In Reply Refer To: MS 5231

January 12, 1996

Apache Corporation
Attention: Mr. Richard Daab
2000 Post Oak Boulevard, Suite 100
Houston, Texas 77056-4400

Gentlemen:

Reference is made to the following plan received December 13, 1995:

Type Plan - Initial Plan of Exploration
Leases - OCS-G 12965, 15318, and 15320
Blocks - 144, 102, and 109
Area - South Timbalier
Activities Proposed - Wells A through I in Blks. 102,109, and 144

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

Your control number is N-5261 and should be referenced in your communication and correspondence concerning this plan.

Sincerely,

Donald C. Howard
Regional Supervisor
Field Operations

bcc: Lease OCS-G 12965 POD File (MS 5032)
Lease OCS-G 15318 POD File (MS 5032)
Lease OCS-G 15320 POD File (MS 5032)
MS 5034 w/public info. copy of the plan
and accomp. info.

AGobert:cic:01/16/96:POECOM

apache CORPORATION

2000 POST OAK BOULEVARD / SUITE 100 / HOUSTON, TEXAS 77056-4400

(713) 296-6000

December 12, 1995

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

RE: Joint Initial Plan of Exploration
South Timbalier Blocks 102/109/144, Leases OCS-G 15318/15320/12965
OCS Federal Waters, Gulf of Mexico, Offshore, LA

Gentlemen:

In accordance with the provisions of Title 30 CFR 250.33, Apache Corporation hereby submits for your review and approval nine (9) copies of an Joint Initial Plan of Exploration for Leases OCS-G 15318/15320/12965, South Timbalier Blocks 102/109/144, Offshore, Louisiana. Five (5) copies are "Proprietary Information" and four (4) copies are "Public Information".

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

Apache Corporation anticipates activities will commence under this proposed Joint Initial Plan of Exploration on approximately February 1, 1996.

Should additional information be required, please contact Apache Corporation's regulatory agent, Sharon L. Perez, J. Connor Consulting, Inc., at (713) 578-3388.

Sincerely,

APACHE CORPORATION

"Public Information"

Richard C. Daab/sp

Richard C. Daab
Senior Drilling Engineer

RCD:CJG:cag
Enclosures

APACHE CORPORATION

JOINT INITIAL PLAN OF EXPLORATION

LEASES OCS-G 15218/15320/12965

SOUTH TIMBALIER BLOCKS 102/109/144

Apache Corporation, as designated operator of the subject oil and gas leases, hereby submits this proposed Joint Initial Plan of Exploration in accordance with the regulations contained in Title 30 CFR 250.33 and more specifically defined in the Minerals Management Service Letters to Lessees and Operators dated October 12, 1988 and September 5, 1989.

HISTORY OF LEASES

Lease OCS-G 15318 was acquired by Apache Corporation at the Central Gulf of Mexico Lease Sale 152 held on May 10, 1995. The effective date for the subject oil and gas lease is July 1, 1995 with a primary term ending date of June 30, 1999.

Lease OCS-G 15320 was acquired by Apache Corporation at the Central Gulf of Mexico Lease Sale 152 held on May 10, 1995. The effective date for the subject oil and gas lease is July 1, 1995 with a primary term ending date of June 30, 1999.

Lease OCS-G 12965 was acquired by Hall-Houston Oil Company at Central Gulf of Mexico Lease Sale 131 held on March 27, 1991. Apache Corporation has become designated operator. The effective date for the subject oil and gas lease is May 1, 1991 with a primary term ending date was April 30, 1995. The lease is being beld by ongoing operations.

In accordance with Letter to Lessees and Operators (LTL) dated November 5, 1993 which amends Title 30 CFR Part 256 surety bond requirements applicable to OCS lessees and operators, Apache Corporation has submitted a $3,000,000 areawide development bond to meet the criteria.

SCHEDULE OF OPERATIONS

Under this Joint Initial Plan of Exploration, Apache Corporation proposes the drilling, completion and testing of nine (9) exploratory wells with four (4) common surface locations, two (2) being located in Block 102 and two (2) in Block 144. Planned commencement date is approximately February 1, 1996, subject to the approval of this Joint Initial Plan of Exploration and issuance of the required Permits to Drill.

It should be emphasized that this schedule is tentative in the meaning of Title 30 CFR 250.33-1. Additional exploratory drilling must be predicated upon the need to further define the structures and/or reservoir limitations.

In addition to the drilling of the subject wells, other activities which may be conducted under this Plan are the setting of well protector type structures, seafloor templates, velocity surveys in wellbores, and the collection of soil borings.

DESCRIPTION OF DRILLING UNIT

Offshore exploratory activities are carried out from mobile drilling rigs. The five most common types of mobile rigs employed for exploratory drilling offshore are submersible drilling rigs, semi-submersible drilling rigs, jack-up drilling rigs, drillships, and drill barges.

The proposed wells will be drilled and completed with a typical jack-up drilling rig. When a rig is selected, the rig specifications will be made a part of the Applications for Permit to Drill. Typical Diverter and BOP Schematics are included as Attachment A.

Safety features will include well control and blowout prevention equipment as described in Title 30 CFR 250.50. The appropriate life rafts, life jackets, ring buoys, etc., as prescribed by the U. S. Coast Guard will be maintained on the facility at all times.

WELL LOCATIONS

The approximate location of the proposed wells in this Joint Initial Plan of Exploration are shown on the Well Location Table and accompanying Location Plat included as Attachment B.

STRUCTURE MAP

A current structure map drawn to the top of the prospective hydrocarbon accumulation showing the surface and bottom hole locations of the proposed wells is included as Attachment C.

BATHYMETRY MAP

Water depths in South Timbalier Blocks 102/109/144 ranges from approximately 62 feet in Block 102 to 82 feet in Block 144. The seafloor slopes to the south.

A bathymetry map showing the proposed surface locations of the subject wells is included as Attachment D.

SHALLOW HAZARDS

KC Offshore, Inc. (Lease OCS-G 15318) and John E. Chance & Associates (Lease OCS-G 12965) conducted geophysical surveys for South Timbalier Blocks 102 and 144. The purpose of the surveys was to evaluate geologic conditions and inspect for potential hazards or constraints to lease development.

A shallow hazards analysis was prepared and submitted for the proposed surface locations in South Timbalier Blocks 102 and 144, evaluating any seafloor and subsurface geologic and manmade features and conditions is included at Attachment E.

OIL SPILL CONTINGENCY PLAN

All drilling and completion operations shall be performed in accordance with industry standards to prevent pollution of the environment. The Oil Spill Contingency Plan is being reviewed by MMS. This plan designates an Oil Spill Response Team consisting of the Apache Corporation's personnel and contract personnel. This team's duties are to eliminate the source of any spill, remove all sources of possible ignition, deploy the most reliable means of available transportation to monitor the movement of a slick, and contain and remove the slick if possible.

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

Apache Corporation is a member of Clean Gulf Associates (CGA). The CGA stores pollution control equipment at two locations in Texas, at Port Aransas and Galveston; five locations in Louisiana, at Venice, Grand Isle, Intracoastal City, Houma and Cameron and one location in Alabama, at Theodore.

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

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

In good weather conditions fast response with oil boom, skimmers, pump and storage tanks would require approximately 9 to 11 hours, including preparation time as indicated below. A heavy equipment system response would require approximately 24-36 hours, including 6 hours preparation time.

		Hours
1.	Procurement of marine vessel capable of transporting oil spill containment equipment and deployment to nearest CGA Base in Grand Isle, LA	2.0
2.	Travel time to Lease Site (Inland Water Tavel - 2 miles @ 6 MPH) (Open Water Travel - 38 miles @ 10 MPH)	.5 4.0
3.	Load Out Fast Response Unit	1.5
4.	Deployment Time	1.0
	Estimated Total Time	9.0

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

In the event a spill occurs from the proposed surface locations in South Timbalier Blocks 102 and 144, our company has projected trajectory of a spill has been prepared utilizing information in the Environmental Impact Statement (EIS) for OCS Lease Sales 142 and 143.

The EIS contains oil spill trajectory simulations using seasonal surface current coupled with wind data, these adjusted every three hours for 30 days or until a target is contacted.

Hypothetical spill trajectories were simulated for each of the potential launch sites across the entire Gulf. These simulations presume 500 spills occurring in each of the four seasons of the year. The results in the EIS were presented as probabilities that an oil spill beginning from a particular launch site would contact a certain land segment within 3, 10 or 30 days.

Utilizing the summary of the trajectory analysis (for 10 days), the probability of a oil spill impacting a land fall is as follows:

Area/Block	Landfall Segment	%	CGA Map No.
South Timbalier Blocks102/109/144	Terrebonne, LA	3%	Map No. 6
	Lafourche, LA	5%	Map No. 6
	Jefferson, LA	1%	Map No. 6 & 7

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

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

NEW OR UNUSUAL TECHNOLOGY

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

LEASE STIPULATIONS

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

Lease Stipulation No. 1 attached to the subject lease instrument requires preparation of a Cultural Resources Report assessing the potential existence of any cultural resources.

This stipulation provides protection of prehistoric and historic archaeological resources by requiring remote sensing surveys in areas designated to have a high probability for archaeological resources and by requiring protection of archaeological resources discovered outside of the designated high probability zones.

A Cultural Resources Report assessing the existence of any cultural resources in South Timbalier Blocks 102 and 144 is being submitted under separate cover.

DISCHARGES

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

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

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

EPA's Western Gulf of Mexico NPDES General Permit GMG290000 addresses the discharge limitations and testing protocol for drilling fluids, cuttings and associated wastes.

Discharges will contain no free oil and will be in compliance with and monitored as required by the permit. Any drilling fluid contaminated with oil will be transported to shore for proper disposal at an authorized disposal site.

Solid domestic wastes will be transported to shore for proper disposal at an authorized disposal site, and sewage will be treated on 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 which may be used in the drilling of the proposed wells are included as Attachment F.

The anticipated discharges associated with Apache Corporation's operations in South Timbalier Blocks 102/109/144 is included as Attachment G.

HYDROGEN SULFIDE

In accordance with Title 30 CFR 250.67, Apache Corporation requests that South Timbalier Blocks 102/109/144 be classified by the Minerals Management Service as an area where the absence of hydrogen sulfide has been confirmed.

PROJECTED EMISSIONS

Offshore air emissions related to the proposed activities result from 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 as oil spills or blowouts.

Primary air pollutants associated with OCS activities are nitrogen oxides, carbon monoxide, sulphur oxides, volatile organic compound, and suspended particulate.

Projected Air Quality Emissions included as Attachment H, addresses the drilling, completion and testing of the proposed nine (9) wells.

ENVIRONMENTAL REPORT

An Environmental Report is included as Attachment I.

COASTAL ZONE CONSISTENCY CERTIFICATION

Issues identified in the Louisiana Coastal Zone Management Programs include the following: general coastal use guidelines, 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.

Certifications of Coastal Zone Management Consistency for Louisiana State is included as Attachments J. A copy of the Public Notice request for publication in the Louisiana Baton Rouge State Times is included as Attachment K, as well as the appropriate Parish Journal being included as Attachment L.

ONSHORE SUPPORT BASE

South Timbalier Blocks 102/109/144 is located approximately 26 miles from the nearest Louisiana shoreline and 36 miles from onshore support base located in Fourchon, Louisiana. Waters depths in South Timbalier Blocks 102/109/144 ranges from approximately 62 feet in Block 102 to 82 feet in Block 144. A Vicinity Plat showing the location of South Timbalier Blocks 102/109/144 relative to the shoreline and onshore base is included as Attachment M.

Apache Corporation will utilize onshore facilities located in Fourchon, Louisiana. This will serve as port of debarkation for supplies and crews. No onshore expansion or construction is anticipated with respect to the proposed activities.

