary storage is needed, a temporary storage barge may be mobilized. **SAFETY IS FIRST PRIORITY. AIR MONITORING WILL BE ACCOMPLISHED AND OPERATIONS DEEMED SAFE PRIOR TO ANY CONTAINMENT/SKIMMING ATTEMPTS**

If the spill went unabated, shoreline impact in coastal environments would depend upon existing environmental conditions. Onshore response may include the deployment of shoreline boom on beach areas, or protection and sorbent boom in vegetated areas. Strategies would be based upon surveillance and real time trajectories that depict areas of potential impact given actual sea and weather conditions. Strategies from the Port Arthur and Southeast Louisiana Area Contingency Plans (ACP), and Unified Command would be consulted to ensure that environmental and special economic resources would be correctly identified and prioritized to ensure optimal protection. ACPs depict the protection response modes applicable for oil spill clean-up operations. Each response mode is schematically represented to show optimum deployment and operation of the equipment in areas of environmental concern. Supervisory personnel have the option to modify the deployment and operation of equipment allowing a more effective response to site-specific circumstances.

FIGURE F-1
TRAJECTORY BY LAND SEGMENT

Trajectory of a spill and the probability of it impacting a land segment have been projected utilizing Bois d'Arc's WCD and information in MMS Oil Spill Risk Analysis Model (OSRAM) for the Central and Western Gulf of Mexico available on MMS website using ten (10) day impact. The results are tabulated below.

Area/Block	OCS-G	Launch Area	Land Segment and/or Resource	Conditional Probability (%) within 10 days
Drilling, Completion, Installation & Production 11.3 miles from shore Vermillion 51		C31	Galveston, TX	2
			Jefferson, TX	3
			Cameron, LA	**24**
			Vermilion, LA	22
			Iberia, LA	4
			St. Mary, LA	1
			Terrebonne, LA	1

WCD Scenario – Development Drilling – BASED ON A SINGLE WELL BLOWOUT (11.3 miles from shore)
Derrick Barge, Vermillion 51
480 bbls of condensate, API Gravity 46°

FIGURE F-2 Equipment Response Time to: Vermillion 51

	EQUIPMENT TYPE	Derated Capacity (BBLS)	Storage (BBLS)	No. of Units	Owner/ Location	Initial Staging	Hours To Staging Area	TOTAL Time to Procure (1)	Time to Load Out (2)	Travel Time (Staging/ Spill) (3)	Time to Deploy (4)	TOTAL Estimated Response Time
A	DC 4 Spray Aircraft	--	--	1	ASI/HOUMA	HOUMA	0					
	Spotter Plane	--	--	1	ASI/HOUMA	HOUMA	0					
	Spotter Personnel			2	ASI/HOUMA	HOUMA	1					
	Dispersant				CGA/HOUMA	HOUMA	0	1	1	1	0	3
B	HOSS Barge	43,000	4,130	1	CGA/HOUMA	HOUMA	0					
	Operators			12	STARS	HOUMA	2					
	Tugs			3	Vessel of Opportunity	HOUMA	4	4	1	17	1	23
C	FRU/Expandi	3,400	200	1	CGA/LAKE CHARLES	CAMERON	0					
	Operators			6	STARS*	CAMERON	2					
	Utility Boat			1	Vessel of Opportunity	CAMERON	2					
	Crew Boat			1	Vessel of Opportunity	CAMERON	2	2	1	5	1	9
D	R/V Bastian Bay	5,000	65	1	CGA/LAKE CHARLES	CAMERON	.5					
	Operators			3	STARS*	CAMERON	2	2	0.5	3	0	5.5
E	**INITIAL SUPPORT**											
	Spotter Helo	--	--	1	PHI/CAMERON	SPILL SITE	1	1	--	0.5	--	1.5
	Surveillance Helo	--	--	1	PHI/CAMERON	SPILL SITE	1	1	--	1.5	--	1.5
	Hand Held Radios	--	--		STARS*	LAKE CHARLES	1.5	1.5	--	1	--	2.5
	TOTAL	51,400	4,395									

*STARS contractor called out by MSRC

12. POLLUTION PREVENTION MEASURES

Bois d'Arc Offshore Ltd. does not propose safety, pollution prevention, or early spill detection measures beyond those required by 30 CFR 250.

APPENDIX G
AIR EMISSIONS INFORMATION

AIR EMISSIONS INFORMATION (If any of these answers are "yes" – the spreadsheets need to be submitted)

Screening Questions for DOCD's	Yes	No
Is any calculated Complex Total (CT) Emission amount (tons) associated with your proposed exploration activities more than 90% of the amounts calculated using the following formulas: CT = $3400D^{2/3}$ for CO, and CT = 33.3D for the other air pollutants (where D = distance to shore in miles)?		X
Do your emission calculations include any emission reduction measures or modified emission factors?		X
Does or will the facility complex associated with your proposed development and production activities process production from eight or more wells?		X
Do you expect to encounter H_2S at concentrations greater than 20 parts per million (ppm)?		X
Do you propose to flare or vent natural gas in excess of the criteria set forth under 250.1105(a)(2) and (3)?		X
Do you propose to burn produced hydrocarbon liquids?		X
Are your proposed development and production activities located within 25 miles from shore?	X	
Are your proposed development and production activities located within 200 kilometers of the Breton Wilderness Area?		X

Summary Information

There are no existing facilities or activities co-located with the currently proposed activities, therefore the Complex Total Emissions are the same as the Plan Emissions and are provided in the Air Quality Review spreadsheets included as ***Attachment G-1***.

This information was calculated by: Valerie Land
(281) 578-3388
valerie.land@jccteam.com

Based on this data, emissions from the proposed activities will not cause any significant effect on onshore air quality.

DOCD AIR QUALITY SCREENING CHECKLIST

OMB Control No. xxxx-xxxx
Expiration Date: Pending

COMPANY	Bois d'Arc Offshore Ltd.
AREA	Vermilion
BLOCK	51
LEASE	G22605
PLATFORM	A
WELL	A-1 thru A-4
COMPANY CONTACT	Valerie Land
TELEPHONE NO.	281-578-3388
REMARKS	Install Platform "A", Install Lease Term Pipeline, Commence Production

"Yes"	"No"	**Air Quality Screening Questions**
	X	1. Is any calculated Complex Total (CT) Emission amount (in tons) associated with your proposed exploration activities more than 90% of the amounts calculated using the following formulas: CT = $3400D^{2/3}$ for CO, and CT = 33.3D for the other air pollutants (where D = distance to shore in miles)?
	X	2. Do your emission calculations include any emission reduction measures or modified emission factors?
	X	3. Does or will the facility complex associated with your proposed development and production activities process production from eight or more wells?
	X	4. Do you expect to encounter H_2S at concentrations greater than 20 parts per million?
	X	5. Do you propose to flare or vent natural gas in excess of the criteria set forth under 250.1105(a)(2) and (3)?
	X	6. Do you propose to burn produced hydrocarbon liquids?
X		7. Are your proposed development and production activities located within 25 miles from shore?
	X	8. Are your proposed development and production activities located within 200 kilometers of the Breton Wilderness Area?

