UNITED STATES GOVERNMENT MEMORANDUM

August 10, 2004

To:

Public Information (MS 5034)

From:

Plan Coordinator, FO, Plans Section (MS

5231)

Subject:

Public Information copy of plan

Control #

S-06497

Туре

Supplemental Development Operations Coordinations Document

Lease(s)

OCS-G02050 Block - 281 East Cameron Area

Operator -

Stone Energy Corporation

Description -

Platform A and Wells H, I, and J

Rig Type

JACKUP

Attached is a copy of the subject plan.

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

Elmo Cooper

Plan Coordinator

Site Type/Name	Botm Lse/Area/Blk	Surface Location	Surf Lse/Area/Blk
FIXED/D		3131 FSL, 3667 FEL	G02050/EC/281
WELL/H	G02050/EC/281	3131 FSL, 3667 FEL	G02050/EC/281
WELL/I	G02050/EC/281	3131 FSL, 3667 FEL	G02050/EC/281
WELL/J	G02050/EC/281	3131 FSL, 3667 FEL	G02050/EC/281

NOTED - SCHEXNAILDRE



August 6, 2004

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

Attn:

Mr. Nick Wetzel

Section Chief Plans Section

Office of Field Operations

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FIELD
OPERATIONS
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AND

P.O. Box 52807 Lafayette, Louisiana 70505 625 East Kaliste Saloom Road Lafayette, Louisiana 70508 Telephone: (337) 237-0410 Fax: (337) 521-2035

CONTROL No. 5 - 6497

REVIEWER: Elmo Cooper PHONE: (504) 731-3083

RE:

Supplemental DOCD

East Cameron Block 281

OCS-G 02050

Offshore, Louisiana

Mr. Wetzel,

In accordance with the provisions of Title 30 CFR 250, Stone Energy Corp. hereby submits for your review and approval nine (9) copies of a Supplemental Development Operations Coordination Document for Lease OCS-G 02050, East Cameron Block 281, Offshore Louisiana. Five (5) copies are "Proprietary Information" and four (4) copies are "Public Information". Excluded from the Public Information are certain geologic discussions, depth of wells, bottom hole locations and structure maps.

Also being submitted with the Supplemental DOCD is a set of seismic line data to cover the proposed well locations.

Stone Energy Corp. anticipates activities will commence under this proposed Supplemental DOCD on or about December 1, 2004 or as soon as the applicable permits are approved.

Should you require additional information, please contact me at (337) 237-0410.

Sincerely,

Amy Fell / Compliance Assistant

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**Enclosures:** 

(5) Copies of Supplemental DOCD (Proprietary)

(4) Copies of Supplemental DOCD (Public)

(3) Folders Updated Infrastructure Map, Hazard Map and Statement

(1) Folder Set of Raw Shallow Hazard Data

(1) Seismic Map

## SUPPLEMENTAL DEVELOPMENT OPERATIONS COORDINATION DOCUMENT

#### **FOR**

### STONE ENERGY CORP.

GULF OF MEXICO OFFSHORE, LOUISIANA

### EAST CAMERON 281 LEASE OCS-G 02050

COMPANY CONTACT
Tom Shinn
Stone Energy Corp.
P.O. Box 52807
Lafayette, LA 70505
Phone: (337) 237-0410
Fax: (337) 233-2276

**AUGUST 2004** 

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## STONE ENERGY CORP. SUPPLEMENTAL DEVELOPMENT COORDINATION DOCUMENT EAST CAMERON 281 OCS-G 02050

Stone Energy Corp. (Stone), as owner and operator of subject lease, submits the following information for planned development and production activities in, offshore, Louisiana. This proposed SUPPLEMENTAL DEVELOPMENT COORDINATION DOCUMENT (SDOCD) in accordance with the regulations contained in Title 30 CFR 250.204 and more specifically defined in the Minerals Management Service (MMS) Notice to Lessees (NTL) and Operators dated August 29, 2003.

#### I. HISTORY OF LEASE

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**LEASE OCS-G 02050** Lease OCS-G 2050 was acquired at Gulf of Mexico Lease Sale No. 22, effective date December 1970 by Chevron. Stone Energy was named designated operator by Chevron.

#### II. LEASE STIPULATIONS

East Cameron Block 281 is not one of the blocks listed on the Letter to Lessees (LTL) issued by MMS on September 5, 1995 as being within the high-probability area for prehistoric archaeological resources on the OCS. A High Resolution Survey was submitted to MMS on May 13, 2004 for updated regulations. By letter dated May 24, 2004, the subject survey complies with the NTL No. 98-20. East Cameron Block 281 carries with it a topographic stipulation. The irregular topography is attributed to a broad, bathymetric high (possible shoal) in the central portion of the lease.

In response to the Military Areas Stipulation being invoked in this block, Stone will contact the command headquarters for Military Warning Area W-147 AB (147 OG/DOV, Houston, Texas Telephone – 281-929-2716 or 2391) for the purpose of entering into an agreement concerning the control of electromagnetic emissions and the use of boats and aircraft in the warning areas.

#### III. BONDING REQUIREMENTS

In fulfillment of the requirements of MMS Notice to Lessees and Operators (NTL) 98-18N, dated December 28, 1998, which amends Title 30 CFR Part 256 surety bond requirements applicable to OCS lessees and operators, please be advised that Stone has in place a \$3 million area wide bond number (6195940) to cover operations on this lease in the Gulf of Mexico.

#### IV. SCHEDULE OF OPERATIONS

Under this proposed SUPPLEMENTAL DEVELOPMENT COORDINATION DOCUMENT, Stone plans to drill three (3) developmental wells ("H", "I", and "J"). We estimate 65 drilling and completing days per well.

Combined Life of the reserves: Excluded from Public Copy.

The following schedule details the chronological order of the proposed events leading to the full start up of drilling and completion:

PROPOSED ACTIVITY	ESTIMATED START DATE
Drill, evaluate, and complete well "H"	December 1, 2004 - February 3, 2005
Drill, evaluate, and complete well "I"	February 4, 2005- April 9, 2005
Drill, evaluate, and complete well "J"	April 10, 2005– June 13, 2005
Install 4-pile and Lease Pipelines to EC 281 "A"	June 14, 2005 – June 27, 2005
and Commence Production	June 28, 2005

#### V. NEW OR UNUSUAL TECHNOLOGY

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

## VI. DESCRIPTION OF DRILLING UNIT AND POLLUTION PREVENTION EQUIPMENT

Safety features on the drilling rig will include well control and blowout prevention equipment as described in 30 CFR 250.400. 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. In addition, the rig and platform will be equipped with typical pollution control equipment including, but not limited to, deck drains, sumps, drip pans and sewage treatment facilities.

Drilling and completion operations will be done with a jack-up rig. The rig specifications are and will be made part of the Application for Permit to Drill.

The goal of this developmental program is the gathering of information on the productivity of the leased area, in a safe manner, with minimal disruption of the environment. Production operations will be conducted by qualified Stone representatives. Regular training of operations personnel is a necessary complement to the pollution prevention features in the design of equipment and operations.

#### VII. DESCRIPTION OF PLATFORM

Under this proposed SUPPLEMENTAL DEVELOPMENT COORDINATION DOCUMENT, Stone plans to drill three (3) developmental wells on EC 281 OCS G- 02050. Drill Locations "H", "I" & "J" install 4--pile over common surface and three(3) lease pipelines to EC 281 'A' existing facility for processing and sales. Typical 4-pile platform is included as **Attachment "P"**.

#### Description of production installation-

The jacket, piles and deck section or sections, the components which make up the platform will go out to location via a material barge, pushed by tugs. At location will be a



derrick or lift barge to perform the installation of the 4-pile. The derrick or lift barge to be use could either be of a type which uses anchors to hold the barge in place during operations, or be a dynamic positioning type, which uses threshers to hold the barge in place during operations. The type of derrick or lift barge to be used by Stone Energy as related to this plan will depend on pricing and availability. Anchor Patterns are included as **Attachment "N"**.

Once on location the jacket will be lower to sea floor by flooding the legs. The derrick or lift barge will then hold the jacket in place up right, while the piles are driven through the jacket legs into the seafloor to secure the jacket section in place.

The deck will be lifted off the material barge by the derrick barge or lift barge and tabbed into the legs of the jacket. The deck will be leveled and welded in place.

At this point installation operations of the proposed 4-pile will be completed and the material barge and derrick barge will be released.

Operations will then begin to complete the final deck piping, and hook-up of the pipelines to prepare the 3-slot tri pod for production operations.

#### Transportation to shore -

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Three (3) inch bulk lease pipelines will run from EAST CAMERON 281 Locations "H", "I" & "J" (4-pile to be installed over Locations "H", "I" & "J") to EAST CAMERON 281 "A" Existing Facility. Length is 10,500 feet. Maximum Flow Rate Combined is 60 MMCFPD 1200 BCPD, and shut-in time of any proposed pipelines is 1 to 2.5 minutes.

The condensate from EC 281 "A" Facility from Lease OCS G-02050 will be measured for allocation purposes. Once measured condensate will be commingled with the gas production, and depart that facility via Stone Energy's existing, 16-inch Gas Segment #3789 to Texas Eastern Transmission Corporation 30-inch SSTI Segment #3743 in EC 281, Operations System No. 9.0. Condensate will be measured for royalty purposes at Iowa Separation and Dehydration ACT Unit Termination point in Iowa, Louisiana.

The gas production from EC 281 "A" Facility from Lease 02050 will be separated, processed and metered for sales and royalty purposes. Once metered at EC 281 "A" Platform, gas will be commingled with condensate and depart that facility via Stone Energy's existing 16-inch Segment #3789 to Texas Eastern Transmission Corporation 30-inch SSTI Segment #3743 in EC 281, Operations System No. 9.0; for final delivery at Iowa Separation and Dehydration ACT Unit Termination point in Iowa, Louisiana.