This base is capable of providing the services necessary for the proposed activities. It has 24-hour service, a radio tower with a phone patch, dock space, equipment and supply storage base, drinking and drill water, etc. Support vessels and travel frequency during drilling and completion activities are as follows:

DRILLING AND COMPLETION OPERATIONS

Crew Boat	10 Trips Per Week
Supply Boat	4 Trips Per Week
Helicopter	1 Trip Per Week

AUTHORIZED REPRESENTATIVE

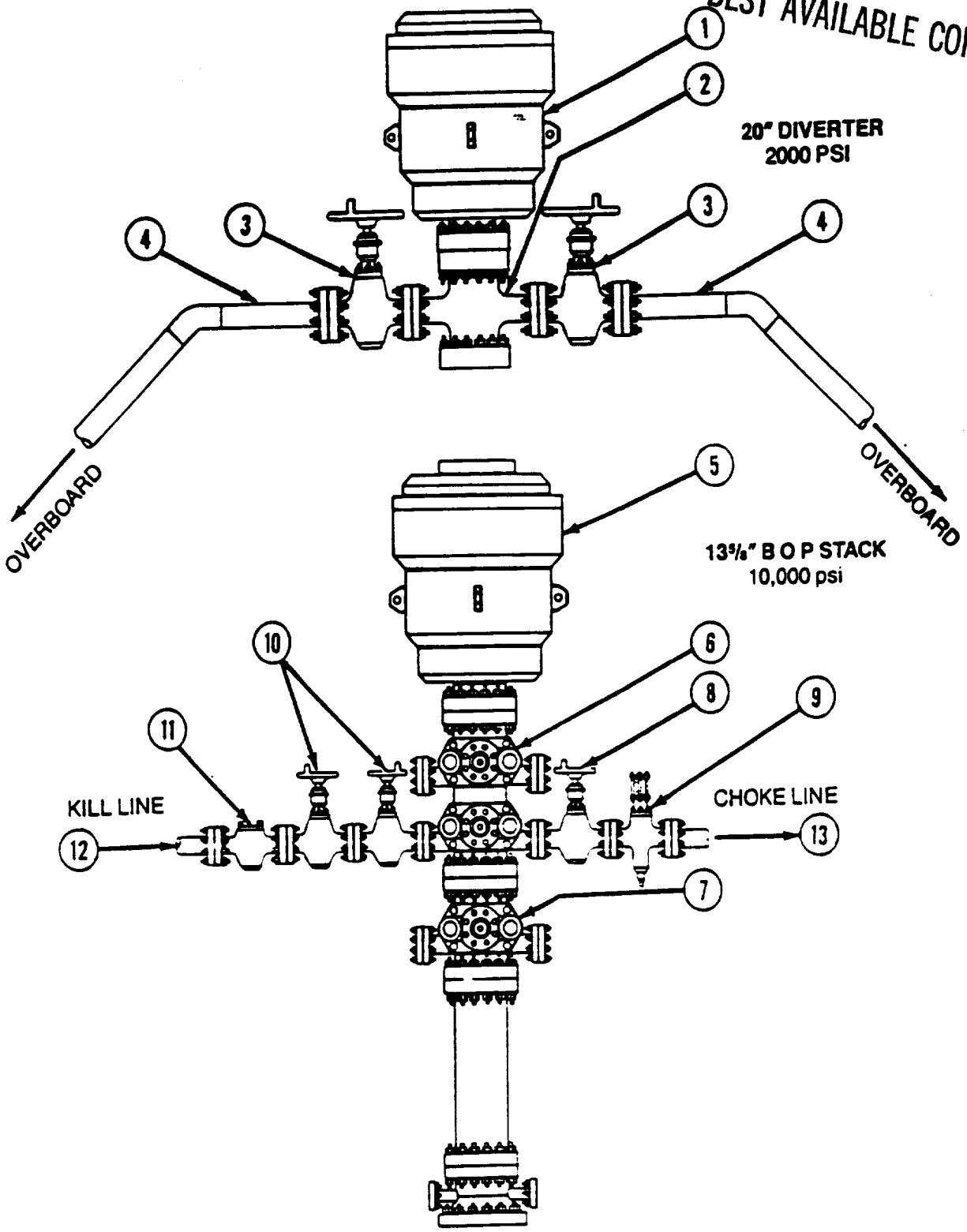
Inquiries may be made to the following authorized representative:

Sharon L. Perez
J. Connor Consulting, Inc.
P. O. Box 219217
Houston, Texas 77218
(713) 578-3388

LIST OF ATTACHMENTS

A Typical Diverter and Blowout Preventer Schematic
B Well Location Table and Plat
C Structure Map
D Bathymetry Map
E Shallow Hazards Statement
F Typical Mud Components
G Quantities and Rates of Discharges
H Projected Air Emissions
I Environmental Report
J Coastal Zone Consistency Certification - Louisiana
K Public Notice Request - State Times
L Public Notice Request - Parish Journal
M Vicinity Map

BLOWOUT PREVENTER STACK
WITH A
HYDRIL DIVERTER



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

20" HYDRIL DIVERTER 2000 psi

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

BLOWOUT PREVENTER STACK

13⅝' 10,000 psi

ITEM	DESCRIPTION
5	13⅝" HYDRIL ANNULAR BOP 5000 psi Type GK H25 Trimmed
6	13⅝" CAMERON DOUBLE BOP 10,000 psi WP H_2S Trimmed
7	13⅝" CAMERON SINGLE BOP 10,000 psi WP H_2S Trimmed
8	4 1/16" MANUAL GATE VALVE Cameron Type "F" H_2S
9	2 1/16" REMOTE HYDRAULIC VALVE Cameron Type "F" 10,000 psi H_2S
10	2 1/16" MANUAL GATE VALVE Cameron Type "F" 10,000 psi H_2S
11	2 1/16" CHECK VALVE Cameron Type "R" 10,000 psi H_2S
12	3" 10,000 psi KILL LINE from Choke Manifold
13	3" 10,000 psi CHOKE LINE from choke Manifold

ATTACHMENT A-1

6" LINE

ROWAN COMPANIES, INC

APACHE CORPORATION

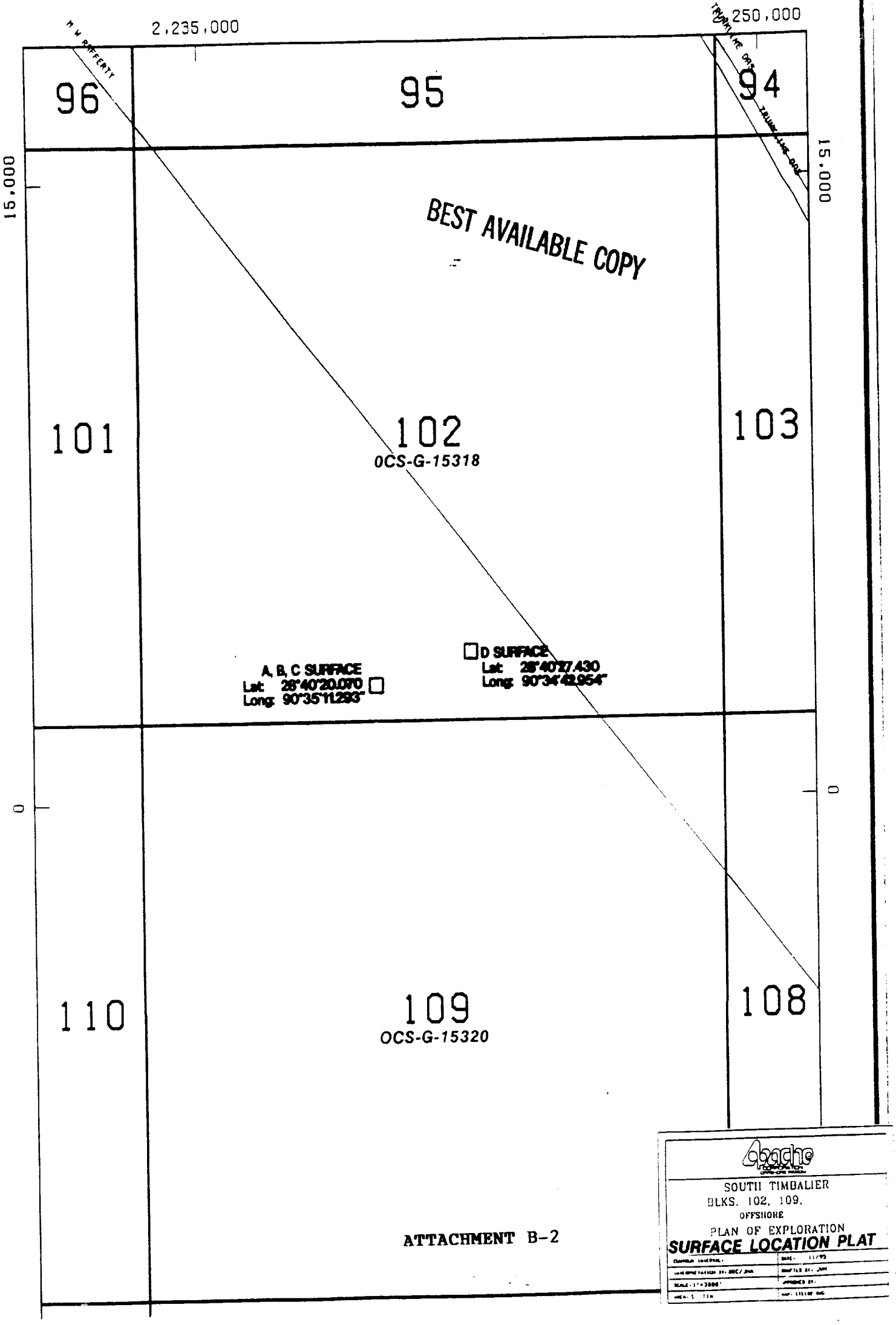
JOINT INITIAL PLAN OF EXPLORATION

LEASES OCS-G 15218/15320/12965

SOUTH TIMBALIER BLOCKS 102/109/144

WELL LOCATION TABLE

WELL	LOCATION	TOTAL DEPTH	WATER DEPTH	TOTAL DAYS
BLOCK 102				
A	PSL: 870' FSL & 6310' FWL(Blk 102)		62'	20
B	PSL: 870' FSL & 6310' FWL (Blk 102)		62'	34
C	PSL: 870' FSL & 6319' FWL (Blk 102)		62'	32
D	PSL: 1630' FSL & 6770' FEL (Blk 102)		62'	20
BLOCK 144				
E	PSL: 250' FNL & 6800' FEL (Blk 144)		67'	19
F	PSL: 250' FSL & 6800' FEL (Blk 144)		67'	34
G	PSL: 250' FNL & 6800' FEL (Blk 144)		67'	34
H	PSL: 2700' FNL & 6280' FWL (Blk 144)		82'	35
I	PSL: 2700' FSL & 6280' FWL (Blk 144)		82'	35



ATTACHMENT B-2

Apache

SOUTH TIMBALIER
BLKS. 102, 109,
OFFSHORE
PLAN OF EXPLORATION
SURFACE LOCATION PLAT

101

IN 100.0%

G-G-12964

NEWFIELD

$1.33

PRT

6/1999

IELD 100.0%

102

*APACHE 100.0%

OCS-G-15318

APACHE

$0.63

PRT

*APACHE 100.0%

M

*MURI

+AS

110

109

MURPHY OIL

13450

BEST AVAILABLE COPY

-G-14524

OCS-G-15320

OC

APACHE

$1.40

HBP

1/1990

RON 100.0%

APACHE

E, F, G SURFACE
Lat: 28°37'50.820"
Long: 90°34'44.461"

4/1996

*APACHE 50.0%

EDISTO 50.0%

SOUTHERN

*VAS

43

144

APACHE COR

OCS-G-6767

H & I SURFACE
Lat: 28°36'01.784"
Long: 90°35'13.537"