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
2004	1	15 days
2005		
2006		
2007		
2008		
2009		
2010		
2011		
2022		

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL		CONTACT	PHONE	REMARKS
Bois d'Arc Offshore Ltd.	Vermilion	51	G22605	A	A-1 thru A-4		Valerie Land	281-578-3388	#REF!

OPERATIONS	EQUIPMENT	RATING	MAX. FUEL	ACT. FUEL	RUN TIME		MAXIMUM POUNDS PER HOUR					ESTIMATED TONS				
	Diesel Engines	HP	GAL/HR	GAL/D												
	Nat. Gas Engines	HP	SCF/HR	SCF/D												
	Burners	MMBTU/HR	SCF/HR	SCF/D	HR/D	DAYS	PM	SOx	NOx	VOC	CO	PM	SOx	NOx	VOC	CO
DRILLING	PRIME MOVER>600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	PRIME MOVER>600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	PRIME MOVER>600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	PRIME MOVER>600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	BURNER diesel	0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	AUXILIARY EQUIP<600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel(crew)	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel(supply)	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel(tugs)	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PIPELINE INSTALLATION	PIPELINE LAY BARGE diesel	2800	135.24	3245.76	24	15	1.97	9.05	67.84	2.04	14.80	0.36	1.63	12.21	0.37	2.66
	SUPPORT VESSEL diesel	350	16.905	405.72	24	15	0.25	1.13	8.48	0.25	1.85	0.04	0.20	1.53	0.05	0.33
	PIPELINE BURY BARGE diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SUPPORT VESSEL diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel(crew)	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel(supply)	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FACILITY INSTALLATION	DERRICK BARGE diesel	4600	222.18	5332.32	24	7	3.24	14.87	111.45	3.34	24.32	0.27	1.25	9.36	0.28	2.04
	MATERIAL TUG diesel	2400	115.92	2782.08	24	7	1.69	7.76	58.15	1.74	12.69	0.14	0.65	4.88	0.15	1.07
	VESSELS>600hp diesel(crew)	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel(supply)	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PRODUCTION	RECIP.<600hp diesel - ***Crane***	100	4.83	115.92	2	15	0.22	0.32	3.08	0.25	0.67	0.00	0.00	0.05	0.00	0.01
	RECIP.<600hp diesel - ***Gen. #2***	100	4.83	115.92	24	4	0.22	0.32	3.08	0.25	0.67	0.01	0.02	0.15	0.01	0.03
	SUPPORT VESSEL diesel- ***Crew***	2065	99.7395	2393.75	8	9	1.46	6.68	50.03	1.50	10.92	0.05	0.24	1.80	0.05	0.39
	TURBINE nat gas	0	0	0.00	0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	RECIP.2 cycle lean nat gas- ***Gen. #1***	125	892.875	21429.00	24	26		0.00	3.00	0.12	0.41		0.00	0.94	0.04	0.13
	RECIP.4 cycle lean nat gas	0	0	0.00	0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	RECIP.4 cycle rich nat gas	0	0	0.00	0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	BURNER nat gas	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	MISC.	**BPD**	**SCF/HR**	**COUNT**												
	TANK-	0			0	0				0.00					0.00	
	FLARE-		0		0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	PROCESS VENT-		0		0	0				0.00					0.00	
	FUGITIVES-			10000.0		78				5.00					4.68	
	GLYCOL STILL VENT-		0		0	0				0.00					0.00	
DRILLING WELL TEST	OIL BURN	0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	GAS FLARE		0		0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
2004	**YEAR TOTAL**						**9.05**	**40.14**	**305.13**	**14.49**	**66.32**	**0.88**	**4.00**	**30.92**	**5.63**	**6.67**
EXEMPTION CALCULATION	**DISTANCE FROM LAND IN MILES**											**376.29**	**376.29**	**376.29**	**376.29**	**17121.08**
	11.3															

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL		CONTACT		PHONE	REMARKS
Bois d'Arc Offshore Ltd.	Vermilion	51	G22605	A	A-1 thru A-4			Valerie Land	281-578-3388	#REF!

OPERATIONS	EQUIPMENT	RATING	MAX. FUEL	ACT. FUEL	RUN TIME		MAXIMUM POUNDS PER HOUR					ESTIMATED TONS				
	Diesel Engines	HP	GAL/HR	GAL/D												
	Nat. Gas Engines	HP	SCF/HR	SCF/D												
	Burners	MMBTU/HR	SCF/HR	SCF/D	HR/D	DAYS	PM	SOx	NOx	VOC	CO	PM	SOx	NOx	VOC	CO
DRILLING	PRIME MOVER>600hp diesel	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	PRIME MOVER>600hp diesel	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	PRIME MOVER>600hp diesel	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	PRIME MOVER>600hp diesel	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	BURNER diesel	0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	AUXILIARY EQUIP<600hp diesel	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel(crew)	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel(supply)	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel(tugs)	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PIPELINE INSTALLATION	PIPELINE LAY BARGE diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SUPPORT VESSEL diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	PIPELINE BURY BARGE diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SUPPORT VESSEL diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel(crew)	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel(supply)	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FACILITY INSTALLATION	DERRICK BARGE diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	MATERIAL TUG diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel(crew)	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel(supply)	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PRODUCTION	RECIP.<600hp diesel - ***Crane***	100	4.83	115.92	2	15	0.22	0.32	3.08	0.25	0.67	0.00	0.00	0.05	0.00	0.01
	RECIP.<600hp diesel - ***Gen. #2***	100	4.83	115.92	24	4	0.22	0.32	3.08	0.25	0.67	0.01	0.02	0.15	0.01	0.03
	SUPPORT VESSEL diesel- ***Crew***	2065	99.7395	2393.75	8	52	1.46	6.68	50.03	1.50	10.92	0.30	1.39	10.41	0.31	2.27
	TURBINE nat gas	0	0	0.00	0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	RECIP.2 cycle lean nat gas- ***Gen.***	125	892.875	21429.00	24	26		0.00	3.00	0.12	0.41		0.00	0.94	0.04	0.13
	RECIP.4 cycle lean nat gas	0	0	0.00	0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	RECIP.4 cycle rich nat gas	0	0	0.00	0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	BURNER nat gas	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	MISC.	**BPD**	**SCF/HR**	**COUNT**												
	TANK-	0			0	0				0.00					0.00	
	FLARE-		0		0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	PROCESS VENT-		0		0	0				0.00					0.00	
	FUGITIVES-			0.0		0				0.00					0.00	
	GLYCOL STILL VENT-		0		0	0				0.00					0.00	
DRILLING WELL TEST	OIL BURN	0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	GAS FLARE		0		0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
2005	YEAR TOTAL						**1.90**	**7.32**	**59.20**	**2.11**	**12.66**	**0.32**	**1.41**	**11.54**	**0.36**	**2.44**
EXEMPTION CALCULATION	**DISTANCE FROM LAND IN MILES**											**376.29**	**376.29**	**376.29**	**376.29**	**17121.08**
	11.3															