#### VIII. WELL LOCATIONS

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The locations of the EAST CAMERON 281 wells are shown on the "OCS Plan Information Plan" included as **Attachment "A"**. The bottom-hole locations are considered Proprietary and are excluded from the Public Information copies of the plan.

#### IX. STRUCTURE MAP/GEOLOGIC CROSS-SECTIONS

Current structure maps drawn to the top of the prospective hydrocarbon accumulation showing the surface and bottom-hole locations of the development wells are included as **Attachment "B"**. This attachment also includes a cross-section map depicting the proposed well locations and the geologic name and age of the anticipated structures. This information is considered Proprietary and excluded from Public Information copies of the plan.

#### X WATER DEPTH

Water depth at the proposed locations is approximately 175 ft Leases OCS-G 02050. A Bathymetry Map is included as **Attachment "G"**.

#### XI. SHALLOW HAZARDS

Shallow Hazard Statement for proposed surface locations is included as Attachment "M".

#### XII. LOCATION OF THE LEASE AND ONSHORE FACILITIES

EAST CAMERON 281 is located approximately 85 miles from the nearest Louisiana coastline and approximately 107 miles from the shore base located in Intracoastal City, Louisiana. A vicinity map of EAST CAMERON 281 relative to the shoreline and onshore base is included in this plan as **Attachment "C"**.

The onshore support base required to support these offshore operations will be located at Intracoastal City, 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.

#### XIII. OIL SPILL RESPONSE PLAN

All drilling, completion, and production operations shall be performed in accordance with industry standards to prevent pollution of the environment. Stone Energy Corporation is the only entity covered in the Regional Oil Spill Response Plan on file with the MMS. OSRP update Approved 07/02/04 and lastly modified 07/15/04 to include WCD for Exploratory Plans. The next biannual update is scheduled for April 28, 2006. Stone Energy requests that the activities proposed in this SUPPLEMENTAL DOCD be covered by our OSRP.

This plan designates an Oil Spill Response Team consisting of contract personnel through Environmental Safety and Health Consulting Services, Inc. 877-437-2634. This team's duties are

to eliminate the source of any spill, remove all sources of possible ignition, and deploy the most reliable means to monitor the movement of a slick, and contain and remove the slick if possible. Stone's Oil Spill Response Team attends drills for familiarization with pollution control equipment and operations procedures on an annual basis.

Stone is a member company of Clean Gulf Associates (CGA). The CGA stores pollution control equipment throughout the Gulf Coast.

In the event of a spill, the primary location for the procurement of clean-up equipment would be the CGA stockpile at Lake Charles, Louisiana. Lake Charles, Louisiana is the staging area for CGA's equipment. Additional clean-up equipment could be mobilized from the Fort Jackson, Galveston and Ingleside, Texas and Houma, Louisiana CGA stockpile areas. The Lake Charles stockpile is located approximately 127 miles from the block.

Worst Case Discharge = (Daily Volume from Uncontrolled Blowout) + (Maximum capacity of Oil Storage Tanks and Flowlines at Facility) + (Volume of Oil Leaked from Break in Pipelines Connected to the Facility)

Worst Case Discharge = 400+0+0=400 barrels

T

The Worst Case Discharge scenario calculated in accordance with 30 CFR 254.21 through 254.29 will be greater than 1,000 barrels.

Worst Case Scenario Comparison Table

Category	Regional OSRP	SUPPLEMENTAL DOCD
Type of Activity	Production -	Developmental Drilling
Facility Designation	EW 305 A	EC 281
Distance to Nearest Shoreline (miles)	32 miles (> 10 miles)	85 mi
Volume		
Storage tanks (total)	25 BBLS	0 BBLS
Flowlines (on facility)	0 BBLS	0BBLS
Lease term pipelines	2480 BBLS	0 BBLS
Uncontrolled blowout (volume per day)	4576 BBLS	400 BBLS
Total Volume	7081 BBLS	400 BBLS
Type of Oil(s)-(crude oil, condensate, diesel)	Crude Oil	Condensate
API Gravity(s)	33.8°	45.0°

"Since Stone Energy Corporation has the capability to respond to the worst-case spill scenario included in its regional. OSRP update Approved 07/02/04 and lastly modified 07/15/04 to include WCD for Exploratory Plans. The next biannual update is scheduled for April 28, 2006. and since the worst-case scenario determined for our SUPPLEMENTAL DOCD does not replace the worst-case scenario in out regional OSRP, I hereby certify that Stone Energy Corporation has the capability to respond, to the maximum extent practicable, to a worst-case discharge, or a substantial threat of such a discharge, resulting from the activities proposed in out SUPPLEMENTAL DOCD."

Facility Tanks, productions vessels.

Type of	Type of	Tank	Number of	Total	Fluid
Storage Tank	Facility	Capacity (bbls)	Tanks	Capacity (bbls)	Gravity (API)
Fuel Oil	Lay Barge	1000	2	2000	No. 2 Diesel
Sump Surge*	Production	250	2	500	Deck Drainage

<sup>\*</sup> To be installed on proposed 4-pile

Diesel oil supply vessels.

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Size of fuel	Capacity of Fuel	Frequency	Route Fuel Supply
Supply Vessel	Supply Vessel	of Fuel Transfers	Vessel Will Take
190 feet	1,500 bbls	Weekly	From the shorebase in Intracoastal City
			LA, to EC 281

Support vessels fuel tanks.

Type of Vessel	Number in Field Simultaneously	Estimated ;Maximum Fuel Tank Storage Capacity
Tug boats	1	1000
Supply vessels	2	1500
Service vessels	2	1000
Crew vessels	1	400

**Produced liquid hydrocarbons transportation vessels.** Liquid hydrocarbons will be transported by pipeline.

Oil and synthetic-based drilling fluids.

Type of Drilling	Estimated Volume of	Mud Disposal	Estimated Volume of	Cuttings Disposal
Fluid	Mud Used per Well	Method	Cuttings Generated	Method
Oil-based	1200	On shore Disposal	2150	On shore Disposal
Synthetic-based	1200	Recycle	2150	Discharge*

<sup>\*</sup>Stone Energy has approval under EPA General Permit #GMG 290000 set forth in Part II.D.10 of the permit and 40 CFR 122.22.

#### Blow Out Scenario.

400 BCPD
26,000 BCPD
65 DAYS
Moderate Probability
Moderate Probability
High Probability
None
65 DAYS

Spill response sites.

Primary response sites	Preplanned Staging Location(s)
Intracoastal City, LA	Intracoastal City, LA

**Spill response.** Stone Energy has ensured, by means of contract, an experienced Spill Management Team as well as an extensive response resource contractor team in order to ensure it is well prepared to address the issues involved. Whenever possible, Stone Energy Corporation will attempt to use alternative response to dissipate an oil slick before it can impact land segments. Mechanical recovery and containment equipment will also be deployed to the spill site in a proactive manner. **Attachment "K"**.

Pollution prevention measures. Stone Energy will ensure our Spill Management Team is well versed with the probable impacted land segment, which in this case the spill originating at the East Cameron 281 Area are Galveston, TX and Cameron, LA. In addition, ensure safety briefings are conducted. The pollution prevention will consist of identifying the hazardous spilled material, control the source, maximize protection of environmentally sensitive areas and contain and recover spilled material. The early spill detection measure will consist of using aircraft, whenever possible. In the event of a night-time spill- the use of Infa-Red sensing cameras are capable of detecting petroleum on the water during the day or at night and in all weather conditions. Attachment "L".

#### XIV. DISCHARGES

All discharges associated with the proposed activities will be in accordance with regulations implemented by MMS, U.S. Environmental Protection Agency (EPA) and U.S. Coast Guard (USCG). Wastes and Discharge Information Attachment "J".

In accordance with EPA's Gulf of Mexico NPDES General Permit, discharges will contain no free oil and will be monitored and in compliance with the general permit. Any drilling fluid contaminated with oil will be transported to shore for proper disposal at an authorized disposal site.

EPA Region VI will be advised prior to and upon completion of discharges for the proposed drilling and production operations addressed in the subject Plan. Surveillance of fluids 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.

Produced water will be discharged from the platform. The discharge will be monitored to ensure the absence of sheen, and all testing will be performed as required by EPA Permit No. GMG290000.

Solid domestic wastes will be transported to shore for proper disposal at an authorized disposal site, and sewage will be treated on location by USCG approved marine sanitation devices on the drilling rig.

Typical mud components, which may be used in the drilling of the proposed wells, are included in **Attachment "D".** The quantities and rates of discharge are included as **Attachment "E"**.

#### XV. HYDROGEN SULFIDE

In accordance with Title 30 CFR 250.67, Stone Energy requests that East Cameron Block 281 be classified by Minerals Management Service as an area where absence of hydrogen sulfide has been confirmed.

The basis of this request is that the (Sands excluded from public copy) Cris S and Upper Lentic objective sands in the proposed wells correlate with the same productive reservoir sands in EC 278, 282 and 283 from which hydrogen sulfide has neither been produced nor detected. Based on analysis of produced fluids from correlative Pliocene sands in nearby blocks the objective sands of the proposed wells H, I and J have been determined to be hydrogen sulfide-free.

#### VI. PROJECTED AIR EMISSIONS

An Air Quality Report has been prepared and is included as Attachment "F".

#### XVII. ENVIRONMENTAL IMPACT ANALYSIS REPORT

An Environmental Impact Analysis Report is included as Attachment "I".