OCS-G-12965

HALL-HOUSTON OIL

7070' TVD
-8915

4147' TVD
4832

4480' TVD
8000

4193' TVD
7440

7082' TVD

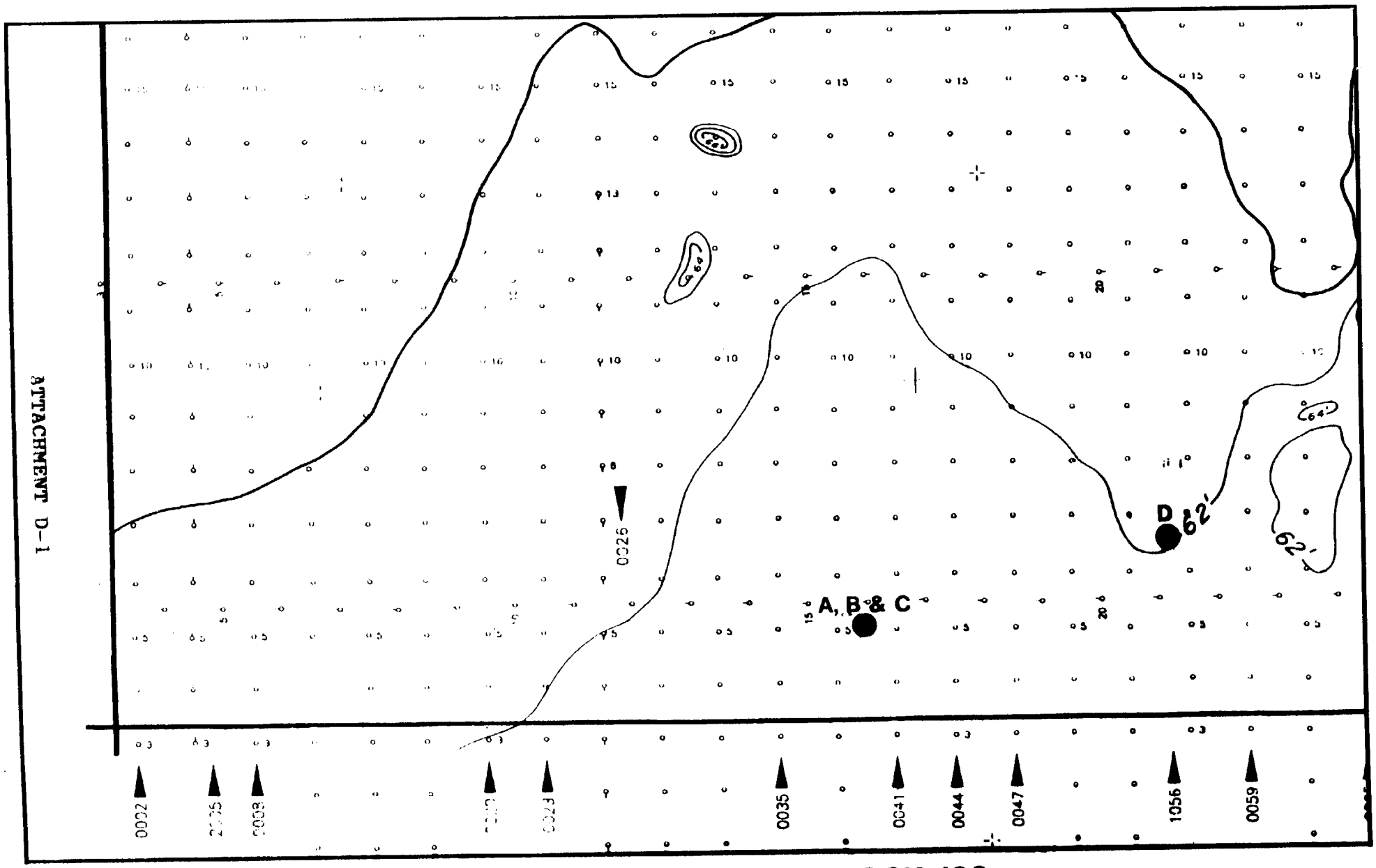
5109' TVD
7926

3835' TVD
4480

Apache

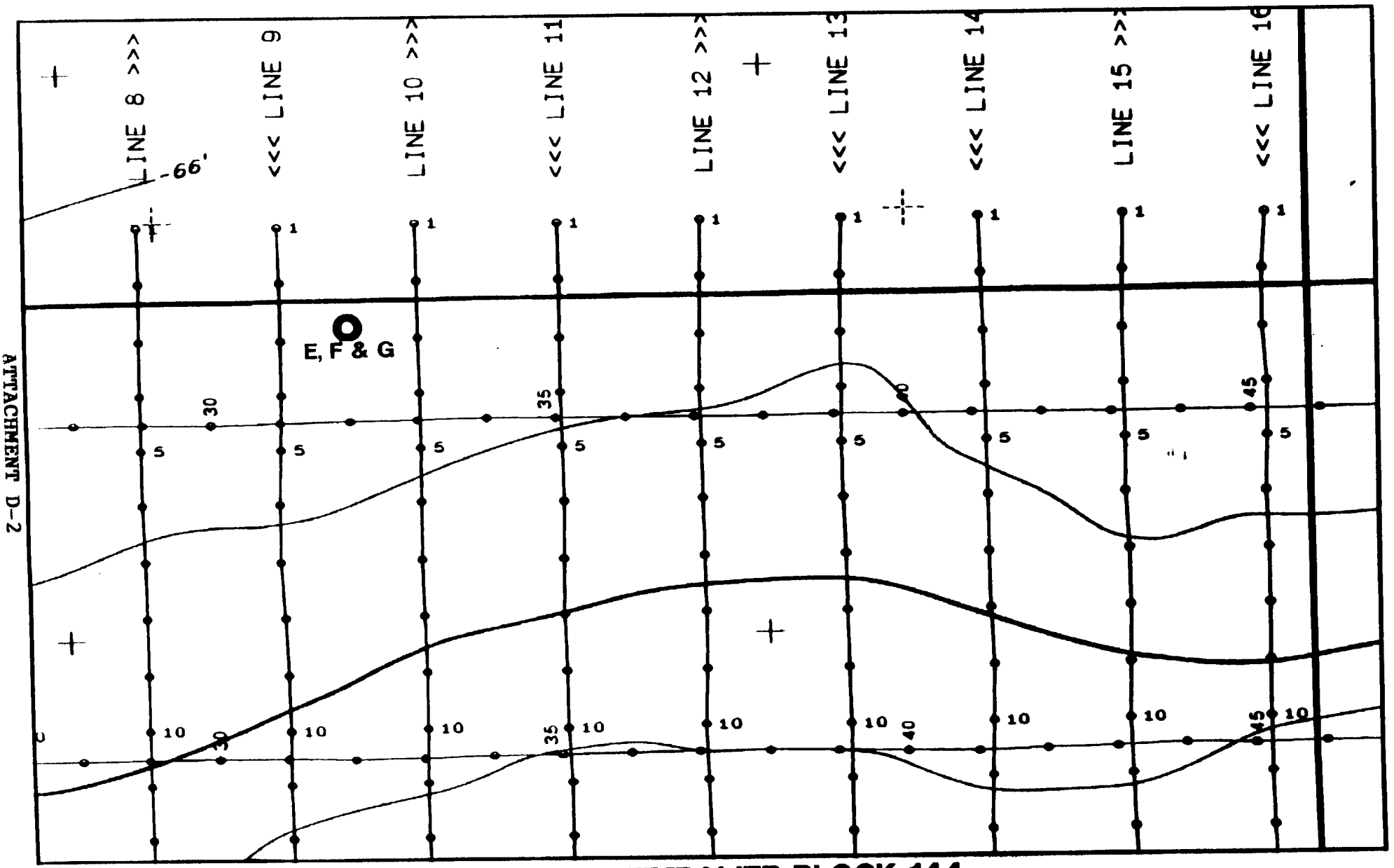
SOUTH TIMBALIER
BLKS. 109, & 144
OFFSHORE TEXAS
PLAN OF EXPLORATION
SURFACE LOC. PLAT