AIR EMISSION CALCULATIONS

OMB Control No. xxxx-xxxx
Expiration Date: Pending

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL
Bois d'Arc Offsh	Vermilion	51	G22605	A	A-1 thru A-4

Year	Emitted Substance				
	PM	SOx	NOx	VOC	CO
2004	0.88	4.00	30.92	5.63	6.67
2005	0.32	1.41	11.54	0.36	2.44
2006	0.32	1.41	11.54	0.36	2.44
2007	0.32	1.41	11.54	0.36	2.44
2008	0.32	1.41	11.54	0.36	2.44
2009	0.32	1.41	11.54	0.36	2.44
2010	0.32	1.41	11.54	0.36	2.44
2011	0.32	1.41	11.54	0.36	2.44
Allowable	376.29	376.29	376.29	376.29	17121.08

APPENDIX H
ENVIRONMENTAL IMPACT ANALYSIS (EIA)

Bois d'Arc Offshore Ltd.

Joint Initial DOCD
Vermilion Block 51 and South Marsh Block 220
OCS-G 22605/22648

(A) Impact Producing Factors

ENVIRONMENTAL IMPACT ANALYSIS WORKSHEET

Environment Resources	Impact Producing Factors (IPFs) - Categories and Examples. Refer to recent GOM OCS Lease Sale EIS for a more complete list of IPFs					
	Emissions (air, noise, light, etc.)	Effluents (muds, cutting, other discharges to the water column or seafloor)	Physical disturbances to the seafloor (rig or anchor emplacements, etc.)	Wastes sent to shore for treatment or disposal	Accidents (e.g., oil spills, chemical spills, H_2S releases)	Discarded Trash & Debris
Site-specific at Offshore Location						
Designated topographic features		(1)	(1)		(1)	
Pinnacle Trend area live bottoms		(2)	(2)		(2)	
Eastern Gulf live bottoms		(3)	(3)		(3)	
Chemosynthetic communities			(4)			
Water quality		X	X		X	
Fisheries		X	X		X	
Marine Mammals	X(8)	X			X(8)	X
Sea Turtles	X(8)	X			X(8)	X
Air quality	X(9)					
Shipwreck sites (known or potential)			(7)			
Prehistoric archaeological sites			X(7)			
Vicinity of Offshore Location						
Essential fish habitat		X	X		X(6)	
Marine and pelagic birds	X				X	X
Public health and safety					(5)	
Coastal and Onshore						
Beaches					X(6)	X
Wetlands					X(6)	
Shore birds and coastal nesting birds					X(6)	X
Coastal wildlife refuges					X	
Wilderness areas					X	

Footnotes for Environmental Impact Analysis Matrix

1) Activities that may affect a marine sanctuary or topographic feature. Specifically, if the well or platform site or any anchors will be on the seafloor within the:
   - o 4-mile zone of the Flower Garden Banks, or the 3-mile zone of Stetson Bank;
   - o 1000-m, 1-mile or 3-mile zone of any topographic feature (submarine bank) protected by the Topographic Features Stipulation attached to an OCS lease;
   - o Essential Fish Habitat (EFH) criteria of 500 ft. from any no-activity zone; or
   - o Proximity of any submarine bank (500 ft. buffer zone) with relief greater than 2 meters that is not protected by the Topographic Features Stipulation attached to an OCS lease.
2) Activities with any bottom disturbance within an OCS lease block protected through the Live Bottom (Pinnacle Trend) Stipulation attached to an OCS lease.
3) Activities within any Eastern Gulf OCS block where seafloor habitats are protected by the Live Bottom (Low-Relief) Stipulation attached to an OCS lease.
4) Activities on blocks designated by the MMS as being in water depths 400 meters or greater.
5) Exploration or production activities where H2S concentrations greater than 500 ppm might be encountered.
6) All activities that could result in an accidental spill of produced liquid hydrocarbons or diesel fuel that you determine would impact these environmental resources. If the proposed action is located a sufficient distance from a resource that no impact would occur, the EIA can note that in a sentence or two.
7) All activities that involve seafloor disturbances, including anchor emplacements, in any OCS block designated by the MMS as having high-probability for the occurrence of shipwrecks or prehistoric sites, including such blocks that will be affected that are adjacent to the lease block in which your planned activity will occur. If the proposed activities are located a sufficient distance from a shipwreck or a prehistoric site that no impact would occur, the EIA can note that in a sentence or two.
8) All activities that you determine might have an adverse effect on endangered or threatened marine mammals or sea turtles or their critical habitats.
9) Production activities that involve transportation of produced fluids to shore using shuttle tankers or barges.

(B) Analysis

Site-Specific at Vermilion Block 51 and South Marsh Block 220

Proposed operations consist of the installing Platform A in Vermilion Block 51, installing a lease term pipeline and commencing production from Lease OCS-G 22648, Well No. A-1 and Lease OCS-G 22605, Wells No. A-2, A-3 and A-4.

1. Designated Topographic Features

Potential IPFs on topographic features include physical disturbances to the seafloor, effluents, and accidents.

Physical disturbances to the seafloor: Vermilion Block 51 and South Marsh Block 220 are 88 miles from the closest designated Topographic Features Stipulation Block (Alderdice Bank); therefore, no adverse impacts are expected.

Effluents: Vermilion Block 51 and South Marsh Block 220 are 88 miles from the closest designated Topographic Features Stipulation Block (Alderdice Bank); therefore, no adverse impacts are expected.

Accidents: It is unlikely that an accidental surface or subsurface spill would occur from the proposed activities (refer to statistics in **Item 5**, Water Quality). Oil spills cause damage to benthic organisms only if the oil contacts the organisms. Oil from a surface spill can be driven into the water column; measurable amounts have been documented down to a 10 m depth. At this depth, the oil is found only at concentrations several orders of magnitude lower than the amount shown to have an effect on corals. Because the crests of topographic features in the Northern Gulf of Mexico are found below 10 m, no oil from a surface spill could reach their sessile biota. Oil from a subsurface spill is not applicable due to the distance of these blocks from a topographic area. The activities proposed in this plan will be covered by Bois d'Arc Offshore Ltd.'s Regional OSRP (refer to information submitted in **Appendix F**).