#### XVIII. COASTAL ZONE CONSISTENCY CERTIFICATION

Issues identified in the Louisiana Coastal Zone Management Program 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.

The proposed activities will comply with Louisiana's approved Coastal management Program and with the applicable enforceable policies. A Certificate of Coastal Zone Management Consistency for Louisiana is included as **Attachment "O"**.

#### XIX. BIOLOGICAL AND PHYSICAL INFORMATION

Stone Energy does not propose using a semi submersible drilling rig to be placed within 500 feet of the no- activity zone of an identified topographic feature. Stone Energy will utilize a jack up drilling rig. Due to the water depth and proposed surface location there is not "Deepwater Chemosynthetic Communities" Stone Energy does not propose bottom-disturbing activities, within 100 feet of any pinnacle trend feature with vertical relief equal to or greater than 8 feet.



#### XX. AUTHORIZED REPRESENTATIVE

Inquiries may be made to the following authorized representative:

Stone Energy Corp.

P.O. Box 52807

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Lafayette, LA 70505 Phone: (337) 237-0410

Fax: (337) 233-2276 ATTN: Tom Shinn

Safety and Compliance Manager

#### XXI. ATTACHMENTS

Attachment A - OCS Plan Information Form and Plat

Attachment B - Structure Maps, Cross Sections, Strat Columns, and Geological Description

Geopressure Statement

Attachment C - Vicinity Map

Attachment D - Typical Mud Components

Attachment E - Quantities and Rates of Discharge

Attachment F - Air Quality Report
Attachment G - Bathymetry Map

Attachment H - BOP and Diverter Schematic

Attachment I - Environmental Impact Analysis
Attachment J - Wastes and Discharge Tables

Attachment K - Spill Response

Attachment L - Pollution Prevention Measures

Attachment M - Shallow Hazard Statement

Attachment N - Anchor Patterns

Attachment O - Coastal Zone Consistency Certificate

Attachment P - Typical 4-Pile Platform

## APPENDIX J PLAN INFORMATION FORM

In order to facilitate data entry and review your OCS plan, we encourage you to use the attached optional "Plan Information Form." OMB Control No. 1010-0049

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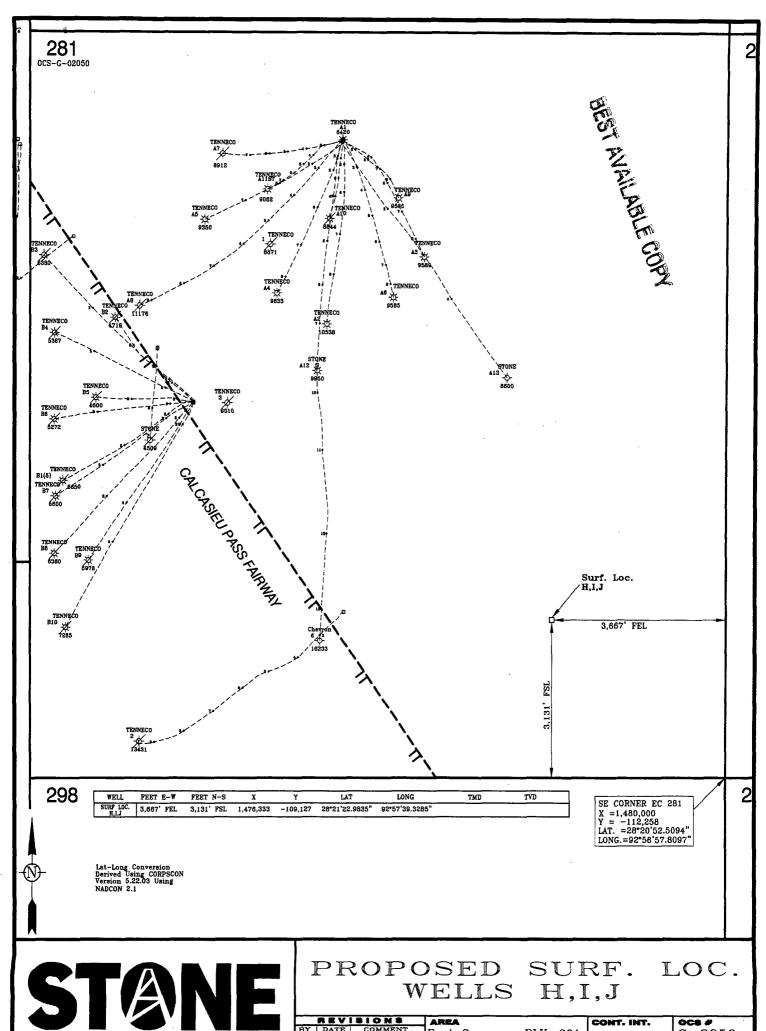
Expiration Date:

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

EXPLORATION PLAN		DEVEL	OPMENT O	OPERATIONS COORDINATION DOCUMENT				х	DEVELOPMENT & PRODUCTION PLAN
OPERATOR: Stone Energy Corporation						ADDRESS: P.O. Box 52807			
MMS OPERATOR NO.:01834						Lafayette, LA 70	Lafayette, LA 70505		
CONTACT PERSON: Tom Shinn						PHONE NO. (33	PHONE NO. (337) 237-0410		
PROPOSED START DATE: 12/01/04 RIG TYPE:			JU SS PF	DS OTHER	DS OTHER DISTANCE TO CLOSEST LAND (IN MILES): 85		E TO CLOSEST LAND (IN MILES): 85		
NEW OR UNUSUAL TECHNOLOGY YES		YES	NO	NO ONSHORE SUPPORT BASE(S): Intracoastal City, La			stal City, La		
NARRATIVE DESCRIPTION OF PROPOSED ACTIVITIES: Drill, evaluate, and complete Wells H,I,&J Install 4-pile and Lease Pipelines to EC 281 'A"; Commence Production.									
PROJECT NAME, IF APPLICABLE:						E, IF APPLICABLE:			

#### PROPOSED WELL/STRUCTURE LOCATIONS

PROPOSED WELL/STRUCTURE LOCATIONS							
WELL/ STRUCTURE NAME	SURFACE LOCATION	BOTTOM-HOLE LOCATION (FOR WELLS)					
Well <u>H</u> Name: <u>East Cameron 281</u>	CALLS: 3667' F E L and 3131' F S L OF LEASE OCS 02050, East Cameron_AREA, BLOCK 281  X: 1,476,333 Y: -109,127  LAT: 28°21'22.9835" LONG: 92°57'39.3285"  TVD(IN FEET): OMITTED MD (IN FEET): OMITTED	CALLS: OMITTED and OMITTED OF LEASE OCS 02050, East Cameron AREA, BLOCK 281  X: OMITTED Y: -OMITTED LAT: OMITTED LONG: OMITTED WATER DEPTH (IN FEET): 175'					
Well <u>I</u> Name: <u>East Cameron 281</u>	CALLS: 3667' F E L and 3131' F S L OF LEASE OCS 02050, East Cameron AREA, BLOCK 281 X: 1.476,333 Y: -109,127 LAT: 28°21'22.9835" LONG: 92°57'39.3285"	CALLS: OMITTED and OMITTED OF LEASE OCS 02050, East Cameron AREA, BLOCK 281  X: OMITTED Y: OMITTED LAT: OMITTED LONG: OMITTED					
Well <u>J</u> Name: <u>East Cameron 281</u>	TVD(IN FEET): OMITTED MD (IN FEET): OMITTED  CALLS: 3667' F E L and 3131' F S L OF  LEASE OCS 02050, East Cameron_AREA,  BLOCK 281  X: 1.476,333  Y: -109,127	WATER DEPTH (IN FEET): 175'  CALLS: OMITTED and OMITTED OF LEASE OCS 02050, East Cameron_AREA, BLOCK 281  X: OMITTED Y: OMITTED					
Well	LAT: 28°21'22.9835"  LONG: 92°57'39.3285"  TVD(IN FEET): OMITTED MD (IN FEET): OMITTED CALLS: and OF	LAT: OMITTED LONG: OMITTED  WATER DEPTH (IN FEET): 175'  CALLS: and · OF					
Name:	LEASE OCS , AREA, BLOCK  X: Y: LAT: LONG: TVD (IN FEET):  MD (IN FEET):	LEASE OCS BLOCK  X: Y: LAT: LONG:  WA FER DEPTH (IN PEET):					