ATTACHMENT B-3



SOUTH TIMBALIER BLOCK 102

Figure 1 Bathymetry Map



ATTACHMENT D-2

Figure 1 Bathymetry Map

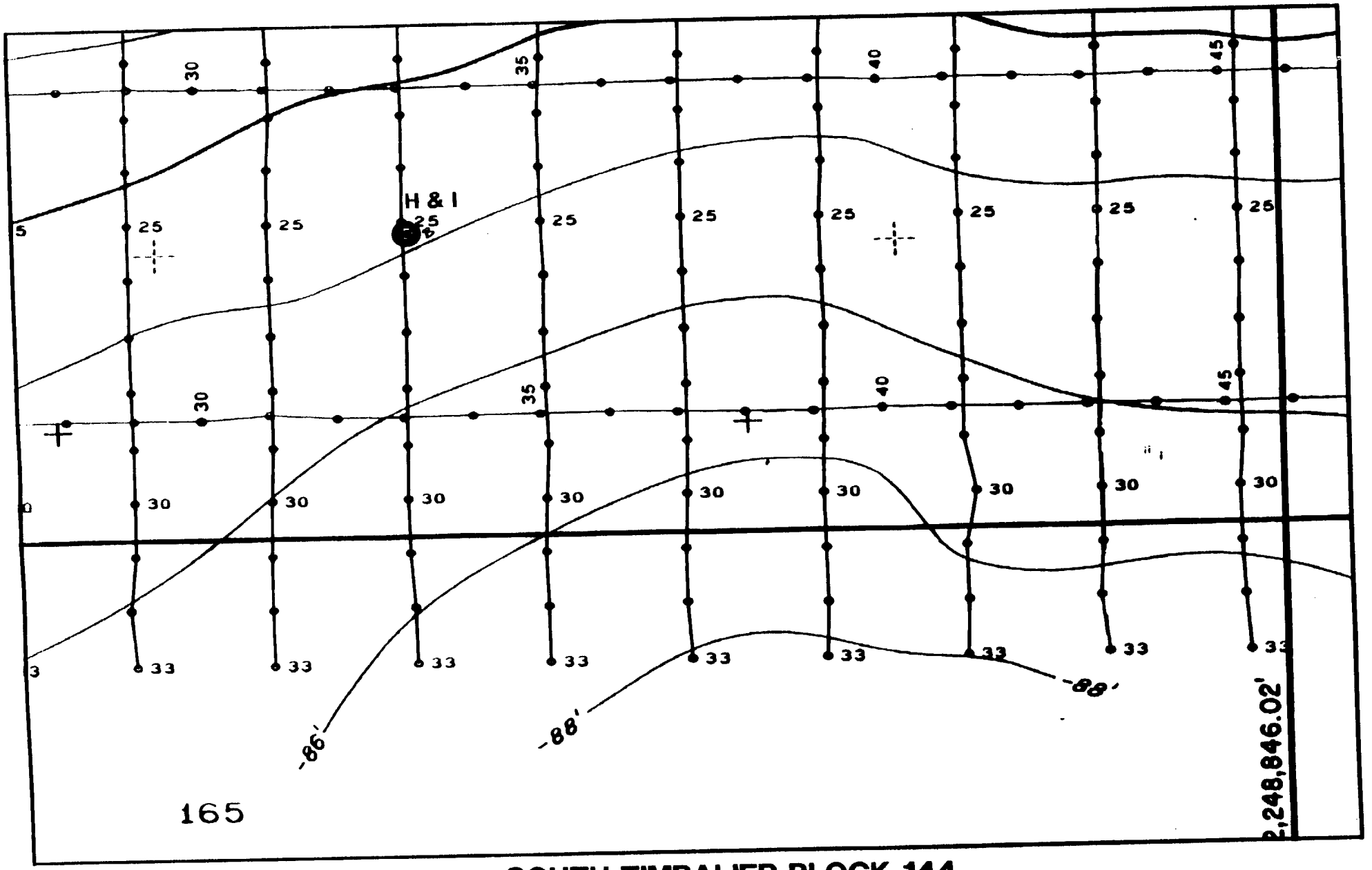


Figure 2 Bathymetry Map

DRILLING FLUID ADDITIVES
PRODUCT CROSS REFERENCE

MIL-X			
BARITE			
MIL-BAR	BAROID	M-I BAR	API barite, 4.2 specific gravity
DENSIMIX	BARODENSE	FER-OX	Macaceous hematite
W.O. 30	BARACARB	LO-WATE	Calcium carbonate
BENTONITE			
MILGEL	AQUAGEL	M-I GEL	API-grade Wyoming bentonite
MILGEL NT	AQUAGEL GOLD SEAL		Untreated Wyoming bentonite
SALTWATER GEL	ZEOGEL	SALT GEL	API-grade attapulgite
SUPER-COL	QUIK-GEL	KWIK-THIK	High-yield bentonite, treated
NEW-VIS			Organic polymer blend
XCD POLYMER	XCD POLYMER	XCD POLYMER	XC Dispersable
MIL-BEN	SHUR-GEL		Bentonite-OCMA Spec. DFCP4
DEFLOCCULANTS			
MIL-TEMP	THERMA-THIN DP	MELANEX-T	High-temperature deflocculant
NEW-THIN	THERMA-THIN	TACKLE (Liquid)	Polymeric deflocculant
UNI-CAL	Q-BROXIN	SPERSENE	Chrome lignosulfonate
UNI-CAL CF	Q-B II	SPERSENE CF	Chrome-free lignosulfonate
MIL-KEM	LIGNOX	RD 2000	Lime mud thinner
SAPP	SAPP	SAPP	Sodium acid pyrophosphate
OILFOS	BARAFOS	PHOS	Sodium tetraphosphate
MIL-THIN	THERMA-THIN	THIN X (Liquid)	Anionic copolymer thinner
FILTRATE REDUCERS			
BIO-LOSE			Modified polysaccharide
CHEMTROL X	DURENEX	RESINEX	Polymer blend, high-temperature
FILTREX	BARANEX	RESINEX	Polyanionic lignin resin
LIGCO	CARBONOX	TANNATHIN	Lignite
LIGCON	CC-16	CAUSTILIG	Causticized lignite
MILSTARCH	IMPERMEX	MY-LO-GEL	Pregelatinized starch
NEW-TROL	POLYAC	SP-101	Sodium polyacrylate
PERMA-LOSE HT	DEXTRID	POLY-SAL	Nonfermenting starch, high-temp.
PYRO-TROL	THERMA-CHEK	POLY RX	Polymeric, high-temperature
KEM-SEAL	THERMA-CHEK		Copolymer, high-temperature
MIL-PAC	PAC R	POLYPAC	Polyanionic cellulose
MIL-PAC LV	PAC L	POLYPAC	Low-viscosity polyanionic cellulose
MILPARK CMC HV	CELLEX (High Vis)	CMC HV	Sodium carboxymethycellulose
MILPARK CMC LV	CELLEX	CMC LV	Sodium carboxymethycellulose
CORROSION CONTROL CHEMICALS			
MIL-GARD	NO-SULF	SULF-X	Basic zinc carbonate
MIL-GARD R	BARASCAV-L	SULF-X ES	Chelated zinc
NOXYGEN	COAT-888	OXYGEN	Oxygen scavenger
	BARACOR 113	SCAVENGER	
SCALE-BAN	SURFLO-H35	SI-1000	Scale inhibitor
	BARACOR 129		
AMI-TEC	BARA FILM	CONQOR 202	Film-forming amine
	BARACOR 300	CONQOR 101	
	COAT-B1400	CONQOR 303	
	COAT-C1815		
CARBO-DRILL OIL MUD ADDITIVES			
CARBO-MUL	INVERMUL NT	VERSAWET	Emulsifier (and wetting agent)
	VERSACOAT		primarily
CARBO-MUL HT	EZ MUL NT		High-temperature emulsifier and wetting agent
CARBO-TEC	INVERMUL	VERSAMUL	Emulsifier
CARBO-GEL	GELTONE II	VERSAGEL	Organophilic clay nectonte
CARBO-VIS	GELTONE II	VERSAMOD	Organcphilic clay
CARBO-TROL		VERSATROL	Filtration control agent
CARBO-TROL A-9	DURATONE HT	VERSALIG	Nonasphaltic filtration control, high-temperature
SURF-COTE	DRILTREAT	VERSAWET	Oil wetting agent for oil muds
	or OMC		
CARBO-MIX	DRILTREAT		Nonionic emulsifier, high-activity
CARBO-TEC HW			HW oil mud emulsifier

ATTACHMENT F

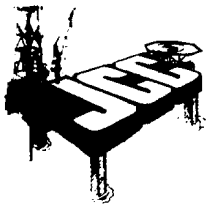
DRILLING FLUID ADDITIVES
PRODUCT CROSS REFERENCE

[illegible]	BAR	M-I	DESCRIPTION
SHALE CONTROL ADDITIVES			
ALPLEX			Aluminum complex
BIO-DRILL 1402			Oil mud alternative
NEW-DRILL	EZ MUD	POLY-PLUS	PHPA liquid
NEW-DRILL HP			Powdered PHPA
NEW-DRILL PLUS	EZ MUD DP		Powdered PHPA
SHALE-BOND	SHALE-BAN	HOLECOAT	Resinous shale stabilizer
PROTECTOMAGIC			Oil-soluble blown asphalt
PROTECTOMAGIC M	AK-70	STABIL-HOLE	Water-dispersants. Blown asphalt
SPOTTING FLUIDS			
BLACK MAGIC			Oil-base spotting fluid
BLACK MAGIC LT	EX SPOT		Low toxicity oil-base spotting fluid
BLACK MAGIC SFT		OIL-FAZE	Oil-base spotting fluid concentrate
MIL-FREE	SCOT-FREE/ ENVIRO-SPOT	PIPE-LAX	Liquid spotting fluid
BIO-SPOT	ENVIRO-SPOT		Nontoxic water-base spotting fluid
BIO-SPOT II			Nontoxic water-base spotting fluid
MIL-SPOT 2	SCOT-FREE	PIPE-LAX W	Weighted (oil-base) spotting fluid concentrate
LUBRICANTS			
AQUA-MAGIC			Low-toxicity lubricant
LUBRI-FILM	EP MUDLUBE	E.P. LUBE	Extreme-pressure lubricant
MIL-LUBE		LUBE-106	General lubricant
DETERGENTS/FOAMERS			
AMPLI-FOAM	DRILFOAM	FOAMER 80	Mist and stiff foaming agent
MIL CLEAN	BAROID RIG WASH BARA-KLEAN	KLEEN-UP	Biodegradeable detergent
MILPARK MD	CON-DET	DD	Drilling detergent
DEFOAMING AGENTS			
LD-8	BARA DEFOAM	DEFOAM-X	Hydrocarbon-base defoamer
W.O. DEFOAM	BARA BRINE DEFOAM	DEFOAM-A	Alcohol-base, saltwater muds
ALUMINUM STEARATE	Aluminum Stearate	Aluminum Stearate	Aluminum Stearate
LOST-CIRCULATION MATERIALS			
CHEK-LOSS			Seepage loss control differential sticking preventative
MIL-CEDAR FIBER	PLUG-GIT	M-I CEDAR FIBER	Cedar fiber
MIL-FIBER	FIBERTEX	M-I FIBER	Fiber blend
MILFLAKE	JELFLAKE	FLAKE	Shredded cellophane flake
MILMICA	MICATEX	MICA	(Muscovite) mica graded
MIL-PLUG		NUT PLUG	Ground pecan shells
MIL-SEAL	BARO-SEAL	KWIK SEAL	Blended lost-circualtion material
COTTONSEED HULLS	Cottonseed Hulls	Cottonseed Hulls	Cottonseed Hulls
PAPER			Ground paper
WALNUT SHELLS	WALL-NUT		Ground walnut shells
MAGNE-SET			Acid-soluble cement
WORKOVER AND COMPLETION FLUID ADDITIVES			
MUD-PAC	COAT-44 & 45	CONQOR 404 X-CORE	Corrosion (packer fluid) inhibitor
BRINE-PAC	BARACOR-A		Corrosion inhibitor clean brine fluids
W.O. 21L	LIQUI-VIS	VIS-L	Liquid HEC polymer
PRESERVATIVES			
DRYOCIDE			Dry (biodegradable) biocide
X-CIDE 207	BARA B466	BACBAN II & III	Biocide

X-CIDE 207 is a registered trademark of Petrotite Corporation.
DRYOCIDE is a registered trademark of Nalco Chemical Company
XCD (in XCD POLYMER) is a registered trademark of Marck & Co., Inc.
OILFOS is a registered trademark of Monsanto Company.

AIR EMISSION CALCULATIONS

J. Connor Consulting, Inc.



AIR QUALITY REVIEW

COMPANY:	**APACHE CORPORATION**
AREA:	**SOUTH TIMBALIER**
BLOCK:	**102/109/144**
LEASE:	**OCS-G 15318/15320/12965**
RIG:	**JACK-UP**
WELL:	**A THUR I**
LATITUDE:	**28°40'27.430"**
LONGITUDE:	**90°34'42.954"**
COMPANY CONTACT:	**SHARON L. PEREZ**
TELEPHONE NO.:	**(713) 578-3388**

REMARKS: **THE PROPOSED JOINT INITIAL PLAN OF EXPLORATION PROVIDES FOR THE DRILLING, COMPLETION AND TESTING OF NINE (9) EXPLORATORY WELLS WITH FOUR (4) COMMON SURFACE LOCATIONS, TWO (2) BEING LOCATED IN BLOCK 102 AND TWO (2) IN BLOCK 144. PLANNED COMMENCEMENT DATE IS APPROXIMATELY FEBRUARY 1, 1996.**

12/12/95 [MMS.WK3]
16225 Park Ten Place Suite 500 Houston, Texas 77084 (713) 578-3388 Fax (713) 578-8895

GULF OF MEXICO AIR EMISSION CALCULATIONS

General

This document (MMS.WK3) was prepared through the cooperative efforts of those professionals in the oil industry including the API/OOC Gulf of Mexico Air Quality Task Force, who deal with air emission issues. This document is intended to standardize the way we estimate an air emission inventory for Plans of Exploration (POE) and Development, Operations, Coordination Documents (DOCD) approved by the Minerals Management Service (MMS). It is intended to be thorough but flexible to meet the needs of different operators. This first sheet gives the basis for the emission factors used in the emission spreadsheet as well as some general instructions. This file contains 8 sheets: A,B,C,D,E,F,G,& H. A is th Instruction Sheet, B is the Title Sheet, C is the Factors Sheet, D,E,F, & G are the Emission Spreadsheets and H is the Summary Sheet. These sheets will describe and calculate emissions from an activity.

Title Sheet

The Title Sheet requires input of the company's name, area, block, OCS-G number, platform and/or well(s) in the necessary lines. This data will automatically be transferred to the spreadsheet and summary sheet.

Factor Sheet

The emission factors were compiled from the latest AP-42 references or from industry studies if no AP-42 reference was available. Factors can be revised as more data becomes available. A change to this Factor Sheet will be automatically changed in Emission Spreadsheet.

The basis for the factors is as follows:

1. NG Turbines Fuel usage scf/hr = HP X 9.524 (10,000 btu/HP-hr / 1050 btu/scf)
2. NG Engines Fuel usage scf/hr = HP X 7.143 (7,500 btu/HP-hr / 1050 btu/scf)
3. Diesel Fuel usage gals/hr = HP X 0.0483 (7,000 btu/HP-hr / 145,000 btu/gal)

Emission Factors

Natural Gas Prime Movers

1. TNMOC refers to total non-methane organic carbon emissions and these can be assumed equivalent to VOC emissions.
2. The sulfur content assumed is 2000 grains/mmscf (3.33 ppm). If your concentration is different then ratio your emission factor up or down.

Diesel-Fired Prime Movers

1. Diesel sulfur level 0.4% by wt
2. For boats use > 600 HP factors based on AP-42 Vol. II, Table II-3-3. Those figures closely match the above values. Include only the emissions from the boats within 25 mile radius of the well/platform.
3. For diesel engines <600 HP VOC emissions equal total HC emissions; for diesel engines>600 HP VOC emissions equal non-methane HC emissions.

Heaters/Boilers/Firetubes/NG-Fired

1. NG Sulfur content is 2000 grains per million cu ft
2. VOCs emissions based on total non-methane HCs

Gas Flares

1. Flare is non-smoking
2. 1050 btu/cu. ft. for NG heating value
3. The sulfur content assumed is 2000 grains/mmscf (3.33 ppm). If your concentration is different then ratio your emission factor up or down or you may use the following formula

   H2S flared (lbs/hr) = Gas flared (cu ft/hr) X ppm H2S X 10E-06 X 34/379

   SOx emis (lbs/hr) = H2S flared (lbs/hr) X 64/34

Liquid Flares

1. Assume 1% by wt Sulfur maximum in the crude oil.
2. VOC equals non-methane HCs
3. Particulate emissions assumes Grade 5 oil.

Tanks

1. Tank emissions assumes uncontrolled fixed roof tank.

Fugitives

1. Fugitives are based on the 1993 Star Environmental Report. It requires that you count or estimate your components.

Glycol Dehydrator Vent

1. The dehydrated gas rate in SCF/HR must be entered in the spreadsheet. The emission factor is from the compilation of the Louisiana Survey and an average emissions per gas rate.