There are no other IPFs (including emissions and wastes sent to shore for disposal) from the proposed activities, which could impact topographic features.

2. Pinnacle Trend Area Live Bottoms

Potential IPFs on pinnacle trend area live bottoms include physical disturbances to the seafloor, effluents, and accidents.

Physical disturbances to the seafloor: Vermilion Block 51 and South Marsh Block 220 are greater than 100 miles from the closest live bottom (pinnacle trend) area; therefore, no adverse impacts are expected.

Effluents: Vermilion Block 51 and South Marsh Block 220 are greater than 100 miles from the closest live bottom (pinnacle trend) area; therefore, no adverse impacts are expected.

Accidents: It is unlikely that an accidental surface or subsurface spill would occur from the proposed activities (refer to statistics in **Item 5**, Water Quality). Oil spills have the potential to foul benthic communities and cause lethal and sublethal effects on live bottom organisms. Oil from a surface spill can be driven into the water column; measurable amounts have been documented down to a 10 m depth. At this depth, the oil is found only at concentrations several orders of magnitude lower than the amount shown to have an effect on marine organisms. Oil from a subsurface spill is not applicable due to the distance of these blocks from a live bottom (pinnacle trend) area. The activities proposed in this plan will be covered by Bois d'Arc Offshore Ltd.'s Regional OSRP (refer to information submitted in **Appendix F**).

There are no other IPFs (including emissions and wastes sent to shore for disposal) from the proposed activities which could impact a live bottom (pinnacle trend) area.

3. Eastern Gulf Live Bottoms

Potential IPFs on Eastern Gulf live bottoms include physical disturbances to the seafloor, effluents, and accidents.

Physical disturbances to the seafloor: Vermilion Block 51 and South Marsh Block 220 are not located in an area characterized by the existence of live bottoms, and this lease does not contain a Live-Bottom Stipulation requiring a photo documentation survey and survey report.

Effluents: Vermilion Block 51 and South Marsh Block 220 are not located in an area characterized by the existence of live bottoms; therefore, no adverse impacts are expected.

Accidents: It is unlikely that an accidental surface or subsurface spill would occur from the proposed activities (refer to statistics in **Item 5**, Water Quality). Oil spills cause damage to live bottom organisms only if the oil contacts the organisms. Oil from a surface spill can be driven into the water column; measurable amounts have been documented down to a 10 m depth. At this depth, the oil is found only at concentrations several orders of magnitude lower than the amount shown to have an effect on marine invertebrates. Oil from a subsurface spill is not applicable due to the distance of these blocks from a live bottom area. The activities proposed in this plan will be covered by Bois d'Arc Offshore Ltd.'s Regional OSRP (refer to information submitted in **Appendix F**).

There are no other IPFs (including emissions and wastes sent to shore for disposal) from the proposed activities which could impact an Eastern Gulf live bottom area.

4. Chemosynthetic Communities

There are no IPFs (including emissions, physical disturbances to the seafloor, wastes sent to shore for disposal, or accidents) from the proposed activities that could cause impacts to chemosynthetic communities.

Operations proposed in this plan are in water depths of 17 feet. High-density chemosynthetic communities are found only in water depths greater than 1,312 feet (400 meters); therefore, Bois d'Arc Offshore Ltd.'s proposed operations in Vermilion Block 51 and South Marsh Block 220 would not cause impacts to chemosynthetic communities.

5. Water Quality

IPFs that could result in water quality degradation from the proposed operations in Vermilion Block 51 and South Marsh Block 220 include disturbances to the seafloor, effluents and accidents.

Physical disturbances to the seafloor: Bottom area disturbances resulting from the emplacement of drill rigs, the drilling of wells and the installation of platforms and pipelines would increase water-column turbidity and re-suspension of any accumulated pollutants, such as trace metals and excess nutrients. This would cause short-lived impacts on water quality conditions in the immediate vicinity of the emplacement operations.

Effluents: Levels of contaminants in drilling muds and cuttings and produced water discharges, discharge-rate restrictions and monitoring and toxicity testing are regulated by the EPA NPDES permit, thereby eliminating many significant biological or ecological effects. Operational discharges are not expected to cause significant adverse impacts to water quality.

Accidents: Oil spills have the potential to alter offshore water quality; however, it is unlikely that an accidental surface or subsurface spill would occur from the proposed activities. Between 1980 and 2000, OCS operations produced 4.7 billion barrels of oil and spilled only 0.001 percent of this oil, or 1 bbl for every 81,000 bbl produced. The spill risk related to a diesel spill from drilling operations is even less. Between 1976 and 1985, (years for which data were collected), there were 80 reported diesel spills greater than one barrel associated with drilling activities. Considering that there were 11,944 wells drilled, this is a 0.7 percent probability of an occurrence. If a spill were to occur, the water quality of marine waters would be temporarily affected by the dissolved components and small oil droplets. Dispersion by currents and microbial degradation would remove the oil from the water column and dilute the constituents to background levels. Historically, changes in offshore water quality from oil spills have only been

detected during the life of the spill and up to several months afterwards. Most of the components of oil are insoluble in water and therefore float. The activities proposed in this plan will be covered by Bois d'Arc Offshore Ltd.'s Regional Oil Spill Response Plan (refer to information submitted in **Appendix F**).

There are no other IPFs (including emissions, physical disturbances to the seafloor, and wastes sent to shore for disposal) from the proposed activities which could cause impacts to water quality.

6. Fisheries

IPFs that could cause impacts to fisheries as a result of the proposed operations in Vermilion Block 51 and South Marsh Block 220 include physical disturbances to the seafloor, effluents and accidents.

Physical disturbances to the seafloor: The emplacement of a structure or drilling rig results in minimal loss of bottom trawling area to commercial fishermen. Pipelines cause gear conflicts which result in losses of trawls and shrimp catch, business downtime and vessel damage. Most financial losses from gear conflicts are covered by the Fishermen's Contingency Fund (FCF). The emplacement and removal of facilities are not expected to cause significant adverse impacts to fisheries.

Effluents: Effluents such as drilling fluids and cuttings discharges contain components and properties which are detrimental to fishery resources. Moderate petroleum and metal contamination of sediments and the water column can occur out to several hundred meters down-current from the discharge point. Offshore discharges are expected to disperse and dilute to very near background levels in the water column or on the seafloor within 3,000 m of the discharge point, and are expected to have negligible effect on fisheries.

Accidents: An accidental oil spill has the potential to cause some detrimental effects on fisheries; however, it is unlikely that such an event would occur from the proposed activities (refer to **Item 5**, Water Quality). The effects of oil on mobile adult finfish or shellfish would likely be sublethal and the extent of damage would be reduced to the capacity of adult fish and shellfish to avoid the spill, to metabolize hydrocarbons, and to excrete both metabolites and parent compounds. The activities proposed in this plan will be covered by Bois d'Arc Offshore Ltd.'s Regional OSRP (refer to information submitted in **Appendix F**).