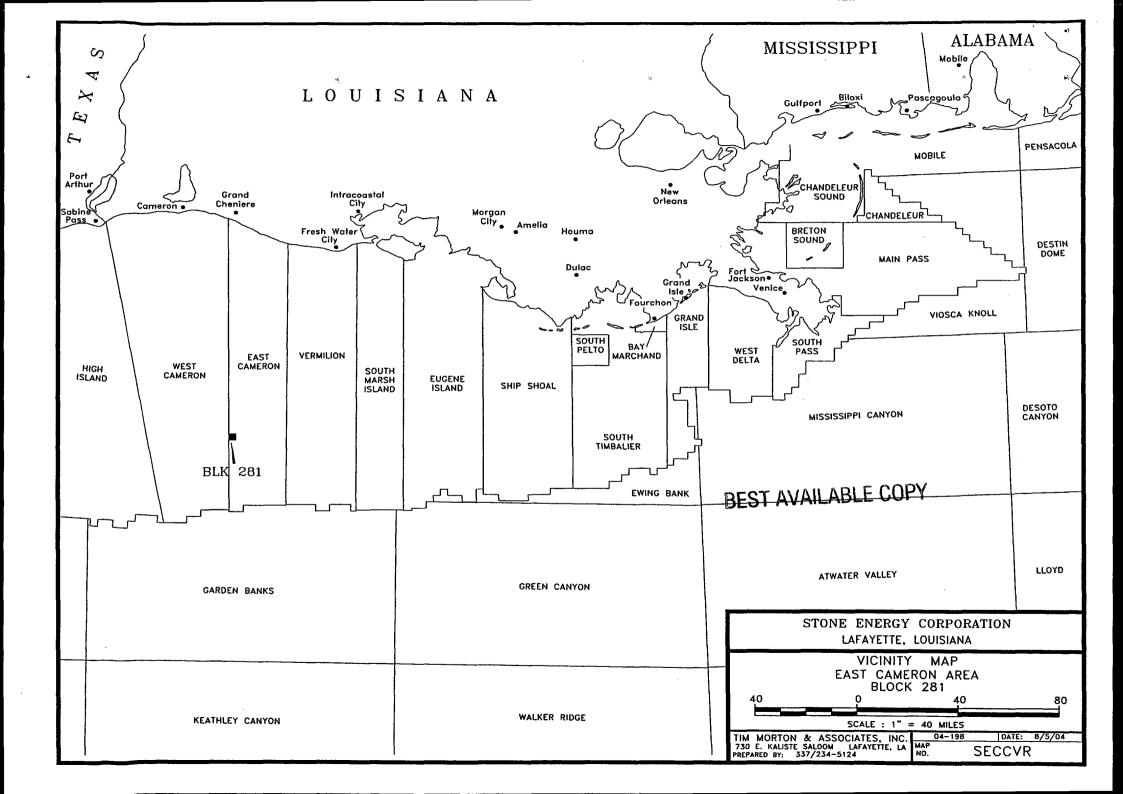


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L		REV	ISIONS	AREA	<b>L</b>				CONT. IN	T.	OC	** #
ŀ	BY	DATE	COMMENT	East	Camer	on	BLK	281			G-	-2050
ŀ			·	GROLO		-	72211	~01	<u></u>		<u>~</u>	2000
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ŀ	-			DRAWN		LPK	11.	100		July		

STRUCTURE MAPS & GEOLOGIC
CROSS-SECTIONS
ARE
EXCLUDED FROM
PUBLIC INFORMATION
COPIES OF PLAN

## **VICINITY MAP**



## DRILLING FLUID PRODUCT LIST

## DRILLING FLUID ADDITIVES PRODUCT CROSS REFERENCE

MILPARK	BAROID	M-II - Varia (25)	DESCRIPTION PROFESSION
WEIGHT MATERIALS			
MIL-BAR	BAROID	M-I BAR	API bante, 4.2 specific gravity
DENSIMIX	BARODENSE	FER-OX	Macaceous nematite
W.O. 30	BARACAB	LO-WATE	Calcium Carbonate
VISCOSIFIERS	BAINACAD	LO-VVATE	Calcium Carbonate
And the state of t	AOUACEL	ALLOS!	
MILGEL	AQUAGEL	M-I GEL	API-grade Wyoming bentonite
MILGEL NT	AQUAGEL GOLD SEAL	A 051	Untreated Wyoming bentonite
SALTWATER GEL	ZEOGEL	SALT GEL	API-grade attapulgite
SUPER-COL	QUIK-GEL	KWIK-THIK	High-yield bentonite, treated
NEW-VIS	V65 501 V455		Organic polymer blend
XCD POLYMER	XCD POLYMER	XCD POLYMER	XC Dispersable
MIL-BEN	SHUR-GEL	and the state of t	Bentonite-OCMA Spec DCFP4
DEFLOCCULANTS		1000	
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 lignosulfate
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
FILTRATION CONTRO	BAGENTS		
BIO-LOSE		Control Control Control Control Control of Section (1980) and \$ 5.1, and 5.0 section (1980) and 5.	Modified polysacchande
CHEMTROL X	DURENEX	RESINEX	Polymer blend, high-temperature
FILTREX	BARANEX	RESINEX	Polyanionic lignin resin
LIGCO	CARBONOX	TANNATHIN	Lignite
LIGCON	CC-16	CAUSTLIG	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	. 021 101	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 carboxymethylcellulose
MILPARK CMC LV	CELLEX	CMC LV	Sodium carboxymethycelllulose
CORROSION CONTRO		UNIO EV	Coddan carboxymetryceilidiose
MIL-GARD	NO-SULF ·	SULF-X	Basia sina saskanata
MIL-GARD R	BARASCAV-L		Basic zinc carbonate
NOXYGEN	COAT-888: BARACOR 113	SULF-X ES OXYGEN SCAVEN	Chelated Zinc
SCALE-BAN			73
AMI-TEC	SURFLO-H35; BARACOR 129	SI-1000	Scale Inhibitor
Alvii-1EC	BARA FILM; BARACOR 300 COAT-B 1400; COAT-C 1815	CONQOR 202;	Film-forming amine
	COA1-6 1400, COA1-C 1815	CONQOR 101; CONQOR 303	
CARBO DRIEL OIL MU	DASBUTIVES	CONQUE 303	
		VEDONALE	
CARBO-MUL	INVERMUL NT; VERSACOAT	VERSAWET	Emulsifier (and weting agent) primarily
CARBO-MUL HT	EZ MUL NT	VEDCANUU	High-temperature emulsifier and wetting agent
CARBO-TEC	INVERMUL	VERSAMUL	Emulsifier
CARBO-GEL	GELTONE II	VERSAGEL	Organophyllic clay nectonte
CARBO-VIS	GELTONE II	VERSAMOD	Organophyiiic clay
CARBO-TROL	DUDATONE	VERSATROL	Filtration control arent
CARBO-TROL A-9	DURATONE HT	VERSALIG	Nonasphaltic filtration control, high-temperature
SURF-COTE	DRILTREAT or OMC	VERSAWET	Oil wetting agent for oil muds
CARBO-MIX	DRILTREAT		Nonionic emulsifier, high-activity
CARBO-TEC HW			HW oil mud emulsifier

#### **DRILLING FLUID ADDITIVES** PRODUCT CROSS REFERENCE

MILPARK	BAROID	M-1% Programme Transfer	DESCRIPTION
SHALE CONTROL ADD	ITIVES		
ALPEX		100 PP 1	Aluminum annalau
BIO-DRILL 1402			Aluminum complex Oil mud alternative
NEW-DRILLL	EZ MUD	POLY-PLUS	PHPA liquid
NEW-DRILL HP	CE MOD	1021-100	Powdered PHPA
NEW-DRILL PLUS	EZ MUD DP		Powdered PHPA
SHALE-BOND	SHALE-BAN	HOLECOAT	Resinous shale stabilizer
PROTECTOMAGIC		1102200111	Oil-soluble blown asphalt
PROTECTOMAGIC M	AK-70	STABIL-HOLE	Water-dispersants. Blown asphalt
SPOTTING FLUIDS			2 and the periodic section aspiral
BLACK MAGIC			Oil-base spotting fluid
BLACK MAGIC LT	EX SPOT		Low toxicity oil-base spotting fluid
BLACK MAGIC SFT	27.01.01	OIL-FAZE	Oil -based spotting fluid concentrate
MIL-FREE	SCOT-FREE: ENVIRO-SPOT	PIPE-LAX	Liquid spotting fluid
BIO-SPOT	ENVIRO-SPOT	1 11 L-L-V	Nontoxic water-base spotting fluid
BIO-SPOT II	2.17.11.0 01 01		Nontoxic water-base spotting fluid
MIL-SPOT 2	SCOT-FREE	PIPE-LAX W	Weighted (oil-base) spotting fluid
0. 0. 2	0001.1122	1 11 E-B-00 00	concentrate
LUBRICANTS			
AQUA-MAGIC			Low toxicity lubricant
LUBRI-FILM	EP MUDLUBE	E.P. LUBE	Low-toxicity lubricant  Extreme-pressure lubricant
MIL-LUBE	LI MODEOBE	LUBE-106	General lubricant
ADETIERGENTS/FOAME		LOBE-100	General Iuoncant
AMPLI-FOAM	THE COLUMN CO. S. L. L. C. L.		
MIL CLEAN	DRILFOAM	FOAMER 80	Mist and stiff foaming agent
MIL CLEAN	BAROID RIG WASH BARA-KLEAN	KLEEN-UP	Biodegradable detergent
MILPARK MD	CON-DET	DD	Drilling Detergent
DEFOAMING AGENTS			
LD-8	BADA DEFOAM	DEFOAMA	
W.O. DEFOAM	BARA DEFOAM	DEFOAM-X	Hydrocarbon-base refoamer
ALUMINUM STEARATE	BARA BRINE; DEFOAM	DEFOAM-A	Alcohol-base, saltwater muds
	ALUMINUM STEARATE	ALUMINUM STEARATE	Aluminum Stearate
LOST-CIRCULATION M	AIEKIAIS		
CHEK-LOSS			Seepage loss control differential
MIL CEDAR FIRED	DI LIC CIT	MI OFBAR FIRE	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	2420.024	NUT-PLUG	Ground pecan shells
MIL-SEAL	BARO-SEAL	KWIKSEAL	Blended lost-circulation material
COTTONSEED HULLS	Cottonseed Hulls	Cottonseed Hulls	Cottonseed Hulls
PAPER	100A11 211 =		Ground paper
WALNUT SHELLS	WALL-NUT		Ground walnut shells
MAGNE-SET			Acid-soluble cement
	PLETION 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 t	rademark of Petrotite Corporation		·

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.