Gas Venting

1. The emission factor is based on venting unburned natural gas of average weight.

Emissions Spreadsheet

The emissions from an operation should be presented for a calendar year (1994, 1995, etc.). The operation may include drilling only or drilling in conjunction with other activities such as pipeline installation or production operations. For the first year use sheet D, for the second year use sheet E, third use F, fourth use G and if you need more you will have to insert a sheet and copy the spreadsheet to the new sheet. The year (CELL D:A38) should be changed and the different operating parameters entered to calculate revised emissions for that subsequent year. The spreadsheet will calculate maximum fuel usage (UNIT/HR) using the known horsepower. It will assume maximum fuel usage is equal to actual fuel

(UNIT/DAY) usage unless the actual fuel usage is known. If so, insert actual fuel usage in appropriate column. The emissions will be calculated as follows:

Emission rate (lb/hr) = (HP or fuel rate) X Emission Factor (Potential to emit)

Emissions (tpy)=Emission rate (lb/hr) X load factor(Act Fuel/Max Fuel) X hrsX daysX ton/2000 lbs (Actual emissions)

To customize the spreadsheet for your application you may want to delete lines for non-applicable equipment/activities or you can input "0" for the HP of equipment that does not apply. You may also need to copy/insert an entire line if more than one similiar type of equipment is present.

Also, the production equipment can be customized further by adding the use of the equipment behind each type of engine, i.e.,

Turbine
Turbine - Gas Compressor

Burner
Burner - Line Heater

Summary Sheet

The Summary Sheet is designed to show a proposed estimate of emissions from an activity over a future period of time. In this example ten years was chosen. Each row links to the corresponding emission calculation spreadsheet for that year. For example, Row 7 of the summary corresponds to the annual totals from Sheet D. Row 8 links to the second emission calculation spreadsheet, Row 9 to the third and Row 10 to the fourth. Row 11 - 16 will carry down the emissions from the last spreadsheet with an emission rate greater than zero. The Summary Sheet will always carry down the last non-zero emission total. For example, if emission calculations are done for the years 1994 and 1995, then the the 1995 total will be carried down through the year 2003. Row 17 of the summary sheet reflects the allowable for the air quality review exemption determination. If more or less years are needed you will will have to modify the spreadsheet.

Print Instructions

The table below lists macros that were written to print sheets A, C, D, E, F, G, & H.

\A - This macro prints 3 pages of instructions (sheet A).
\C - This macro prints the emissions factors sheet (sheet C).
\D - This macro prints the emissions calculations sheet (sheet D).
\E - This macro prints the emissions calculations sheet (sheet E).
\F - This macro prints the emissions calculations sheet (sheet F).
\G - This macro prints the emissions calculations sheet (sheet G).
\H - This macro prints the emissions calculations sheet (sheet H).
\X - This macro prints all sheets - A, C, D, E, F, G, & H.

To run one of these macros, hold down ALT and press the letter in the macro range name. For example, to run the macro \A, press ALT-a.

AIR EMISSION CALCULATIONS

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

Equipment/Emission Factors	units	TSP	SOx	NOx	VOC	CO	REF.	DATE
NG Turbines	gms/hp-hr		0.00247	1.3	0.01	0.83	AP42 3.2-2	4/93
NG 2-cycle lean	gms/hp-hr		0.00185	11	0.43	1.5	AP42 3.2-2	4/93
NG 4-cycle lean	gms/hp-hr		0.00185	12	0.72	1.6	AP42 3.2-2	4/93
NG 4-cycle rich	gms/hp-hr		0.00185	10	0.14	8.6	AP42 3.2-2	4/93
Diesel Recip. < 600 hp.	gms/hp-hr	1	0.931	14	1.12	3.03	AP42 3.3-1	4/93
Diesel Recip. > 600 hp.	gms/hp-hr	0.24	1.49	11	0.33	2.4	AP42 3.4-1	4/93
NG Heaters/Boilers/Burners	lbs/mmscf	5	0.6	140	2.8	35	AP42 1.4-1	4/93
NG Flares	lbs/mmscf		0.57	71.4	60.3	388.5	AP42 11.5-1	9/91
Liquid Flaring	lbs/bbls	0.42	6.6	2.3	0.01	0.21	AP421.3-1	4/93
Tank Vapors	lbs/bbl				0.03		E&P Forum	1/93
Fugitives	lbs/hr/comp.				0.000025		API Study	12/93
Glycol Dehydrator Vent	lbs/mmscf				6.6		La. DEQ	1991
Gas Venting	lbs/scf				0.0034			

AIR EMISSION CALCULATIONS

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL	LATITUDE	LONGITUDE	CONTACT	PHONE	REMARKS
APACHE CORPORATION	SOUTH TIMBALIER	102/109/144	OCS-G 15318	JACK-UP	A THUR I	28°40'27.430"	90°34'42.954"	SHARON L. PEREZ	(713) 578-338	THE PROPOSED JOINT INITIAL PLAN OF EXPLORATION PROVIDES FOR THE

OPERATIONS	EQUIPMENT Diesel Engines Nat. Gas Engines Burners	HP HP MMBTU/HR	MAX. FUEL GAL/HR SCF/HR SCF/HR	ACT. FUEL GAL/D SCF/D SCF/D	RUN TIME HR/D	RUN TIME DAYS	POUNDS PER HOUR TSP	SOx	NOx	VOC	CO	TONS PER YEAR TSP	SOx	NOx	VOC	CO
DRILLING	PRIME MOVER>600hp diesel	1000	48 30	1159 20	24	263	0.53	3 28	24 23	0.73	5.29	1.67	10 36	76 47	2.29	16 68
	PRIME MOVER>600hp diesel	1000	48 30	1159 20	24	263	0.53	3 28	24 23	0.73	5.29	1.67	10 36	76 47	2 29	16 68
	PRIME MOVER>600hp diesel	1000	48 30	1159 20	24	263	0.53	3 28	24 23	0.73	5 29	1.67	10 36	76 47	2 29	16 68
	AUXILIARY EQUIP<600hp diesel	575	27.77	666 54	24	263	1.27	1 18	17 73	1.42	3 84	4.00	3.72	55.96	4.48	12.11
	VESSELS>600 hp diesel-SUPPLY	2065	99 74	2393.75	7	150	1.09	6.78	50 03	1.50	10.92	0.57	3.56	26.27	0.79	5.73
	VESSELS>600 hp diesel-CREW	2065	99 74	2393 75	4	376	1 09	6 78	50 03	1.50	10.92	0.82	5.10	37.62	1.13	8 21
PIPELINE	PIPELINE LAY BARGE diesel	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
INSTALLATION	SUPPORT VESSEL diesel	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
	PIPELINE BURY BARGE diesel	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
	SUPPORT VESSEL diesel	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
FACILITY	DERRICK BARGE diesel	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
INSTALLATION	MATERIAL TUG diesel	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
PRODUCTION	RECIP <600hp diesel	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
	RECIP >600hp diesel	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
	SUPPORT VESSEL diesel	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
	TURBINE 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
	RECIP 2 cycle lean 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
	RECIP 4 cycle lean 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
	RECIP 4 cycle rich 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
	BURNER nat gas	0	0 00	0 00	0	0	0 00	0 00	0 00	0.00	0.00	0.00	0.00	0 00	0.00	0 00
	MISC	BPD	SCF/HR	COUNT												
	TANK-	0			0	0				0.00					0.00	
	FLARE-		0		0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	PROCESS VENT-		0		0	0				0.00					0.00	
	FUGITIVES-			0 0		0				0.00					0.00	
	GLYCOL STILL VENT-		0		0	0				0.00					0.00	
DRILLING	OIL BURN	250			24	18	4 38	68 75	23 96	0 10	2.19	0.95	14.85	5.18	0.02	0.47
WELL TEST	GAS FLARE		208333 333		24	18		0.12	14 88	12.56	80.94		0.03	3 21	2.71	17.48
1996	YEAR TOTAL						9.41	93.45	229.32	19.27	124.65	11.34	58.32	357.64	16.01	94.06
EXEMPTION CALCULATION	DISTANCE FROM LAND IN MILES 26 0											865.80	865.80	865.80	865.80	30165.54

BEST AVAILABLE COPY

AIR EMISSION CALCULATIONS

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL
APACHE CORPORATION	SOUTH TIMBALIE	102/109/144	OCS-G 15318/153	JACK-UP	A THUR I

Year	Emitted Substance				
	TSP	SOx	NOx	HC	CO
1996	11.34	58.32	357.64	16.01	94.06
Allowable	865.80	865.80	865.80	865.80	30165.54

JOINT INITIAL PLAN OF EXPLORATION

ENVIRONMENTAL REPORT

SOUTH TIMBALIER BLOCKS 102/109/144

LEASES NO. OCS-G 15318/15320/12965

OFFSHORE, LOUISIANA

Prepared by:

J. Connor Consulting, Inc.
16225 Park Ten Place, Suite 500
Houston, TX 77084
713/578-3388

December 7, 1995

ATTACHMENT I

TABLE OF CONTENTS

I. DESCRIPTION OF PROPOSED ACTION

Apache Corporation proposes to conduct exploratory activities within South Timbalier Blocks 102/109/144, Leases No.OCS-G 15318/15320/12965, Offshore, Louisiana.

As proposed, the Joint Initial Plan of Exploration for South Timbalier Blocks 102/109/144 provides for the drilling, completion and testing of nine (9) exploratory wells with four (4) common surface locations, two (2) being located in Block 102 and two (2) in Block 144.

At this time, the planned commencement date for proposed activities is on or about February 1, 1996.

A. DESCRIPTION OF PROPOSED TRAVEL MODES, ROUTES AND FREQUENCY

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

	Drilling/Completion Operations
Crew Boat	10 Trips Per Week
Supply Boat	4 Trips Per Week
Helicopter	1 Trip Per Week

B. ONSHORE SUPPORT BASE

The proposed activities will utilize a support base located at Fourchon, 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 exploration 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 blocks.

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

C. NEW OR UNUSUAL TECHNOLOGY

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

D. VICINITY MAP

The proposed surface location for the activities in South Timbalier Blocks 102/109/144 is located approximately 26 miles from the nearest Louisiana coastline in water depths ranging from 62 feet in Block 102 to 82 feet in Block 144. The seafloor slopes to the south.

II. DESCRIPTION OF AFFECTED ENVIRONMENT

A. COMMERCIAL FISHING

The Gulf of Mexico provides nearly 20% of the commercial fish landings in the continental United States. During 1991, commercial landings of all fisheries in the Gulf totaled nearly 1.5 billion pounds valued at about $641 million.

Menhaden, with landings of 1.2 billion pounds, valued at $41 million, was the most important Gulf species in quantity landed during 1991. Shrimp, with landings of 229 million pounds, valued at $411 million, was the most important Gulf species in value landed during 1991. The 1991 Gulf oyster fishery accounted for 43% of the national total with landings of 13.7 million pounds of meats, valued at about $35.5 million. The Gulf blue crab fishery accounted for 29% of the national total with landings of 65.4 million pounds, valued at $23.5 million.

Alabama ranked last among Central and Western Gulf states in total commercial landings for 1991 with 13.6 million pounds landed, valued at $18.3 million. Shrimp was the most important fishery landed, with 6.5 million pounds, valued at $14.2 million. In addition, during 1991, the following six species each accounted for landings valued at over $125,000: blue crab, shark, black mullet, red snapper, flounder, and the American oyster. Alabama had about 3,470 and 2,515 commercial saltwater, licensed fishermen during 1991 and 1992, respectively.

Mississippi ranked second among Central and Western Gulf states in total commercial fishery landings for 1991, with 208.6 million pounds landed, valued at an estimated $20.5 million. Shrimp was the most important fishery, with 6 million pounds landed, valued at about $9.6 million. Menhaden landings during 1991, are estimated at 200 million pounds landed, valued at $9.4 million. In addition, during 1991, the following four species each accounted for landings valued at over $150,000: red snapper, blue crab, American oyster,

and black mallet. In 1991 and 1992, Mississippi had about 3,329 and 2,515 commercial saltwater, licensed fishermen, respectively.