There are no IPFs from emissions, or wastes sent to shore for disposal from the proposed activities which could cause impacts to fisheries.

7. Marine Mammals

GulfCet II studies revealed that cetaceans of the continental shelf and shelf-edge were almost exclusively bottlenose dolphin and Atlantic spotted dolphin. Squid eaters, including dwarf and pygmy killer whale, Risso's dolphin, rough-toothed dolphin, and Cuvier's beaked whale, occurred most frequently along the upper slope in areas outside of anticyclones. IPFs that could cause impacts to marine mammals as a result of the proposed operations in Vermilion Block 51 and South Marsh Block 220 include emissions, effluents, discarded trash and debris, and accidents.

Emissions: Noises from drilling activities, support vessels and helicopters may elicit a startle reaction from marine mammals. This reaction may lead to disruption of marine mammals' normal activities. Stress may make them more vulnerable to parasites, disease, environmental contaminants, and/or predation (Majors and Myrick, 1990). There is little conclusive evidence for long-term displacements and population trends for marine mammals relative to noise.

Effluents: Drilling fluids and cuttings discharges contain components which may be detrimental to marine mammals. Most operational discharges are diluted and dispersed upon release. Any potential impact from drilling fluids would be indirect, either as a result of impacts on prey items or possibly through ingestion in the food chain (API, 1989).

Discarded trash and debris: Both entanglement in, and ingestion of debris have caused the death or serious injury of marine mammals (Laist, 1997; MMC, 1999). The limited amount of marine debris, if any, resulting from the proposed activities is not expected to substantially harm marine mammals. Operators are prohibited from deliberately discharging debris as mandated by MARPOL-Annex V and the Marine Plastic Pollution Research and Control Act, and regulations imposed by various agencies including the United States Coast Guard (USCG) and the Environmental Protection Agency (EPA).

Bois d'Arc Offshore Ltd. will operate in accordance with the regulations and also avoid accidental loss of solid waste items by maintaining waste management plans, manifesting trash sent to shore, and using special precautions such as covering outside trash bins to prevent accidental loss of solid waste. Special caution will be exercised when handling and disposing of small items and packaging materials, particularly those made of non-biodegradable, environmentally persistent materials such as plastic or glass.

Informational placards will be posted on all vessels and facilities having sleeping or food preparation capabilities. All offshore personnel, including contractors and other support services-related personnel (e.g. helicopter pilots, vessel captains and boat crews) will be indoctrinated on waste procedures, and will view the video (or Microsoft PowerPoint presentation), "All Washed Up: The Beach Litter Problem". Thereafter, all personnel will view the marine trash and debris training video annually.

Accidents: Collisions between support vessels and cetaceans would be unusual events, however should one occur, death or injury to marine mammals is possible. Contract vessel operators can avoid marine mammals and reduce potential deaths by maintaining a vigilant watch for marine mammals and maintaining a safe distance when they are sighted. Vessel crews should use a reference guide to help identify the twenty-eight species of whales and dolphins, and the single species of manatee that may be encountered in the Gulf of Mexico OCS. Vessel crews must report sightings of any injured or dead protected marine mammal species immediately, regardless of whether the injury or death is caused by their vessel, to the Marine Mammal and Sea Turtle Stranding Hotline at (800) 799-6637, or the Marine Mammal Stranding Network at (305) 862-2850. In addition, if the injury or death was caused by a collision with a contract vessel, the MMS must be notified within 24 hours of the strike by email to protectedspecies@mms.gov. If the vessel is the responsible party, it is required to remain available to assist the respective salvage and stranding network as needed.

Oil spills have the potential to cause sublethal oil-related injuries and spill-related deaths to marine mammals. However, it is unlikely that an accidental oil spill would occur from the proposed activities (refer to **Item 5**, Water Quality). Oil spill response activities may increase vessel traffic in the area, which could add to changes in cetacean behavior and/or distribution, thereby causing additional stress to the animals. The effect of oil dispersants on cetaceans is not known. The acute toxicity of oil dispersant chemicals included in Bois d'Arc Offshore Ltd.'s OSRP is considered to be low when compared with the constituents and fractions of crude oils and diesel products. The activities proposed in this plan will be covered by Bois d'Arc Offshore Ltd.'s OSRP (refer to information submitted in accordance with **Appendix F**).

There are no other IPFs (including physical disturbances to the seafloor) from the proposed activities which could impact marine mammals.

8. Sea Turtles

IPFs that could cause impacts to sea turtles as a result of the proposed operations include emissions, effluents, discarded trash and debris, and accidents. GulfCet II studies sighted most loggerhead, Kemp's ridley and leatherback sea turtles over shelf waters. Historically these species have been sighted up to the shelf's edge. They appear to be more abundant east of the Mississippi River than they are west of the river (Fritts et al., 1983b; Lohoefener et al., 1990). Deep waters may be used by all species as a transitory habitat.

Emissions: Noise from drilling activities, support vessels, and helicopters may elicit a startle reaction from sea turtles, but this is a temporary disturbance.

Effluents: Drilling fluids and cuttings discharges are not known to be lethal to sea turtles. Most operational discharges are diluted and dispersed upon release. Any potential impact from drilling fluids would be indirect, either as a result of impacts on prey items or possibly through ingestion in the food chain (API, 1989).

Discarded trash and debris: Both entanglement in, and ingestion of, debris have caused the death or serious injury of sea turtles (Balazs, 1985). The limited amount of marine debris, if any, resulting from the proposed activities is not expected to substantially harm sea turtles. Operators are prohibited from deliberately discharging debris as mandated by MARPOL-Annex V and the Marine Plastic Pollution Research and Control Act, and regulations imposed by various agencies including the United States Coast Guard (USCG) and the Environmental Protection Agency (EPA). Bois d'Arc Offshore Ltd. will operate in accordance with the regulations and also avoid accidental loss of solid waste items by maintaining waste management plans, manifesting trash sent to shore, and using special precautions such as covering outside trash bins to prevent accidental loss of solid waste. Special caution will be exercised when handling and disposing of small items and packaging materials, particularly those made of non-biodegradable, environmentally persistent materials such as plastic or glass.

Informational placards will be posted on all vessels and facilities having sleeping or food preparation capabilities. All offshore personnel, including contractors and other support services-related personnel (e.g. helicopter pilots, vessel captains and boat crews) will be indoctrinated on waste procedures, and will view the video (or Microsoft PowerPoint presentation), "All Washed Up: The Beach Litter Problem". Thereafter, all personnel will view the marine trash and debris training video annually.