## STONE ENERGY CORP. SUPPLEMENTAL DEVELOPMENT COORDINATION DOCUMENT LEASE COS-G 02050 EAST CAMERON 281

## QUANTITIES AND RATES OF DISCHARGES<sup>(1)</sup> (PUBLIC INFORMATION)

<u>WELL</u>	<u>DEPTH</u>	HOLE SIZE	QUANTITY(bbls)(2)	DISCHARGE RATE*
"H"	OMITTED	26"	788	Maximum 1000 bbls/hr.
	OMITTED	17-1/2"	1071	Maximum 1000 bbls/hr
	OMITTED	12-1/4"	1600	Maximum 1000 bbls/hr
	OMITTED	8-1/2"	142	Maximum 1000 bbls/h
"]"	OMITTED	26"	466	Maximum 1000 bbls/hr.
	OMITTED	17-1/2"	761	Maximum 1000 bbls/hr
	OMITTED	12-1/4"	1642	Maximum 1000 bbls/hr
	OMITTED	8-1/2"	177	Maximum 1000 bbls/hr
"J"	OMITTED	26"	466	Maximum 1000 bbls/hr.
	OMITTED	171/2"	761	Maximum 1000 bbls/hr
	OMITTED	12-1/4"	1644	Maximum 1000 bbls/hr
	OMITTED	8-1/2"	190	Maximum 1000 bbls/hr



A list of mud additives that may be used while conducting drilling operations is shown in Attachment "D". Mud and drill cuttings will be discharged at the well site in accordance with EPA regulations.

Mud and drill cuttings which have been contaminated with oil will be transported to shore for proper disposal at an authorized disposal site.

\* The discharge rate will not exceed 1000 bbls/hr., in accordance with EPA regulations. -

(1) Discharge consists of cuttings and drilling fluid.

**ATTACHMENT "E"** 

<sup>(2)</sup> Quantity (bbls) = Capacity of hole (cuttings) + 20% (loss of drilling fluids).

## AIR QUALITY REPORT

COMPANY	Stone Energy Corporation
AREA	East Cameron
BLOCK	281
LEASE	OCS-G-02050
PLATFORM	
WELL	Н, I & J
COMPANY CONTACT	Amy Fell
TELEPHONE NO.	337/237-0410
REMARKS	

"Yes"	"No"	Air Quality Screening Questions
	No	Is any calculated Complex Total (CT) Emission amount (in tons) associated with your proposed exploration activities more than 90% of the amounts calculated using the following formulas: CT = 3400D2/3 for CO, and CT = 33.3D for the other air pollutants (where D = distance to shore in miles)?
	Nσ	Do your emission calculations include any emission reduction measures or modified emission factors?
	No	Does or will the facility complex associated with your proposed development and production activities process production from eight or more wells?
	No	Do you expect to encounter H2S at concentrations greater than 20 parts per million (ppm)?
	No	Do you propose to flare or vent natural gas in excess of the criteria set forth under 250.1105(a)(2) and (3)?
	No	Do you propose to burn produced hydrocarbon liquids?
	No	Are your proposed development and production activities located within 25 miles from shore?
	No	Are your proposed development and production activities located within 200 kilometers of the Breton Wilderness Area?

#### If ALL questions are answered "No":

Fill in the information below about your lease term pipelines and submit only this coversheet with your plan.

#### If ANY question is answered "Yes":

Prepare and submit a full set of spreadsheets with your plan.

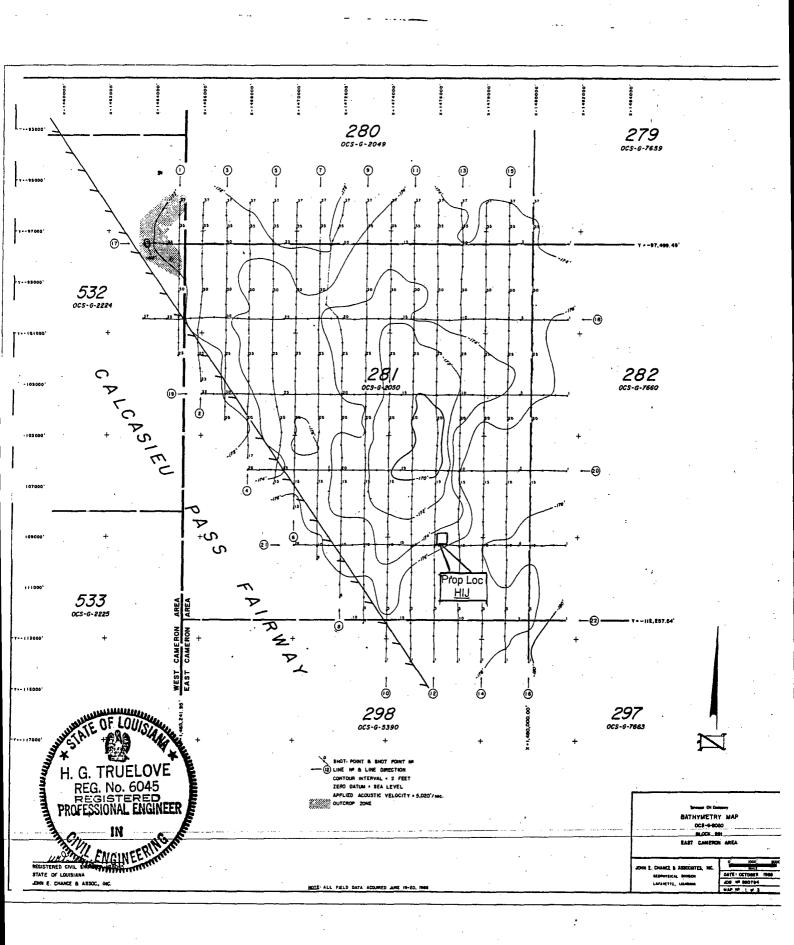
YEAR	NUMBER OF PIPELINES	TOTAL NUMBER OF CONSTRUCTION DAYS
2004		
2005	3	14
2006		
2007		
2008		
2009		
2010		
2011		
2012		
2013		
2014		

#### STONE ENERGY CORPORATION EAST CAMERON AREA BLOCK 281 OCS-G-02050

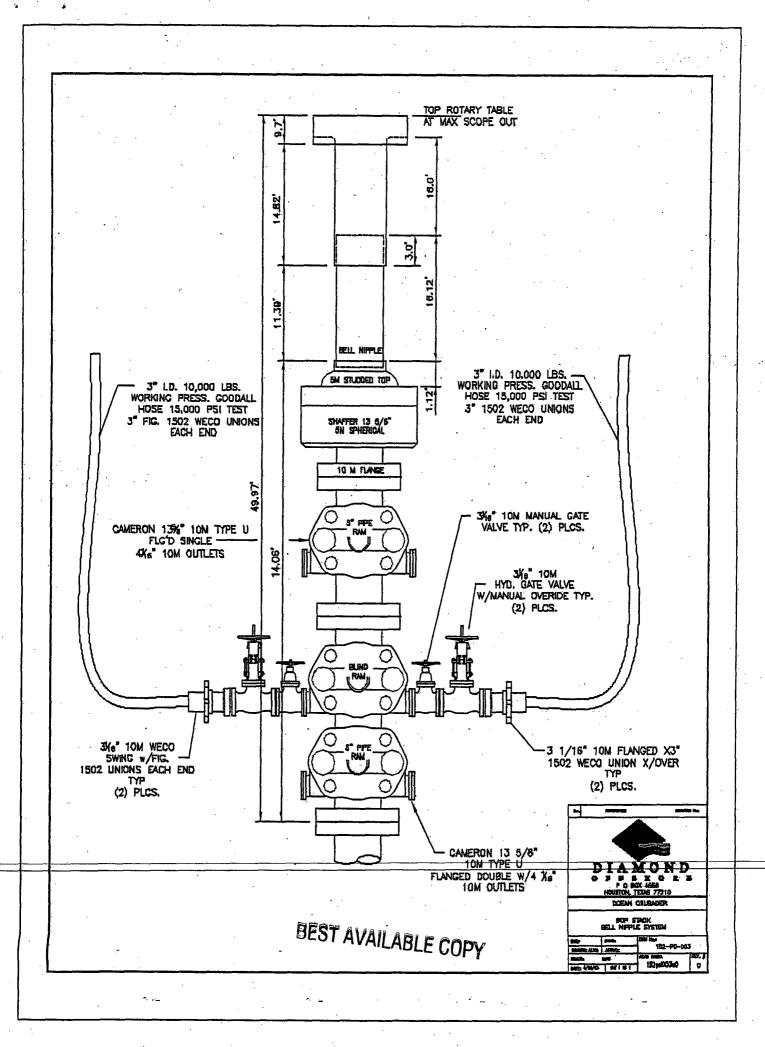
Air Pollutant	Plan Emission Amounts (tons)	Calculated Exemption Amounts (tons)	Calculated Complex Total Emission Amounts (tons)
Carbon monoxide (CO)	203.38	65212.64	203.38
Particulate matter (PM)	27.12	2797.20	27.12
Sulphur dioxide (SO2)	124.40	2797.20	124.40
Nitrogen oxides (NOx)	932.14	2797.20	932.14
Volatile organic compounds (VOC)	39.18	2797.20	39.18