Louisiana ranked first among Central and Western Gulf states in total commercial fishery landings for 1991, with nearly 1.2 billion pounds landed, valued at $163.4 million. Menhaden was the highest quantity finfish, with 1.0 billion pounds landed, valued at $48 million. Shrimp was the highest value shellfish, with 27.3 million pounds landed, valued at $36.7 million. In addition, during 1991, the following nine species each accounted for landings valued at over $1 million: black drum, red mullet roe, shark, red snapper, spotted seatrout, bluefin tuna, yellowfin tuna, blue crab, and the American oyster. In 1991 and 1992, Louisiana had about 19,923 and 19,241 commercial saltwater, licensed fishermen, respectively.

Texas ranked third among Central and Western Gulf states in total commercial fishery landings for 1990 with nearly 99 million pounds landed, valued at $182 million. In quantity and value, shrimp ranked first, with about 92 million pounds, valued at $17 million. In addition, during 1991, the following four species each accounted for landings valued at over $500,000: red snapper, black drum, blud crab, and the American oyster. In 1991 and 1992, Texas had about 17,483 and 14,519 commercial saltwater, licensed fishermen, respectively.

The Gulf of Mexico yielded the nation's second largest regional commercial fishery by weight in 1991. The Gulf Fisheries landing were 20% of the national total by weight and 20% by value. Most commercial species harvested from Federal waters of the Gulf of Mexico are considered to be at or near an overfished condition. Continued fishing at the present levels may result in rapid declines in commercial landings and eventual failure of certain fisheries.

Commercial landings of traditional fisheries. such as shrimp, red snapper. and spiny lobster, have declined over the past decade despite substantial increases in fishing effort. Commercial landings of recent fisheries, such as shark, black drum, and tuna, have increased exponentially over the past five years, and those fisheries are thought to be in need of conservation communication.

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

B. SHIPPING

The establishment of a series of safety fairways or traffic separation schemes (TSS's), and anchorage areas provide unobstructed approach for vessels using U.S. ports. Shipping safety fairways are lanes or corridors in which no fixed structure, whether temporary or permanent, is permitted. TSS's increase navigation safety by separating opposing lanes of vessel traffic. Fairway anchorage are areas contiguous to and associated with a fairway, in which fixed structures may be permitted within certain spacing limitations.

Fairways play an important role in the avoidance of collisions on the OCS, particularly in the case of the larger oceangoing vessels, but not all vessels stay within the fairways. Many others, such as fishing boats and OCS support vessels, travel 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 drilling rig and each of the marine vessels servicing these operations will be equipped with all U.S. Coast Guard required navigational safety aids to alert ships of its presence in all weather conditions.

South Timbalier Blocks 102/109/144 are clear of any designated shipping fairways and/or anchorage areas.

C. PLEASURE BOATING, SPORT FISHING AND RECREATION

The northern Gulf of Mexico coastal zone is one of the major recreational regions of the United States, particularly for marine fishing and beach activities. Gulf Coast shorelines offer a diversity of natural and developed landscapes and seascapes. Major recreational resources include publicly owned and administered areas, such as national seashores, parks, beaches, and wildlife lands, as well as designated preservation areas, such as national seashores, parks, beaches, and wildlife lands, as well as designated preservation areas, such as historic and natural sites land landmarks, wilderness areas, wildlife sanctuaries, and scenic rivers. Gulf Coast residents and tourists from throughout the nation, as well as from foreign countries, use these resources extensively and intensively for recreational activity. Commercial and private recreational facilities and establishments, such as resorts, marinas, amusement parks, and ornamental gardens, also serve as primary-interest areas.

The Gulf States from Texas to Alabama account for about 1.3 million registered motorboats and over 3.5 million paid fishing license holders. The two major recreational areas most directly associated with the offshore leasing and potentially affected by it are the offshore marine environment and the coastal shorefront of the adjoining states. The major recreational activity occurring on the OCS is offshore marine recreational fishing and diving. 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 production platforms. The recreational fishing associated with oil and gas structures stems from their function as high profile artificial fishing reefs. The NMFS Marine Recreational Fisheries Statistics Survey for the Gulf and Atlantic Coasts (USDOC, NMFS, 1990a) and 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.

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 shorefront is associated with accessible beach areas. Beaches are a major inducement for coastal tourism, as well as a primary resource for resident recreational activity. However, recreational resources, activities, and expenditures are not constant along the Gulf of Mexico shorefront, but are focused where public beaches are close to major urban centers. Beach use is a major economic factor for many Gulf coastal communities, especially during peak-use seasons in the spring and summer. Tourism in the central zone of the give 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. Management of this resource was accomplished by establishing a high-probability zone for the occurrence of historic shipwrecks. A recently completed Texas A&M University (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. MMS redefined those blocks in the Gulf of Mexico that are considered to have a high probability for the occurrence of **historic** period shipwrecks. The number of blocks with a high probability for historic shipwrecks were reduced from 3,410 to 2,263. Remote sensing surveys required by MMS have recorded evidence of approximately 57 potential shipwrecks.

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

BLOCK 102

Water depths range from 55 feet across the northern block of Block 102 to 63 feet in the southeast quadrant. Seafloor scouring probably caused by Hurricane "Andrew" was recorded in the bottom profiles and side scan sonar records. Depressions as deep as 6 feet may have resulted from wave induced erosion, anchor scarring, and/or rig impacts. The "Zane Barnes", a semi-submersible drafting approximately 55 feet, may have been driven through this area by the hurricane. The rig could have run aground in this water depth and scoured to bottom as it was driven northward across this area.

The subbottom profiles have been reviewed for evidence of former landforms which may have supported prehistoric human groups. Prior to conversion into a gradually deepening marine environment, this portion of the continental shelf was exposed to subaerial weathering conditions and stream drainage during the Late Wisconsin low sea level cycle. The lowering of sea level during the Late Wisconsin was a response to expansion of the glacial ice sheets in the polar regions of the continents. By the time of maximum glaciations, the stroage of water in the glaciers resulted in the lowering of the sea level approximately 425 feet to 450 feet recession occurred between 20,000 and 18,000 years ago, and most of the continental shelf was exposed as dry land at this time. The drop in sea level, and rivers entrenched channels and broad valleys into the upper Pleistocene strata across the subaerially exposed continental shelf.

The magnetometer and side scan sonars records were analyzed for evidence of possible shipwreck remains. Specific file references to wrecks in the vicinity of Block 102 include: the "Betsey" (Block 101, the "Buccaneer" (Block 101, the "U-166" (Block 75), the "R.M. Parker, Jr." (Block 75), the "R.J.L. (Block 97), the "J.A. Bisso" (Block 72) and the "Guidung

Light" (Block 105. Significant time has been spent on locating the German submarine "U-166", and based on serval dive trips across this South Timbalier Area, it's actual location has not been verified.

There were no side scan sonar contacts correlating to any of the magnetic anomalies. Most of the magnetic deflections are low amplitude, short duration signatures caused by ferrous objects which are too small to be detected by the side scan sonar or buried below the mudline. The largest magnetic deflections are anomalies No. 4, 18, 39, 55 and 75. These anomalies have gamma counts (amplitudes) in excess of 100 gamma and durations of 200 feet to 335 feet along the tracklines. Anomalies No. 4 and 39 occur in close proximity to each other and a small anomaly No. 37. This cluster should be avoided when selecting well sites. Anomalies No. 17 and 18 might represent a common source, and No. 55 and 56 are probably generated by the same ferrous mass. These contiguous contacts, with at least one fairly large deflection, constitute sources to be avoided. The other anomaies theoretically could be casued be ferrous debris from a shipwreck, but the lack of line to line continuity makes designations of clusters more difficulte. In light of the numerous wrecks reported around this lease and the potential occurrence of unpublished sinkings, the anomalies should be avoided wherever possilbe becasure the actual identification of the anomalouis targets is still speculative.

BLOCK 144

Water depths range from 64 feet to 86 feet, and the seafloor dips to the south and southeast at rates ranging from 4 feet to 8 feet per mile. Seafloor sediments in the area reportedly consist of clayey silt. The side scan sonar records and bathymetric profiles revealed that the seafloor is smooth across the survey area with no evidence of topographic irregularities such as outcrops or depressions.

The side scan sonar and magnetometer records were reviewed to verify the location of man-made features within the surveys area and to investigate for evidence of possible shipwreck remains. The contact does not display any seafloor relief and is not highly indicative of shipwreck remains. There has been significant oil and gas development activity in the area, and the contact probably represents some sort of modern ferrous debris. Available files do not offer any references of shipwrecks for the survey area, and the water depths are too deep for any histroric sailing vessels to have aground in this area.

The upper 30 to 40 feet of Holocene/Recent strata in the survey area could not have been inhabited by prehistoric human groups because the sedimentary layers have not been exposed above sea level since the time of deposition. The following sea level curve indicated that the deeply buried Pleistocene horizon was inundated by rising sea approximatley 16,500 to 17,500 years BP. This time frame virtually negrates the possibility that prehistoric man occupied the Pleistocene horizon across the survey area. Possible

subaerialy aggradation of deeper delta plains or distributary levees may have occurren, but the 3.5 kHz profiles cannot penetrate beneath the gas-charged horizon at the base of these uppermost layers, and deeper features are not discernible. The Pleistocene surface is so deeply buried in this area that possible Paleo-Indian remains along this horizon are beyond a reasonable recovery depth. The collected geophysical zone for the recovery of prehistoric cultural resources.

E. ECOLOGICALLY SENSITIVE FEATURES

Coastal barrier landforms consist of islands, spits, and beaches that stretch in an irregular chain from Alabama to Texas. These elongated, narrow landforms are composed of sand and other unconsolidated, predominantly coarse sediments that have been transported and deposited by waves, currents, storm surges, and winds. Barrier landforms are young coastal features. They began to form 5,000 to 6,000 years ago after the main mass of continental ice sheets had melted and global rate of sea-level rise began to slow.

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

Barrier landforms are relatively low landmasses that are continually adjusting configuration in response to changing environmental conditions. Landform changes can be seasonal and cyclical, such as the transition from a summer (swell wave) beach to a winter (storm wave) beach, or they can be indicative of a trend, such as a net landward movement of a feature. The long-term survival of fixed structures, such as roads, buildings, and power lines, constructed on a barrier landform can often be jeopardized by the changing and migratory nature of the barrier features. Some types of construction or stabilization projects on barrier landforms may actually encourage erosion, especially when the project interferes with longshore or shore-normal sediment movements.

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

Louisiana has the most rapidly retreating beaches in the nation. The statewide average for 1956-1978 was 27.2 ft/yr (van Beek and Meyer-Arendt, 1982). The average retreat rate for the Fourchon beach over the last 100 years has been 35 to 65 ft/yr (Boyd and Penland, 1988). The statewide average, according to Dolan et al. (1982) is in excess of 3.6 m/yr. Beaches along the deltaic plain in Louisiana fit into one of three categories, depending on the stage of the deltaic cycle of the nearby landmass. When a major distributary of the Mississippi River is abandoned, subsidence results in a local sea-level transgression that transforms the active delta into an erosional headland with flanking barriers. Fourchon Beach is an example of an eroding headland beach. With increased age and subsidence, the barrier shoreline evolves into a transgressive barrier-island arc that is separated from the mainland by a lagoon. Isles Derniers is an example of a barrier that underwent the transformation from a headland beach to a barrier arc within the past century. Eventually, with continued subsidence and sediment deprivation, the island ceases to exist, its remnant forming a submarine inner-shelf shoal.

The Chenier Plain is located farther to the west in Louisiana. Here, the coast is fronted by sand beaches and coastal mudflats. The source of the mud is the discharge of the Mississippi and Atchafalaya Rivers, which tends to drift westward along with the prevailing winds and associated nearshore currents.

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

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

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

The importance of coastal wetlands to the coastal environment has been well documented. Coastal wetlands are characterized by high organic productivity, high detritus production, and efficient nutrient recycling. They provide habitat for a great number and wide diversity of invertebrates, fish, reptiles, birds, and mammals. Wetlands are particularly important as nursery grounds for juvenile forms of many important fish species. The Louisiana

coastal wetlands support over two-thirds of the Mississippi Flyway wintering waterfowl population and the largest fur harvest in North America.