Accidents: Collisions between support vessels and sea turtles would be unusual events, however should one occur, death or injury to sea turtles is possible. Contract vessel operators can avoid sea turtles and reduce potential deaths by maintaining a vigilant watch for sea turtles and maintaining a safe distance when they are sighted. Vessel crews should use a reference guide to help identify the five species of sea turtles that may be encountered in the Gulf of Mexico OCS. Vessel crews must report sightings of any injured or dead protected sea turtle species immediately, regardless of whether the injury or death is caused by their vessel, to the Marine Mammal and Sea Turtle Stranding Hotline at (800) 799-6637, or the Marine Mammal Stranding Network at (305) 862-2850. In addition, if the injury or death was caused by a collision with a contract vessel, the MMS must be notified within 24 hours of the strike by email to protectedspecies@mms.gov. If the vessel is the responsible party, it is required to remain available to assist the respective salvage and stranding network as needed.

All sea turtle species and their life stages are vulnerable to the harmful effects of oil through direct contact or by fouling of their food. Exposure to oil can be fatal, particularly to juveniles and hatchlings. However, it is unlikely that an accidental oil spill would occur from the proposed activities (refer to **Item 5**, Water Quality). Oil spill response activities may increase vessel traffic in the area, which could add to the possibility of collisions with sea turtles. The activities proposed in this plan will be covered by Bois d'Arc Offshore Ltd.'s Regional Oil Spill Response Plan (refer to information submitted in accordance with **Appendix F**).

There are no other IPFs (including physical disturbances to the seafloor) from the proposed activities which could impact sea turtles.

9. Air Quality

Vermilion Block 51 and South Marsh Block 220 are located 11.3 miles from shore. Applicable emissions data is included in Appendix G of the Plan.

There would be a limited degree of air quality degradation in the immediate vicinity of the proposed activities. Plan Emissions for the proposed activities do not exceed the annual exemption levels as set forth by MMS. Accidents and blowouts can release hydrocarbons or chemicals, which could cause the emission of air pollutants. However, these releases would not impact onshore air quality because of the prevailing atmospheric conditions, emission height, emission rates, and the distance of Vermilion Block 51 and South Marsh Block 220 from the coastline. There are no other IPFs (including effluents, physical disturbances to the seafloor, wastes sent to shore for treatment or disposal) from the proposed activities which would impact air quality.

10. Shipwreck Sites (known or potential)

IPFs that could impact known or unknown shipwreck sites as a result of the proposed operations in Vermilion Block 51 and South Marsh Block 220 include disturbances to the seafloor. Vermilion Block 51 and South Marsh Block 220 are not located in or adjacent to an OCS block designated by MMS as having a high probability for occurrence of shipwrecks. Bois d'Arc Offshore Ltd. will report to MMS the discovery of any evidence of a shipwreck and make every reasonable effort to preserve and protect that cultural resource. There are no other IPFs (including emissions, effluents, wastes sent to shore for treatment or disposal, or accidents) from the proposed activities which could impact shipwreck sites.

11. Prehistoric Archaeological Sites

IPFs that could cause impacts to prehistoric archaeological sites as a result of the proposed operations in Vermilion Block 51 and South Marsh Block 220 are physical disturbances to the seafloor and accidents (oil spills).

Physical Disturbances to the seafloor: Vermilion Block 51 and South Marsh Block 220 are located inside the Archaeological Prehistoric high probability lines. Bois d'Arc Offshore Ltd. will report to MMS the discovery of any object of prehistoric archaeological significance and make every reasonable effort to preserve and protect that cultural resource.

Accidents: An accidental oil spill has the potential to cause some detrimental effects to prehistoric archaeological sites if the release were to occur subsea. However, it is unlikely that an accidental oil spill would occur from the proposed activities (refer to **Item 5**, Water Quality). The activities proposed in this plan will be covered by Bois d'Arc Offshore Ltd.'s Regional Oil Spill Response Plan (refer to information submitted in accordance with **Appendix F**).

There are no other IPFs (including emissions, effluents, wastes sent to shore for treatment or disposal) from the proposed activities that could cause impacts to prehistoric archaeological sites.

Vicinity of Offshore Location

1. Essential Fish Habitat (EFH)

IPFs that could cause impacts to EFH as a result of the proposed operations in Vermilion Block 51 and South Marsh Block 220 include physical disturbances to the seafloor, effluents and accidents. EFH includes all estuarine and marine waters and substrates in the Gulf of Mexico.

Physical disturbances to the seafloor: The Live Bottom Low Relief Stipulation, the Live Bottom (Pinnacle Trend) Stipulation, and the Eastern Gulf Pinnacle Trend Stipulation would prevent most of the potential impacts on live-bottom communities and EFH from bottom disturbing activities (e.g., anchoring, structure emplacement and removal).

Effluents: The Live Bottom Low Relief Stipulation, the Live Bottom (Pinnacle Trend) Stipulation, and the Eastern Gulf Pinnacle Trend Stipulation would prevent most of the potential impacts on live-bottom communities and EFH from operational waste discharges. Levels of contaminants in drilling muds and cuttings and produced-water discharges, discharge-rate restrictions, and monitoring and toxicity testing are regulated by the EPA NPDES permit, thereby eliminating many significant biological or ecological effects. Operational discharges are not expected to cause significant adverse impacts to EFH.

Accidents: An accidental oil spill has the potential to cause some detrimental effects on EFH. Oil spills that contact coastal bays and estuaries, as well as OCS waters when pelagic eggs and larvae are present, have the greatest potential to affect fisheries. However, it is unlikely that an oil spill would occur from the proposed activities (refer to **Item 5**, Water Quality). The activities proposed in this plan will be covered by Bois d'Arc Offshore Ltd.'s Regional OSRP (refer to information submitted in **Appendix F**).

There are no other IPFs (including emissions, or wastes sent to shore for treatment or disposal) from the proposed activities which could impact essential fish habitat.

2. Marine and Pelagic Birds

IPFs that could impact marine birds as a result of the proposed activities include air emissions, accidental oil spills, and discarded trash and debris from vessels and the facilities.

Emissions: Emissions of pollutants into the atmosphere from these activities are far below concentrations which could harm coastal and marine birds.

Accidents: An oil spill would cause localized, low-level petroleum hydrocarbon contamination. However, it is unlikely that an oil spill would occur from the proposed activities (refer to **Item 5**, Water Quality). Marine and pelagic birds feeding at the spill location may experience chronic, nonfatal, physiological stress. It is expected that few, if any, coastal and marine birds would actually be affected to that extent. The activities proposed in this plan will be covered by Bois d'Arc Offshore Ltd.'s Regional OSRP (refer to information submitted in **Appendix F**).