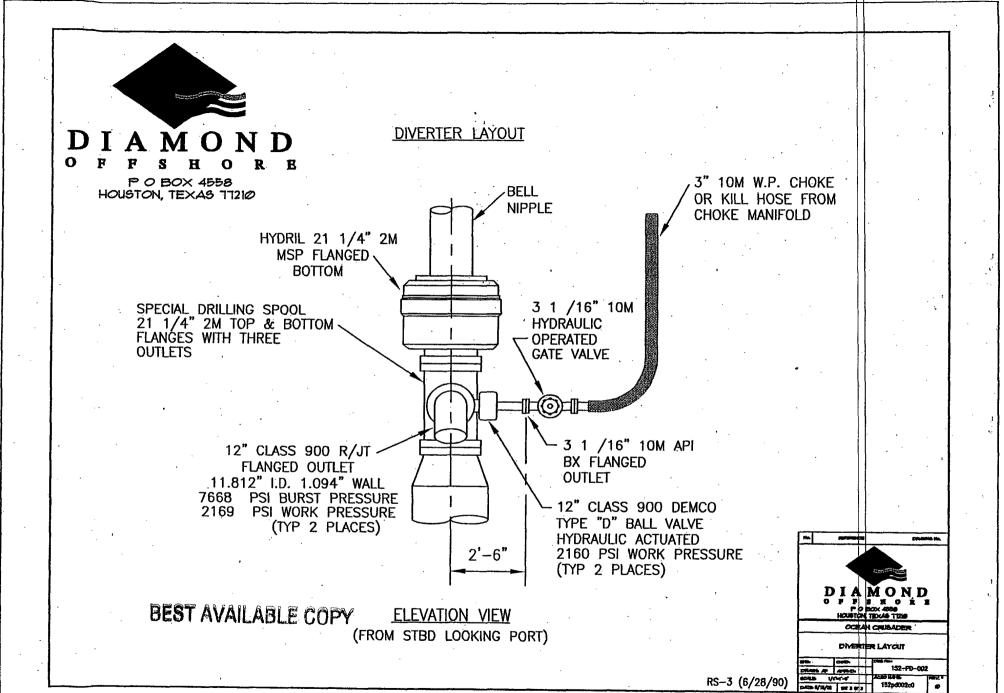
Contact: Joe Morton, P.E., 337/234-5124, jmorton@mortoninc.com

## **BATHYMETRY MAP**



## **BOP AND DIVERTER SCHEMATIC**





## ENVIRONMENTAL IMPACT ANALYSIS

# **Environmental Impact Analysis**

East Cameron Area Block 281 OCS-G-02050

August 5, 2004

Prepared for Stone Energy Corporation by Tim Morton & Associates, Inc.

Filename: C:\2004\Stone\EastCameron\198-Block281\EIAEC281.wpd

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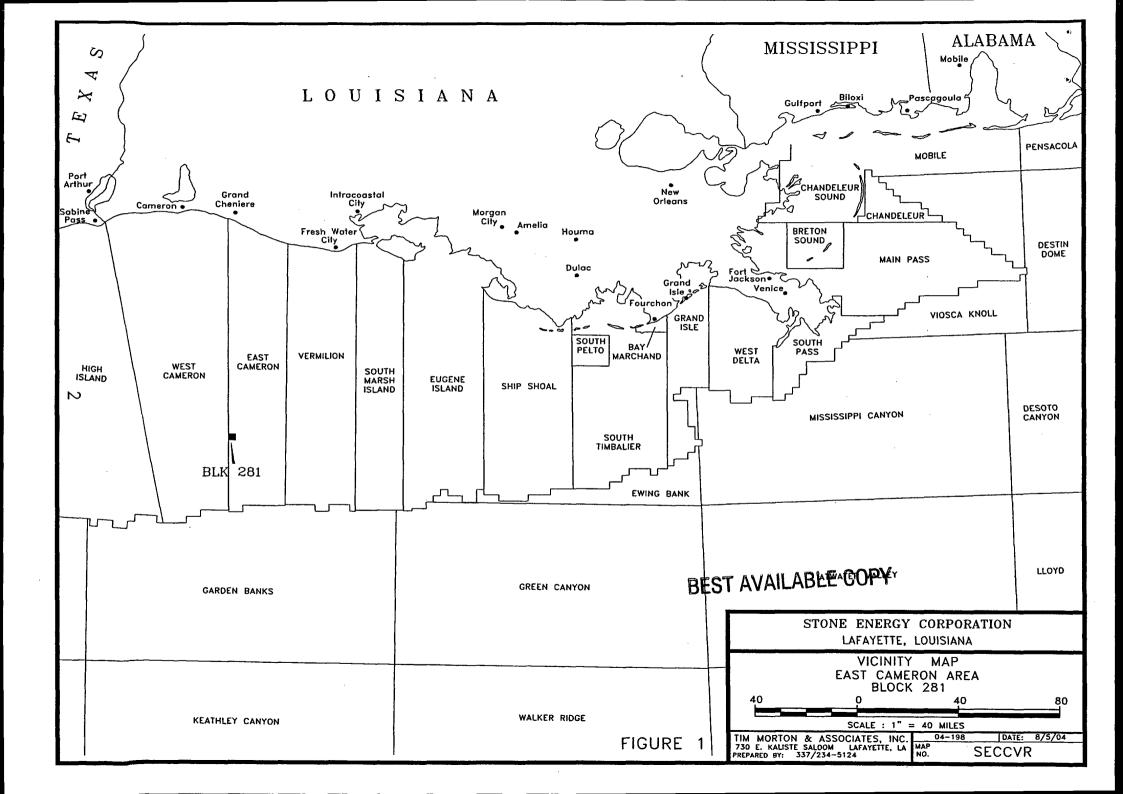
### I. Description of the Proposed Activity

This environmental impact analysis addresses the activity proposed by Stone Energy Corporation (Stone) for East Cameron Area Block 281 (OCS-G-02050). The approximate location of the activity is presented on a general vicinity map of the Outer Continental Shelf (OCS) lease areas off the coast of Louisiana (Figure 1).

Stone proposes to utilize a jackup rig to drill three wells in East Cameron Area Block 281 from a common surface location. Stone anticipates that it will take approximately 65 days to drill and complete each well. If the wells are successful, Stone proposes to install a 4-pile platform at the surface location of the wells and lease term pipelines to their existing "A" platform located in East Cameron Area Block 281. More specific information can be found in the attached Development Operations Coordination Document (DOCD).

The proposed activities will be carried out by Stone with a guarantee of the following:

- The best available and safest technologies will be utilized throughout the projects. This includes meeting all applicable requirements for equipment types, general project layout, safety systems, equipment and monitoring systems.
- All operations will be covered by a Minerals Management Service (MMS) approved
  Oil Spill Response Plan.
- All applicable Federal, State, and local requirements regarding air emissions, water quality, and discharge for the proposed activities, as well as any other permit conditions, will be complied with.



## **II. Impact-Producing Factors**

	Refer		ing Factors (IPF's OCS Lease Sale E			of IPF's
	Emissions	Effluents	Physical	Wastes	Accidents	Other IPF's
	(air, noise, light, etc.)	(muds, cuttings, other discharges	disturbances to the seafloor	sent to shore for	(e.g., oil spills, chemical spills,	you identify
All the second s		to the water column	(rig or anchor	treatment	H2S releases)	
Environmental		or seafloor)	emplacements, etc.)	or disposal		
Resources		le de la companya de	1 6		1	
Site-specific at Offshore Location  Designated topographic features						
Pinnacle Trend area live-bottoms						
Eastern Gulf live bottoms						
Chemosynthetic communities						
Water quality		X			X	
Fisheries					X	
Marine mammals,	X				X	
Sea turtles	X				X	
Air quality	X				·	
Shipwreck sites (known or potential)  Prehistoric archaeological sites			<del></del>			3
eremistoric archaeological sites						<u></u>
Vicinity of Offshore Location				<u> </u>	1	
Essential fish habitat			* 1974		X	
Marine and pelagic birds					X	
Public health and safety						
Here the second						
Coastal and Onshore	T			I	V I	
Beaches					X	
Wetlands	X			-	X	
Coastal wildlife refuges	Λ				X	
Wilderness areas					X	
			······			
Other Resources You Identify						
Marie Committee						
Stanfordi.						

# III. Analysis of Impact-Producing Factors

# A. Site-specific at Offshore Location

# 1. Designated Topographic Features

After a review of impact-producing factors (including effluents, physical disturbances to the seafloor, and accidents) resulting from activities proposed in the DOCD, there will be no adverse impacts to topographic features. East Cameron Area Block 281 is located approximately 29 miles west of Sonnier Bank, the nearest known topographic feature.

The following discussion of topographic features is summarized from the Final Environmental Impact Statement (USDOI, OCS EIS/EA MMS 2002-052). The Topographic Lease Stipulation has been used on leases since 1973, and this experience shows conclusively that the stipulation effectively prevents damage to the biota of these banks from routine oil and gas activities. In the unlikely event of an accidental surface or subsurface oil spill, concentrated oil is not expected to impact sessile biota on topographic features. Crests of designated topographic features in the northern Gulf of Mexico are found below 10 meters; therefore, concentrated oil from a surface spill is not likely to reach sessile biota. Subsurface spills could result in the formation and settling of oil-saturated material, and oil-sediment particles could come into contact with living coral tissue; however, a subsurface spill should rise to the surface, and any oil remaining at depth would probably be swept clear of the banks by currents moving around the banks (Rezak et al., 1983). Activities proposed in the DOCD will be covered by Stone's Oil Spill Response Plan (OSRP).

### 2. Pinnacle Trend Area Live Bottoms

After a review of impact-producing factors (including effluents, physical disturbances to the seafloor, and accidents) resulting from activities proposed in the DOCD, there will be no adverse impacts to pinnacle trend live bottoms. East Cameron Area Block 281 is located approximately 277 miles from Main Pass Area Block 290, the nearest block protected by the pinnacle trend live bottom stipulation.

The following discussion of pinnacle trend area live bottoms is summarized from the Final Environmental Impact Statement (USDOI, OCS EIS/EA MMS 2002-052). By identifying the individual pinnacles present at the activity site, the lessee would be directed to avoid placement of the drilling rig and anchors on the sensitive areas. Thus, mechanical damage to the pinnacles is eliminated when measures required by the stipulation are imposed. The stipulation does not address the discharge of effluents near the pinnacles because the pinnacle trend is subjected to heavy natural sedimentation and is at considerable depths. The rapid dilution of drill cuttings and muds will minimize the potential of significant concentration of effluents on the pinnacles.