Louisiana contains most of the Gulf coastal wetlands. The deterioration of coastal wetlands, particularly in Louisiana, is an issue of concern. In Louisiana, the annual rate of wetlands loss has been measured at 130 km^2 for the period 1955-1978. A recent study has shown that the current rate of landloss on the Deltaic Plain area of the Louisiana coast has decreased to about 90 km^2 per year. Several factors contribute to wetlands loss in Coastal Louisiana, including sediment deprivation (a result of a 50% decrease in the suspended-sediment load of the river since the 1950's and the channelization of the river, which has prevented overbank sediment deposition), subsidence and sea-level rise, and the construction of pipeline and navigation canals through the wetlands.

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

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

In Texas, coastal marshes occur along the inshore side of barrier islands and bays and on river deltas. Salt marshes consisting primarily of smooth cordgrass occur at lower elevations and at higher salinities. Brackish marshes occur in transition areas landward of salt marshes on slightly higher elevations and at greater distances from saltwater bodies. Freshwater marshes of the region occur primarily along the major rivers and tributaries. Sparse bands of black mangroves are also found in the region. Broad expanses of emergent wetland vegetation and hypersaline waters to the south. In these areas, Spartina Alterniflora, the most common salt-marsh grass elsewhere in the Gulf, occurs rarely in salt marshes. Common salt-marsh plants here include more salt-tolerant species such as Batis Maritima and Salicornia.

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

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 1955/1956 to 1978.

Offshore seagrasses are not conspicuous in the Central and Western Gulf; however, fairly extensive beds may be found in estuarine areas behind the barrier islands throughout the Gulf. Seagrasses would be continuous around the entire periphery of the Gulf if it were not for the adverse effects of turbidity and low salinity of the Mississippi effluent from the delta to Galveston. In general, the vast majority of the benthos of the Central and Western Gulf consists of soft, muddy bottom dominated by polychaetes. The most extensive beds occur in Chandeleur Sound in coastal Louisiana and the Mississippi Sound. The distribution of seagrass beds in the Central and Western Gulf have dimished during recent decards. The primary factors believed to be responsible for these conditions include hurricanes,

freshwater diversions from the Mississippi river during flood stage into coastal areas dredging activities and water quality degradation.

The term sensitive offshore resources refers both to the water column and the seafloor. Seafloor (benthic) habitats are the most likely to be adversely affected by offshore oil and gas operations, especially live-bottom areas, deep-water benthic communities, and topographic features. The northeastern portion of the Central Gulf of Mexico exhibits a region of topographic relief, the "pinnacle trend," between 67 and 110 m (220 and 360 ft) depth. The pinnacles appear to be carbonate reefal structures in an intermediate stage between growth and fossilization. The region contains a variety of features from low to major pinnacles, as well as ridges, scarps, and relict patch reefs. It has been postulated that these features were built during lower stands of the sea during the rise in sea level following the most recent ice age. The heavily indurated pinnacles provide a surprising amount of surface area for the growth of sessile invertebrates and attract large numbers of fish.

The pinnacles are found at the outer edge of the Mississippi-Alabama shelf between the Mississippi River and DeSoto Canyon. The bases of the pinnacles rise from the seafloor 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 1985 showed biota similar to the transitional antipatharian-zone assemblage described by Rezak (CSA, 1985). These pinnacles may provide structural habitat for a variety of pelagic fish.

With the exception of the region defined as the pinnacle-trend areas, the substrate in waters shallower than 67 m of the Central Gulf is a mixture of mud and/or sand. The live-bottom 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 the deep waters of the Gulf. These cold-water communities are associated with seismic wipe-out zones and hydrocarbon seep areas between water depths greater than 400 meters and 1,000 meters. Chemosynthetic communities have been a source of controversy over the past few years, in part because of the unusual environmental requirements and hypothesized sensitivity of the communities to oil and gas activities. The MMS requires site-specific surveys of bottom-disturbing actions in water depths greater than 400 m in order to judge the potential of the region for supporting chemosynthetic organisms.

The shelf and shelf edge of the Central and Western Gulf are characterized by topographic features which are inhabited by benthic communities. The habitat created by the topographic features is important because they support hard-bottom communities of high biomass, high diversity, and high numbers of plant and animal species; they support, either as shelter, food, or both, large numbers of commercially and recreationally important fishes; they are unique to the extent that they are small isolated areas of communities in the vast Gulf of Mexico; they provide a relatively pristine area suitable for scientific research; and they have an aesthetically attractive intrinsic value.

Seven distinct biotic zones on the banks of the Gulf have been identified. None of the banks contain all of the seven zones. The zones are divided into four categories dependent upon the degree of reef-building activity in each zone. The Central Gulf of Mexico lists 16 topographic features and the western Gulf of Mexico lists 23 topographic features. None of those listed are in or near the vicinity of the proposed operations in South Timbalier Blocks 102/109/144.

F. PIPELINES AND CABLES

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

G. OTHER MINERAL USES

The activities proposed for South Timbalier Blocks 102/109/144 will have no direct or indirect impact on other mineral uses.

H. OCEAN DUMPING

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

Interim final rules published May 2, 1990 explicitly stated that fixed and floating platforms or all drilling rigs, manned production platforms, and support vessels operating under a Federal oil and gas lease are required to develop Waste Management Plans and to post placards reflecting MARPOL, Annex V dumping restrictions. Waste Management Plans will require oil and gas operators to describe procedures 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 1988 requires ships transporting garbage and refuse to assure that the garbage and refuse is properly contained on board so that it will not be lost in the water from inclement wind or water conditions.

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

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

A general NPDES, based on effluent limitation guidelines, is required for direct disposal of operational wastes into offshore waters. The major discharges from offshore oil and gas exploration and production activities include produced water, drilling fluids and cuttings, ballast water, and storage displacement water. Minor discharges from the offshore oil and gas industry include drilling-waste chemicals, fracturing and acidifying fluids, and well completion and workover fluids; and from production operations, produced sand, deck drainage, and miscellaneous well fluids (cement, BOP fluid); and other sanitary and domestic wastes, gas and oil processing wastes, and miscellaneous discharges.

I. ENDANGERED AND THREATENED SPECIES AND CRITICAL HABITAT

Twenty-nine species of cetaceans, one sirenian, and one exotic pinniped (California sea lion) have been sighted in the northern Gulf of Mexico. Seven species of baleen whales have been reported in the Gulf of Mexico. These include the northern right whale and six species of balaenopterid whales (blue, fin, sei, Bryde's, minke and humpback).

Sightings and strandings of these species in this area are uncommon, though historical sightings and strandings census data suggest that they more often frequent the north-central Gulf region in comparison to the other areas of the Gulf.

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

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

A component of the ongoing GULFCET study will include an attempt to tag and track a limited number of sperm whales within the continental slope area of the north-central and northwestern Gulf using satellite telemetry to determine seasonal movements, diving behavior, and preferred habitat.

The Alabama, Choctawhatchee, and Perdido Key beach mice, subspecies of the old field mouse, occupy restricted habitats in the mature coastal dunes of Florida and Alabama. The beach mice feed nocturnally on the lee side of the dunes and remain in burrows during the day. Seeds are the major item of their diet.

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 seagrasses 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, occasionally enter

shallow water in more northern areas. Their nesting is concentrated on coarse-grain beaches in the tropical latitudes.

The hawksbill is the least commonly reported marine turtle in the Gulf. Texas is the only Gulf state where stranded turtles are regularly reported. The Kemp's ridley sea turtle is the most imperiled of the world's marine turtles. Nesting in the United States occurs infrequently on Padre and Mustang Islands in south Texas from May to August.

Female Kemp's ridleys appear to inhabit nearshore areas, and congregations of Kemp's have been recorded off the mouth of the Mississippi River. Juvenile ridleys recently tagged and released in Atlantic coastal habitats demonstated movements southward along the coast of Florida (NMFS Newsbreaker, 1993), but to date their remigration to the Gulf is unverified.

The loggerhead sea turtle appears worldwide in habitats ranging from estuaries to the continental shelf. Aerial surveys indicate that loggerheads are common in less than 50m 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 fibe major groups: seabirds, shorebirds, wading birds, marsh birds and waterfowl. The following coastal and marine birds species which inhabit or frequent the north-central and western Gulf of Mexico costal areas and recognized by the FWS as either endangered or threatened area: piping plover, whooping crane, eskimo curlew, bald eagle, peregrine falcon, eastern brown pelican, and interior least tern.

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

The piping plover is endangered in the Great Lakes watershed and threatened elsewhere. Its historic populations have remained depressed because of losses to their beach and nesting habitat. On the Gulf Coast, Texas and Louisiana have the largest numbers and highest wintering densities. There, the plover prefers intertidal flats and beaches for its habitat. Piping plovers are susceptible to contact with spilled oil because of their preference for feeding in intertidal areas.

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

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

Bald eagles are found throughout the Gulf States. Bald eagles actively nest in upland and wetland areas 30-50 miles from the coast throughout the Gulf. Bald eagles inhabit areas near water although they rarely nest on the coast. They prey on birds, fish, and small mammals.

Historically, two nestings have occurred along the Mississippi coast. In northwestern Florida, coastal nesting occurs at St. Vincent, St. Marks, and lower Suwannee National Refuges. Brown pelicans have been removed from the Federal endangered species list in Alabama and Florida but remain listed as endangered in Mississippi, Louisiana, and Texas. Their decline is primarily the result of hatching failure caused be ingestion of fish containing pesticides Nesting occurs in colonies on coastal islands. Six brown pelican rookeries have been documented in Louisiana: on Queen Bess, North, Last, Calumet-Timbalier, and Grand Gosier Islands, and at South Pass. There is also a small rookery on Pelican Island in Nueces County, Texas. Unsuccessful nesting has occurred on Sunset Island in Matagorda Bay, and 40 hatchlings have been reintroduced to San Bernard National Wildlife Refuge. Brown pelicans inhabit the coast, rarely venturing into freshwater or flying more than 32 km (20 miles) offshore. They feed by plunge-diving to catch fish near the surface.

J. SOCIOECONOMIC

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

The production of OCS oil and gas, particularly offshore Louisiana, has been a major source of revenue in the study area since 1954. Data from the 1987 Census show that the average annual payroll associated with oil and gas activities amounts to approximately $2.2 billion for the Gulf of Mexico Region ($1.7 billion for the Central Gulf, $0.6 billion for the Western Gulf, and $2.2 million for the Eastern Gulf). Average annual tax dollars generated per employee in the offshore oil and gas program are estimated at 8% of payroll revenues. Thus, State and local taxes generated annually by the Federal offshore oil and gas program are estimated at $134.7 million from the Central Gulf, $44.3 million from the Western Gulf, and $0.2 million from the Eastern Gulf.

Job estimates as of June 1991 show that 83,400 jobs are directly or indirectly dependent on the offshore program. Approximately 80% of these jobs are associated with activity in the Central Gulf and 20% 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 30,000 workers in the Central Gulf, and 7,500 workers in the Western Gulf.

The offshore oil exploration industry including oil companies, drilling contractors, and oilfield suppliers provide a major input to Louisiana's economy. A number of ports in the Central and Western Gulf have developed into important centers for offshore support. The most active of these in Louisiana are (from east to west) Venice, Morgan City, Intracoastal City, and Cameron, Louisiana. The onshore support base for operations in South Timbalier Blocks 102/109/144 is Fourchon, Louisiana.

The MMS sponsored a socioeconomic workshop in September,1992 designed to provide 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 of the OCS oil and gas industry in the Region and to provide a mechanism to provide this information to decisionmakers.

III. UNAVOIDABLE ADVERSE ENVIRONMENTAL IMPACTS

A. WATER QUALITY

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

B. EFFECTS ON MARINE ORGANISMS

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

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

C. EFFECTS ON THREATENED OR ENDANGERED SPECIES

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

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

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

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

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

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

D. WETLANDS AND BEACH

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

The proposed activity is not expected to result in permanent alterations of barrier beach configurations, except in localized areas downdrift from navigation channels that have been dredged and deepened. The contribution to this localized erosion is expected to be less than 1%.

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

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

E. AIR QUALITY

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

Emissions of pollutants into the atmosphere for these activities are likely to have minimum impact on offshore air quality because of prevailing atmospheric conditions, emission heights, and 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 for formation, which in the Gulf occurs about 35 days a year, mostly during winter. Impact from these conditions is reduced in winter because the onshore winds have the smallest frequency (37%) and rain removal is greatest. Summer is the worst time, with onshore winds having a frequency of 61%. Emissions of pollutants into the atmosphere are expected to have concentrations that would not change the onshore air quality classifications.