Discarded trash and debris: Marine and pelagic birds could become entangled and snared in discarded trash and debris, or ingest small plastic debris, which can cause permanent injuries and death. Operators are prohibited from deliberately discharging debris as mandated by MARPOL-Annex V and the Marine Plastic Pollution Research and Control Act, and regulations imposed by various agencies including the United States Coast Guard (USCG) and the Environmental Protection Agency (EPA). Bois d'Arc Offshore Ltd. will operate in accordance with the regulations and also avoid accidental loss of solid waste items by maintaining waste management plans, manifesting trash sent to shore, and using special precautions such as covering outside trash bins to prevent accidental loss of solid waste. Special caution will be exercised when handling and disposing of small items and packaging materials, particularly those made of non-biodegradable, environmentally persistent materials such as plastic or glass. Informational placards will be posted on all vessels and facilities having sleeping or food preparation capabilities. All offshore personnel, including contractors and other support services-related personnel (e.g. helicopter pilots, vessel captains and boat crews) will be indoctrinated on waste procedures, and will view the video (or Microsoft PowerPoint presentation), "All Washed Up: The Beach Litter Problem". Thereafter, all personnel will view the marine trash and debris training video annually. Debris, if any, from these proposed activities will seldom interact with marine and pelagic birds; therefore, the effects will be negligible.

There are no other IPFs (including effluents, physical disturbances to the seafloor, or wastes sent to shore for treatment or disposal) from the proposed activities which could impact marine and pelagic birds.

3. Public Health and Safety Due to Accidents.

There are no IPFs (emissions, effluents, physical disturbances to the seafloor, wastes sent to shore for treatment or disposal or accidents, including an accidental H2S releases) from the proposed activities which could cause impacts to public health and safety. In accordance with 30 CFR 250.417(c) and 2002-G08, sufficient information is included in **Appendix C** to justify our request that our proposed activities be classified by MMS as H2S absent.

Coastal and Onshore

1. Beaches

IPFs from the proposed activities that could cause impacts to beaches include accidents (oil spills) and discarded trash and debris.

Accidents: Oil spills contacting beaches would have impacts on the use of recreational beaches and associated resources. Due to the distance from shore (11.3 miles) and the response capabilities that would be implemented, no significant adverse impacts are expected. The activities proposed in this plan will be covered by Bois d'Arc Offshore Ltd.'s Regional OSRP (refer to information submitted in **Appendix F**).

Discarded trash and debris: Trash on the beach is recognized as a major threat to the enjoyment and use of beaches. There will only be a limited amount of marine debris, if any, resulting from the proposed activities. Operators are prohibited from deliberately discharging debris as mandated by MARPOL-Annex V and the Marine Plastic Pollution Research and Control Act, and regulations imposed by various agencies including the United States Coast Guard (USCG) and the Environmental Protection Agency (EPA). Bois d'Arc Offshore Ltd. will operate in accordance with the regulations and also avoid accidental loss of solid waste items by maintaining waste management plans, manifesting trash sent to shore, and using special precautions such as covering outside trash bins to prevent accidental loss of solid waste. Special caution will be exercised when handling and disposing of small items and packaging materials, particularly those made of non-biodegradable, environmentally persistent materials such as plastic or glass.

Informational placards will be posted on all vessels and facilities having sleeping or food preparation capabilities. All offshore personnel, including contractors and other support services-related personnel (e.g. helicopter pilots, vessel captains and boat crews) will be indoctrinated on waste procedures, and will view the video (or Microsoft PowerPoint presentation), "All Washed Up: The Beach Litter Problem". Thereafter, all personnel will view the marine trash and debris training video annually.

There are no other IPFs (emissions, effluents, physical disturbances to the seafloor, or wastes sent to shore for treatment or disposal) from the proposed activities which could impact beaches.

2. Wetlands

Salt marshes and seagrass beds fringe the coastal areas of the Gulf of Mexico. Due to the distance from shore (11.3 miles), accidents (oil spills) represent an IPF which could impact these resources.

Accidents: Level of impact from an oil spill will depend on oil concentrations contacting vegetation, kind of oil spilled, types of vegetation affected, season of the year, pre-existing stress level of the vegetation, soil types, and numerous other factors. Light-oiling impacts will cause plant die-back with recovery within two growing seasons without artificial replanting. However,

it is unlikely that an oil spill would occur from the proposed activities (refer to **Item 5**, Water quality). If a spill were to occur, response capabilities as outlined in Bois d'Arc Offshore Ltd.'s Regional OSRP (refer to information submitted in Appendix F) would be implemented.

There are no other IPFs (emissions, effluents, physical disturbances to the seafloor, or wastes sent to shore for treatment or disposal) from the proposed activities that could cause impacts to wetlands.

3. Shore Birds and Coastal Nesting Birds

The Paul J. Rainey and Marsh Island WMAs (12 miles from Vermilion Block 51 and South Marsh Block 220) are highly productive habitats for wildlife. Thousands of shore birds use the refuge as a wintering area. Also, wading birds nest on the refuge. The WMAs provide habitat for colonies of nesting wading birds and seabirds as well as wintering shorebirds and waterfowl. The most abundant nesters are brown pelicans, laughing gulls, and royal, Caspian, and sandwich terns. IPFs from the proposed activities that could cause impacts to shore birds and coastal nesting birds are accidents (oil spills) and discarded trash and debris.

Accidents: Oil spills could cause impacts to shore birds and coastal nesting birds. The birds most vulnerable to direct effects of oiling include those species that spend most of their time swimming on and under the sea surface, and often aggregate in dense flocks (Piatt et al., 1990; Vauk et al., 1989). Coastal birds, including shorebirds, waders, marsh birds, and certain water fowl, may be the hardest hit indirectly through destruction of their feeding habitat and/or food source (Hansen, 1981; Vermeer and Vermeer, 1975). Direct oiling of coastal birds and certain seabirds is usually minor; many of these birds are merely stained as a result of their foraging behaviors. Birds can ingest oil when feeding on contaminated food items or drinking contaminated water.

Oil-spill cleanup operations will result in additional disturbance of coastal birds after a spill. However, it is unlikely that an oil spill would occur from the proposed activities (refer to **Item 5**, Water quality). Due to the distance from shore being 11.3 miles, Bois d'Arc Offshore Ltd. would immediately implement the response capabilities outlined in their Regional OSRP (refer to information submitted in **Appendix F**).

Discarded trash and debris: Coastal and marine birds are highly susceptible to entanglement in floating, submerged, and beached marine debris: specifically plastics. Operators are prohibited from deliberately discharging debris as mandated by MARPOL-Annex V and the Marine Plastic Pollution Research and Control Act, and regulations imposed by various agencies including the United States Coast Guard (USCG) and the Environmental Protection Agency (EPA). Bois d'Arc Offshore Ltd. will operate in accordance with the regulations and also avoid accidental loss of solid waste items by maintaining waste management plans, manifesting trash sent to shore, and using special precautions such as covering outside trash bins to prevent accidental loss of solid waste. Special caution will be exercised when handling and disposing of small items and packaging materials, particularly those made of non-biodegradable, environmentally persistent materials such as plastic or glass.