In the unlikely event of an accidental surface or subsurface oil spill, concentrated oil is not expected to impact biota of the pinnacle trend. Any surface oil spill resulting from a proposed action would likely have no impact on the biota of the pinnacle trend because the crests of these features are much deeper than 20 meters. All evidence to date indicates that accidental oil discharges that occur at the seafloor from a pipeline or blowout would rise in the water column, surfacing almost directly over the source

location, and thus not impact pinnacles. Activities proposed in the DOCD will be covered by Stone's Oil Spill Response Plan (OSRP).

### 3. Eastern Gulf Live Bottoms

After a review of impact-producing factors (including effluents, physical disturbances to the seafloor, and accidents) resulting from activities proposed in the DOCD, there will be no adverse impacts to eastern gulf live bottoms. East Cameron Area Block 281 is located approximately 316 miles west of the nearest block protected by the eastern gulf live bottom stipulation.

The following discussion of eastern gulf live bottoms is summarized from the Final Environmental Impact Statement (USDOI, OCS EIS/EA MMS 2000-077). Through detection and avoidance, the eastern gulf live bottom lease stipulation minimizes the likelihood of mechanical damage from OCS activities associated with rig and anchor emplacement to the sessile and pelagic communities associated with the crest and flanks of such features. Since this area is subject to heavy natural sedimentation, this stipulation does not include and specific measures to protect the pinnacles from the discharge of effluents.

In the unlikely event of an accidental surface or subsurface oil spill, concentrated oil is not expected to impact eastern gulf live bottoms because of the depth of the features and dilution of spills by currents and/or quickly rising oil. Activities proposed in the DOCD will be covered by Stone's Oil Spill Response Plan (OSRP).

# 4. Chemosynthetic Communities

After a review of impact-producing factors (including effluents, physical disturbances to the seafloor, and accidents) resulting from activities proposed in the DOCD, there will be no adverse impacts to chemosynthetic communities. Bottom-disturbing activities proposed in this DOCD will not impact any deepwater chemosynthetic communities as the water depths in East Cameron Area Block 281 range from 169 feet to 178 feet.

The following discussion of chemosynthetic communities is summarized from the Final Environmental Impact Statement (USDOI, OCS EIS/EA MMS 2002-052). Impacts to chemosynthetic communities from any oil released would be a remote possibility. Release of hydrocarbons associated with a blowout should not present a possibility for impact to chemosynthetic communities located a minimum of 457 meters (1,500 feet) from well sites. East Cameron Area Block 281 is located approximately 52 miles north of Garden Banks Area Block 416, the nearest block with a known chemosynthetic community. Activities proposed in the DOCD will be covered by Stone's Oil Spill Response Plan (OSRP).

#### 5. Water Quality

After a review of impact-producing factors (including effluents and accidents) resulting from activities proposed in the DOCD, there are potential impacts to water quality. The discharges generated as a result of drilling and production activities associated with this DOCD will be discharged upon successful bioassay test as per NPDES discharge guidelines. Solids wastes; typically paper, plastic, cloth, and metal, will be collected and transported to shore for disposal at an approved disposal facility. Solid wastes generated from the transportation vessels, normally just garbage, will be collected and returned to

shore for disposal with the drilling rig refuse. Scrap metal and other metal wastes will be recycled or sold as scrap and will not be shipped to a disposal facility with the other refuse. Sanitary wastes will be treated in approved marine sanitation devices as required by the Clean Water Act. All biodegradable wastes, such as kitchen food scraps, will be comminuted or ground and discharged in accordance with Annex V of MARPOL 73/78. Hazardous wastes from the drilling rig, such as paint, or paint thinner, will be collected in sealed metal containers and transported to an approved disposal site in accordance with RCRA guidelines. All applicable Federal, State, and local requirements regarding water quality and discharge for the proposed activities, as well as any other permit conditions, will be complied with.

The following discussion of potential impacts to water quality is summarized from the Final Environmental Impact Statement (USDOI, OCS EIS/EA MMS 2002-052). In the unlikely event of an accidental surface or subsurface oil spill, a variety of physical, chemical, and biological processes act to disperse the oil slick, such as spreading, evaporation of the more volatile constituents, dissolution into the water column, emulsification of small droplets, agglomeration sinking, microbial modification, photochemical modification, and biological ingestion and excretion. The water quality would be temporarily affected by the dissolved components and small oil droplets that do not rise to the surface or are mixed down by surface turbulence. Dispersion by currents and microbial degradation would remove the oil from the water column or dilute the constituents to background levels. Activities proposed in the DOCD will be covered by Stone's Oil Spill Response Plan (OSRP).

#### 6. Fisheries

After a review of impact-producing factors (including accidental oil spills) resulting from activities proposed in the DOCD, there are potential impacts to fisheries. In the unlikely event of an accidental surface or subsurface oil spill, there is the potential for some detrimental effects to fisheries.

The following discussion of potential impacts to fisheries is summarized from the Final Environmental Impact Statement (USDOI, OCS EIS/EA MMS 2002-052). The Gulf sturgeon (Ancipenser oxyrincus desotoi) is the only listed threatened fish species in the Gulf of Mexico. The Gulf sturgeon could be impacted by oil spills. Contact with spilled oil could cause irritation of gill epithelium and disturbance of liver function in Gulf sturgeon. The likelihood of spill occurrence and contact to the Gulf sturgeon is very low.

Should a spill occur in the area of mobile adult finfish or shellfish, the effects would likely be sublethal and the extent of the damage would be reduced to the capability of adult fish and shellfish to avoid a spill, to metabolize hydrocarbons, and to excrete both metabolites and parent compounds. Activities proposed in the DOCD will be covered by Stone's Oil Spill Response Plan (OSRP).

## 7. Marine Mammals

After a review of impact-producing factors (including vessel traffic, noise, accidental oil spills, and loss of trash and debris) resulting from activities proposed in the DOCD, there are potential impacts to marine mammals. Endangered or threatened marine mammal species which might occur in the Gulf of Mexico are West Indian manatee (<u>Trichechus</u>

manatus), northern right whale (<u>Eubalaena glacialis</u>), fin whale (<u>Balaenoptera physalus</u>), humpback whale (<u>Megaptera novaeangliae</u>), sei whale (<u>B. borealis</u>), sperm whale (<u>Physeter macrocephalus</u>), and blue whale (<u>B. musculus</u>)(USDOI, OCS EIS/EA MMS 2002-052). Several non-endangered and non-threatened mammal species of whales and dolphins also occur in the Gulf of Mexico.

The following discussion of potential impacts to marine mammals is summarized from the Final Environmental Impact Statement (USDOI, OCS EIS/EA MMS 2002-052). Small numbers of marine mammals could be killed or injured by chance collision with service vessels and by eating indigestible debris, particularly plastic items, lost from service vessels, drilling rigs, and fixed and floating platforms. Sperm whales are one of the 11 whale species that are hit commonly by ships (Laist et al., 2001). Collisions between OCS vessels and cetaceans within the project area are expected to be unusual events.

Deaths due to structure removals are not expected due to existing mitigation measures or those being developed for structures placed in oceanic waters. There is no conclusive evidence whether anthropogenic noise has or has not caused long-term displacements of, or reductions in, marine mammal populations. Contaminants in waste discharges and drilling muds might indirectly affect marine mammals through food-chain biomagnification, although the scope of effects and their magnitude are not known.

Chronic and sporadic sublethal effects could occur that may stress and/or weaken individuals of a local group or population and make them more susceptible to infection from natural or anthropogenic sources. Few lethal effects are expected from oil spills, chance collisions with service vessels and ingestion of plastic material. Oil spills of any size are estimated to be aperiodic events that may contact cetaceans. Disturbance (e.g. noise) may stress animals, weaken their immune systems, and make them more vulnerable to parasites and diseases that normally would not be fatal.

The net result of any disturbance would depend on the size and percentage of the population affected, ecological importance of the disturbed area, environmental and biological parameters that influence an animal's sensitivity to disturbance and stress, and the accommodation time in response to prolonged disturbance (Geraci and St. Aubin, 1980). Routine oil and gas activities are not expected to have long-term adverse effects on the size and productivity of any marine mammal species or population stock endemic to the northern Gulf of Mexico.

#### 8. Sea Turtles

After a review of impact-producing factors (including vessel traffic, noise, accidental oil spills, and loss of trash and debris) resulting from activities proposed in the DOCD, there are potential impacts to sea turtles. Endangered or threatened sea turtle species which might occur in the Gulf of Mexico are Kemp's ridley turtle (Lepidochelys kempii), green turtle (Chelonia mydas), hawksbill turtle (Eretmochelys imbricata), leatherback turtle (Dermochelys coriacea), and loggerhead turtle (Caretta caretta) (USDOI, Region IV Endangered Species Notebook).

The following discussion of potential impacts to sea turtles is summarized from the Final Environmental Impact Statement (USDOI, OCS EIS/EA MMS 2002-052). Routine

activities resulting from a proposed action have the potential to harm individual sea turtles. These animals could be impacted by the degradation of water quality resulting from operational discharges; noise generated by helicopter and vessel traffic, platforms, and drillships; brightly-lit platforms; explosive removals of offshore structures; vessel collisions; and jetsam and flotsam generated by service vessels and OCS facilities. Lethal effects are most likely to be from chance collisions with OCS service vessels and ingestion of plastic materials. "Takes" due to explosive removals are expected to be rare due to mitigation measures already established (e.g. National Marine Fisheries Service (NMFS) Observer Program) and in development. Most OCS activities are expected to have sublethal effects. Contaminants in waste discharges and drilling muds might indirectly affect sea turtles through food-chain biomagnification; there is uncertainty concerning the possible effects. Chronic sublethal effects (e.g. stress) resulting in persistent physiological or behavioral changes and/or avoidance of impacted areas could cause declines in survival or fecundity, and result in either population declines, however, such declines are not expected. The routine activities of a proposed action are unlikely to have significant adverse effects on the size and recovery of any sea turtle species or population in the Gulf of Mexico.