F. COMMERCIAL FISHING

The major impact producing factors on fishing activities from the proposed operations is structure placement, 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).

The effects on and the extent of damage from an oil spill to Gulf commercial fisheries is restricted by time and location. Oil spills that contact coastal bays, estuaries, and waters of the OCS when high concentrations of pelagic eggs and larvae are present have the greatest potential to damage commercial fishery resources. Migratory species, such as mackerel, cobia, and crevalle could be impacted if oil spills contact nearshore open waters. The majority of the Gulf's fishes are estuary dependent. The effects from an oil spill contacting a large area of a Gulf estuary would be considerable on local populations of commercial fishery resources, such as menhaden, shrimp, and blue crabs, that use that area as a nursery and/or spawning ground. The effects from chronic oiling in Gulf coastal wetlands would be substantial on all life stages of a local population of a sessile fishery resource such as oysters.

The emplacement of a structure, with a surrounding 100-m navigational safety zone, results in the loss of approximately 6 ha of bottom trawling area to commercial fishermen and causes space-use conflicts. Gear conflicts from underwater OCS obstructions result in losses of trawl and shrimp catch, business downtime, and vessel damage.

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

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

G. SHIP NAVIGATION

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

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

H. CULTURAL RESOURCES

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

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

The archaeological surveys required prior to an operator beginning oil and gas activities in a lease block are estimated to be 90% effective as identifying possible sites.

Based on these data, published research and our interpretations, the probability of locating the presence of significant prehistoric cultural resources in the survey of Blocks 333/354, Ship Shoal Area is assessed as poor. There are no observable cut and filled channels or other geomorphological features which would suggest possible areas for prehistoric human occupation. The nature of fifteen magnetic anomalies are unknown. They could represent additional modern cultural material associated with the oil and gas field construction activity or lost historic material of unknown age or significance.

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

I. RECREATION AND AESTHETIC VALUES

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

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

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

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

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

IV. SUMMARY

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

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

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

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

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

REFERENCES

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

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

3. Final Environmental Impact Statement, Proposed Oil and Gas Lease Sales 113, 115, and 116, Gulf of Mexico OCS Region, OCS EIS, MMS 87-0077.

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

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

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

7. Final Environmental Impact Statement, Proposed Oil and Gas Lease Sales 139 and 141, Gulf of Mexico OCS Region, OCS EIS, MMS-91-0054.

8. Final Environmental Impact Statement, Proposed Oil and Gas Lease Sales 142 and 143, Gulf of Mexico OCS Region, OCS EIS, MMS-92-0054.

9. Final Environmental Impact Statement, Proposed Oil and Gas Lease Sales 147 and 150, Gulf of Mexico OCS Region, OCS EIS, MMS 93-0065.

COASTAL ZONE MANAGEMENT

CONSISTENCY CERTIFICATION

INITIAL PLAN OF EXPLORATION

SOUTH TIMBALIER BLOCKS 102/109/144

LEASES NO. OCS-G 15318/15320/12965

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 Program.

Arrangements have been made with the Morning Advocate in Baton Rouge, Louisiana to publish a public notice of the proposed activities no later than December 22, 1995.

Additionally, arrangements have been made with The Daily Comet in Lafourche Parish to publish a public notice of the proposed activities no later than December 22, 1995.

APACHE CORPORATION
Lessee or Operator

C J Pau-ile
Certifying Official

December 8, 1995
Date

ATTACHMENT I

2000 POST OAK BOULEVARD / SUITE 100 / HOUSTON, TEXAS 77056-4400

[713] 296-6000

December 12, 1995

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

Attention: Vicky Thompson

Gentlemen:

Please publish the following as a legal ad no later than December 22, 1995.

Public Notice of Federal Consistency review of a Proposed Joint Initial Plan of Exploration by the Coastal Management Section/Louisiana Department of Natural Resources for the plan's consistency with the Louisiana Coastal Resources Program.

Applicant: Apache Corporation
2000 Post Oak Boulevard
Suite 100
Houston, Texas 77056

Location: South Timbalier Blocks 102/109/144
Leases OCS-G 15318/15320/12965
Offshore, Louisiana

Description: Exploratory activities include the drilling, completion and testing of nine (9) exploratory wells with four (4) common surface locations, two (2) being located in Block 102 and two (2) in Block 144. Support operations will be from an onshore base located in Fourchon, Louisiana. No ecologically sensitive species or habitats are expected to be affected by these activities.

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

ATTACHMENT K

State Times Newspaper
Legal Ad Publication
December 12, 1995

The public is requested to submit comments to the Louisiana Department of Natural Resources Coastal Management Division, Attention: OCS Plans, P. O. Box 44487, Baton Rouge, Louisiana 70804-4487. Comments must be received within 15 days of this notice or 15 days after the Coastal Management Section obtains a copy of the plan and it is available for public inspection. This public notice is provided to meet the requirements of the NOAA Regulations on Federal Consistency with approved Coastal Management Programs.

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

Richard C. Daab
Apache Corporation
2000 Post Oak Boulevard
Suite 100
Houston, Texas 77056

Please direct any questions concerning this request to the attention of the undersigned, or Apache Corporation's regulatory agent, J. Connor Consulting, Inc., Attention: Sharon L. Perez at (713) 578-3388.

Sincerely,

APACHE CORPORATION

Richard C. Daab/SP
Richard C. Daab
Senior Drilling Engineer

RCD:SLP:cag

2000 POST OAK BOULEVARD / SUITE 100 / HOUSTON, TEXAS 77056-4400

[713] 296-6000

December 12, 1995

The Daily Comet
705 West 5th
Thibodaux, Louisiana 70302

Attention: Doris Dome

Gentlemen:

Please publish the following as a legal ad no later than December 22, 1995.

Public Notice of Federal Consistency review of a Proposed Joint Initial Plan of Exploration by the Coastal Management Section/Louisiana Department of Natural Resources for the plan's consistency with the Louisiana Coastal Resources Program.

Applicant: Apache Corporation
2000 Post Oak Boulevard
Suite 100
Houston, Texas 77056

Location: South Timbalier Blocks 102/109/144
Leases OCS-G 15318/15320/12965
Offshore, Louisiana

Description: Exploratory activities include the drilling, completion and testing of nine (9) exploratory wells with four (4) common surface locations, two (2) being located in Block 102 and two (2) in Block 144. Support operations will be from an onshore base located in Fourchon, Louisiana. No ecologically sensitive species or habitats are expected to be affected by these activities.

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

ATTACHMENT L

The Daily Comet
Legal Ad Publication
December 12, 1995

The public is requested to submit comments to the Louisiana Department of Natural Resources Coastal Management Division, Attention: OCS Plans, P. O. Box 44487, Baton Rouge, Louisiana 70804-4487. Comments must be received within 15 days of this notice or 15 days after the Coastal Management Section obtains a copy of the plan and it is available for public inspection. This public notice is provided to meet the requirements of the NOAA Regulations on Federal Consistency with approved Coastal Management Programs.

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Richard C. Daab
Apache Corporation
2000 Post Oak Boulevard
Suite 100
Houston, Texas 77056

Please direct any questions concerning this request to the attention of the undersigned, or Apache Corporation's regulatory agent, J. Connor Consulting, Inc., Attention: Sharon L. Perez at (713) 578-3388.

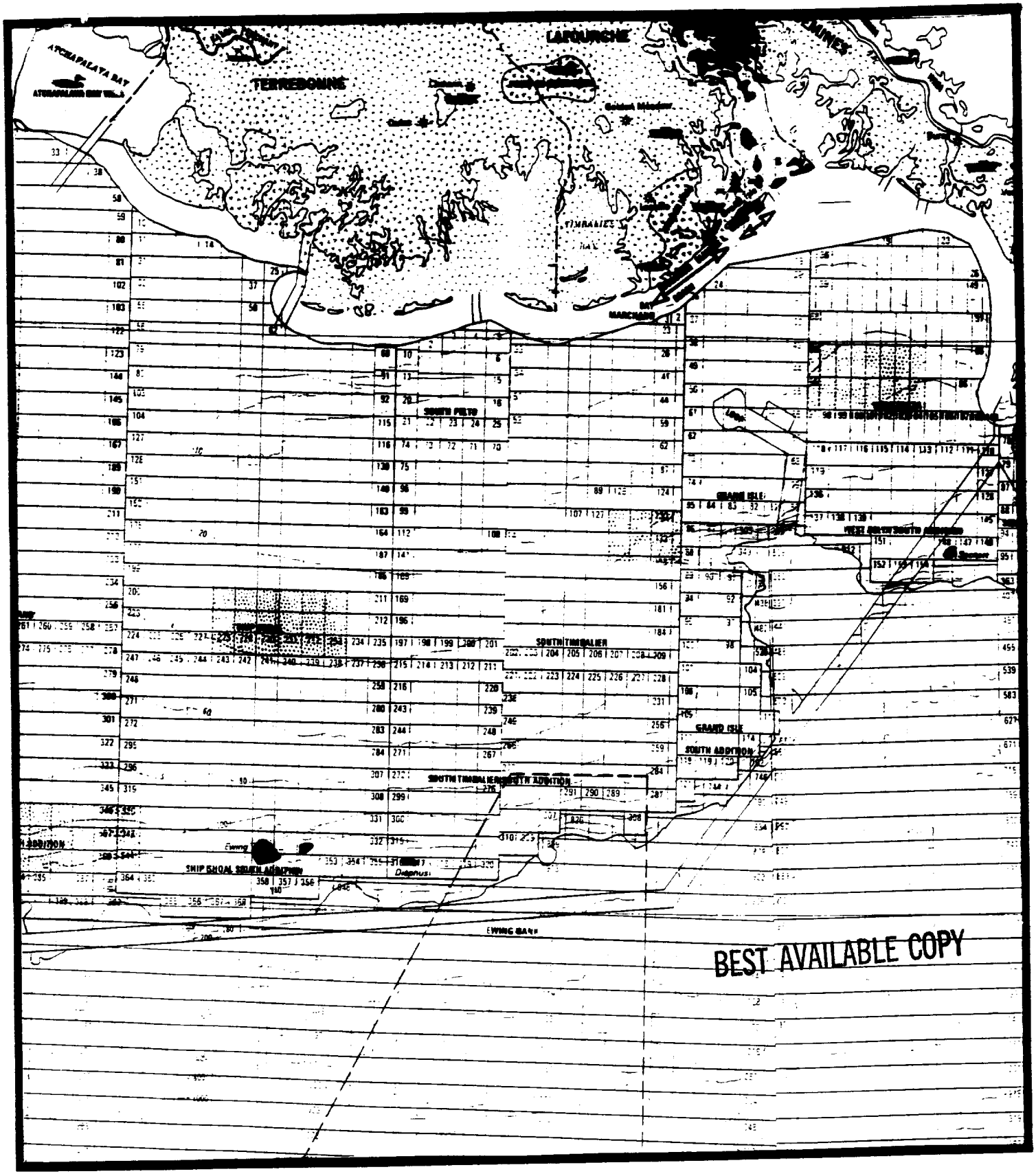
Sincerely,

APACHE CORPORATION

Richard C. Daab/sp

Richard C. Daab
Senior Drilling Engineer

RCD:SLP:cag



26 MILES TO THE NEAREST SHORELINE AND 36 MILES TO THE SHOREBASE IS LOCATED IN FOURCHON, LOUISIANA

APACHE CORPORATION

SOUTH TIMBALIER BLOCKS 102/109/144

VICINITY MAP

ATTACHMENT M

COASTAL ZONE MANAGEMENT

CONSISTENCY CERTIFICATION

INITIAL PLAN OF EXPLORATION

SOUTH TIMBALIER BLOCKS 102/109/144

LEASES NO. OCS-G 15318/15320/12965

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 Program.

Arrangements have been made with the Morning Advocate in Baton Rouge, Louisiana to publish a public notice of the proposed activities no later than January 18, 1996.

Additionally, arrangements have been made with The Daily Comet in Lafourche Parish to publish a public notice of the proposed activities no later than January 18, 1996.

APACHE CORPORATION
Lessee or Operator

H. Craig Clark
Certifying Official

January 8, 1996
Date