Informational placards will be posted on vessels and every facility that has sleeping or food preparation capabilities. All offshore personnel, including contractors and other support services-related personnel (e.g. helicopter pilots, vessel captains and boat crews) will be indoctrinated on waste procedures, and will view the video (or Microsoft PowerPoint presentation), "All Washed Up: The Beach Litter Problem". Thereafter, all personnel will view the marine trash and debris training video annually.

There are no other IPFs (emissions, effluents, physical disturbances to the seafloor, or wastes sent to shore for treatment or disposal) from the proposed activities that could cause impacts to shore birds and coastal nesting birds.

4. Coastal Wildlife Refuges

Accidents: Vermilion Block 51 and South Marsh Block 220 are approximately 12 miles from the Paul J. Rainey and Marsh Island WMAs. Management goals of the WMAs are waterfowl habitat management, marsh restoration, providing sanctuary for nesting and wintering seabirds, and providing sandy beach habitat for a variety of wildlife species. IPFs from the proposed activities that could cause impacts to this coastal wildlife refuge are accidents (oil spills) and discarded trash and debris.

Impacts to shore birds and coastal nesting birds and to the beach, was covered in previous sections. Other wildlife species found on the refuges include nutria, rabbits, raccoons, alligators, and loggerhead turtles. Impacts to loggerhead turtles were also covered under a previous section.

It is unlikely that an oil spill would occur from the proposed activities (refer to **Item 5**, Water quality). Response capabilities would be implemented, no impacts are expected. The activities proposed in this plan will be covered by Bois d'Arc Offshore Ltd.'s Regional OSRP (refer to information submitted in **Appendix F**).

There are no other IPFs (emissions, effluents, physical disturbances to the seafloor, or wastes sent to shore for treatment or disposal) from the proposed activities that could cause impacts to coastal wildlife refuges.

5. Wilderness Areas

An accidental oil spill from the proposed activities could cause impacts to wilderness areas. However, it is unlikely that an oil spill would occur from the proposed activities (refer to **Item 5**, Water Quality). Due to the distance from the nearest designated wilderness area (> 100 miles) and the response capabilities that would be implemented, no significant adverse impacts are expected. The activities proposed in this plan will be covered by Bois d'Arc Offshore Ltd.'s Regional OSRP (refer to information submitted in **Appendix F).**

6. Other Environmental Resources Identified

None

(C) Impacts on your proposed activities.

The site–specific environmental conditions have been taken into account for the proposed activities. No impacts are expected on the proposed activities from site-specific environmental conditions.

(D) Alternatives

No alternatives to the proposed activities were considered to reduce environmental impacts.

(E) Mitigation Measures

No mitigation measures other than those required by regulation will be employed to avoid, diminish, or eliminate potential impacts on environmental resources.

(F) Consultation

No agencies or persons were consulted regarding potential impacts associated with the proposed activities. Therefore, a list of such entities has not been provided.

(G) References

Authors:

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Although not cited, the following were utilized in preparing this EIA:

- Hazard Surveys
- MMS EIS's:
  - GOM Deepwater Operations and Activities. Environmental Assessment. MMS 2000-001
  - GOM Central and Western Planning Areas Sales 166 and 168 Final Environmental Impact Statement. MMS 96-0058

APPENDIX I
COASTAL MANAGEMENT CONSISTENCY INFORMATION

Relevant enforceable policies were considered in certifying consistency for Louisiana. A certificate of Coastal Management Consistency for the State of Louisiana is enclosed as ***Attachment I-1***.

COASTAL ZONE MANAGEMENT
CONSISTENCY CERTIFICATION
JOINT INITIAL
DEVELOPMENT OPERATIONS COORDINATION DOCUMENT
VERMILION BLOCK 51/SOUTH MARSH ISLAND BLOCK 220
OCS-G 22605/22648

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

Bois d'Arc Offshore Ltd.

Lessee or Operator

Wayne L Laufer
Certifying Official

08/03/04
Date

PLAN INFORMATION FORM

GENERAL INFORMATION

Type of OCS Plan:		Exploration Plan (EP)	X	Development Operations Coordination Document (DOCD)
Company Name:	Bois d'Arc Offshore Ltd.			MMS Operator Number: 02268
Address:	600 Travis Street Suite 6275 Houston, TX	Contact Person:	Valerie Land	
		Phone Number:	(281) 578-3388	
		Email Address:	Valerie.land@jccteam.com	

Lease: G22605/22648	Area: VR/SM	Block: 51/220	Project Name (If Applicable): NA
Objective(s): ☐ Oil ☒ Gas ☐ Sulphur ☐ Salt	Onshore Base: Dulac, La	Distance to Closest Land (Miles): 11.3	

Description of Proposed Activities (Mark all that apply)

☐ Exploration drilling	☐ Development drilling
☐ Well completion	☒ Installation of production platform
☐ Well test flaring	☒ Installation of production facilities
☐ Installation of well protection structure	☐ Installation of satellite structure
☐ Installation of subsea wellheads and/or manifolds	☒ Installation of lease term pipelines
☐ Temporary well abandonment	☒ Commence production
☐ Other (specify and describe)	

Do you propose to use new or unusual technology to conduct your activities?		Yes	X	No		
Do you propose any facility that will serve as a host facility for deepwater subsea development?		Yes	X	No		
Do you propose any activities that may disturb an MMS-designated high-probability archaeological area?	X	Yes		No		

Tentative Schedule of Proposed Activities

Proposed Activity	Start Date	End Date	No. of Days
Install Platform "A" in Vermilion 51	10/04/04	10/10/04	7
Install Lease Term Pipeline in Vermilion 51 and South Marsh Island Block 220	10/11/04	10/25/04	15
Commence Production from Wells A-1 thru A-4	10/26/04		

Description of Drilling Rig		*Description of Production Platform	
☐ Jackup	☐ Drillship	☐ Caisson	☐ Tension leg platform
☐ Gorilla Jackup	☐ Platform rig	☐ Well protector	☐ Compliant tower
☐ Semisubmersible	☐ Submersible	☒ Fixed platform	☐ Guyed tower
☐ DP Semisubmersible	☐ Other (Attach Description)	☐ Subsea manifold	☐ Floating production system
☐ Drilling Rig Name (If Known):		☐ Spar	☐ Other (Attach description)

Description of Lease Term Pipelines

From (Facility/Area/Block)	T0 (Facility/Area/Block)	Diameter (inches)	Length (Feet)	Product
VR51, "A"	SM220, SSTI	8"	5585'	Gas/Condensate