In the unlikely event of an accidental surface or subsurface oil spill, sea turtles could be adversely impacted. Oil spills and oil-spill-response activities are potential threats that could have lethal effects on turtles. Contact with oil, consumption of oil particles, and oil-contaminated prey could seriously affect individual sea turtles. Oil-spill-response planning and the habitat protection requirements of the Oil Pollution Act of 1990 should mitigate these threats.

# 9. Air Quality

Estimated air emissions associated with the proposed activities have been calculated and were determined to be below the MMS exemption levels for particulates, sulfur oxides, nitrogen oxides, volatile organic compounds and carbon monoxide. There would be a limited degree of air quality degradation in the immediate vicinity of the proposed activities; however, the emissions associated with the proposed activities are not projected to have significant effects on onshore air quality.

# 10. Shipwreck Sites (known or potential)

After a review of impact-producing factors (including physical disturbances to the seafloor) resulting from activities proposed in the DOCD, there will be no adverse impacts to known or potential shipwreck sites. The area of proposed activities falls outside the zone designated as an area with a high probability of historic shipwrecks.

## 11. Prehistoric Archaeological Sites

After a review of impact-producing factors (including physical disturbances to the seafloor) resulting from activities proposed in the DOCD, there are potential impacts to prehistoric archaeological sites. The area of proposed activities falls outside the zone designated as an area with a high probability of pre-historic archaeological resources.

# **B.** Vicinity of Offshore Location

#### 1. Essential Fish Habitat

After a review of impact-producing factors (including accidental oil spills) resulting from activities proposed in the DOCD, there are potential impacts to essential fish habitat. In the unlikely event of an accidental surface or subsurface oil spill, there is the potential for some detrimental effects to essential fish habitat.

The following discussion of potential impacts to essential fish habitat is summarized from the Final Environmental Impact Statement (USDOI, OCS EIS/EA MMS 2002-052). Should a spill occur in the area of a mobile adult finfish or shellfish, the effects would likely be sublethal and the extent of the damage would be reduced to the capability of adult fish and shellfish to avoid a spill, to metabolize hydrocarbons, and to excrete both metabolites and parent compounds. Activities proposed in the DOCD will be covered by Stone's Oil Spill Response Plan (OSRP).

# 2. Marine and Pelagic Birds

After a review of impact-producing factors (including vessel traffic, noise, accidental oil spills, and loss of trash and debris) resulting from activities proposed in the DOCD, there are potential impacts to marine and pelagic birds.

The following discussion of potential impacts to marine and pelagic birds is summarized from the Final Environmental Impact Statement (USDOI, OCS EIS/EA MMS 2002-052). The majority of effects on endangered/threatened and non-endangered/non-threatened marine birds are expected to be sublethal: behavioral effects, sublethal exposure to or intake of OCS-related contaminants or discarded debris, temporary disturbances, and displacement of localized groups from impacted habitats. Chronic sublethal stress, however, is often undetectable in birds. As a result of stress, individuals may weaken, facilitating infection and disease; then migratory species may not have the strength to reach their destination. No significant habitat impacts are expected to occur directly from routine activities resulting from a proposed action.

Oil spills pose the greatest potential direct and indirect impacts to marine birds. Birds that are heavily oiled are usually killed. If physical oiling of individuals or local groups of birds occurs, some degree of both acute and chronic physiological stress associated with direct and secondary uptake of oil would be expected. Lightly oiled birds can sustain tissue and organ damage from oil ingested during feeding and grooming or from oil that is inhaled. Stress and shock enhance the effects of exposure and poisoning. Low levels of oil could stress birds by interfering with food detection, feeding impulses, predator avoidance, territory definition, homing of migratory species, susceptibility to physiological disorders, disease resistance, growth rates, reproduction, and respiration. Reproductive success can be affected by the toxins in oil. Indirect effects occur by fouling of nesting habitat, and displacement of individuals, breeding pairs, or populations to less favorable habitats. Dispersants used in spill cleanup activity can have toxic effects similar to oil on the reproductive success of marine birds. Activities proposed in the DOCD will be covered by Stone's Oil Spill Response Plan (OSRP).

## 3. Public Health and Safety

After a review of impact-producing factors (including an accidental H<sub>2</sub>S release) resulting from activities proposed in the DOCD, there will be no adverse impacts to public health and safety. Stone requests that East Cameron Area Block 281 be classified as an area where the absence of H<sub>2</sub>S has been confirmed.

# C. Coastal and Onshore

#### 1. Beaches

After a review of impact-producing factors (including accidental oil spills) resulting from activities proposed in the DOCD, there are potential impacts to beaches. East Cameron Area Block 281 is located approximately 84 miles from the coast of Cameron Parish, Louisiana. Due to the distance from shore and the available oil spill response capabilities, no adverse impacts to beaches are anticipated as a result of the proposed activities. Activities proposed in the DOCD will be covered by Stone's Oil Spill Response Plan (OSRP).

#### 2. Wetlands

After a review of impact-producing factors (including accidental oil spills) resulting from activities proposed in the DOCD, there are potential impacts to wetlands. East Cameron Area Block 281 is located approximately 84 miles from the coast of Cameron Parish, Louisiana. Due to the distance from shore and the available oil spill response capabilities, no adverse impacts to wetlands are anticipated as a result of the proposed activities. Activities proposed in the DOCD will be covered by Stone's Oil Spill Response Plan (OSRP).

# 3. Shore Birds and Coastal Nesting Birds

After a review of impact-producing factors (including vessel traffic, noise, accidental oil spills, and loss of trash and debris) resulting from activities proposed in the DOCD, there are potential impacts to shore birds and coastal nesting birds. East Cameron Area Block 281 is located approximately 84 miles from the coast of Cameron Parish, Louisiana. Due to the distance from shore and the available oil spill response capabilities, no adverse impacts to shore birds and coastal nesting birds are anticipated as a result of the proposed activities.

The following discussion of potential impacts to shore birds and coastal nesting birds is summarized from the Final Environmental Impact Statement (USDOI, OCS EIS/EA MMS 2002-052). The majority of effects on endangered/threatened and non-endangered/non-threatened shore birds and coastal nesting birds are expected to be sublethal: behavioral effects, sublethal exposure to or intake of OCS-related contaminants or discarded debris, temporary disturbances, and displacement of localized groups from impacted habitats. Chronic sublethal stress, however, is often undetectable in birds. As a result of stress, individuals may weaken, facilitating infection and disease; then migratory species may not have the strength to reach their destination. No significant habitat impacts are expected to occur directly from routine activities resulting from a proposed action. Secondary impacts to coastal habitats will occur over the long-term and may ultimately displace species from traditional sites to alternative sites.

Oil spills pose the greatest potential direct and indirect impacts to shore birds and coastal nesting birds. Birds that are heavily oiled are usually killed. If physical oiling of individuals or local groups of birds occurs, some degree of both acute and chronic physiological stress associated with direct and secondary uptake of oil would be expected. Small coastal spills, pipeline spills, and spills from accidents in navigated waterways can contact and affect the different groups of coastal birds, most commonly marsh birds, waders, waterfowl, and certain shorebirds. Lightly oiled birds can sustain tissue and organ damage from oil ingested during feeding and grooming or from oil that is inhaled. Stress and shock enhance the effects of exposure and poisoning. Low levels of oil could stress birds by interfering with food detection, feeding impulses, predator avoidance, territory definition, homing of migratory species, susceptibility to physiological disorders, disease resistance, growth rates, reproduction, and respiration. Reproductive success can be affected by the toxins in oil. Indirect effects occur by fouling of nesting habitat, and displacement of individuals, breeding pairs, or populations to less favorable habitats. Dispersants used in spill cleanup activity can have toxic effects similar to oil on the reproductive success of marine birds. Activities proposed in the DOCD will be covered by Stone's Oil Spill Response Plan (OSRP).

## 4. Coastal Wildlife Refuges

After a review of impact-producing factors (including accidental oil spills) resulting from activities proposed in the DOCD, there are potential impacts to coastal wildlife refuges. East Cameron Area Block 281 is located approximately 84 miles south of Rockefeller Refuge, the nearest coastal wildlife refuge. Due to the distance from this refuge and the available oil spill response capabilities, no adverse impacts to coastal wildlife refuges are anticipated as a result of the proposed activities. Activities proposed in the DOCD will be covered by Stone's Oil Spill Response Plan (OSRP).

#### 5. Wilderness Areas

After a review of impact-producing factors (including accidental oil spills) resulting from activities proposed in the DOCD, there are potential impacts to wilderness areas. East Cameron Area Block 281 is located approximately 84 miles from Cameron Parish, Louisiana. Due to the distance from shore and the available oil spill response capabilities, no adverse impacts to wilderness areas are anticipated as a result of the proposed activities. Activities proposed in the DOCD will be covered by Stone's Oil Spill Response Plan (OSRP).

# D. Other Environmental Resources Identified

None

# IV. Impacts on Proposed Activities

A Shallow Hazards Assessment was prepared for the proposed surface location. The surface location was evaluated for any seafloor and subsurface geological and manmade features and conditions that may adversely affect operations. No impacts are expected on the proposed activities from site-specific environmental conditions.

# V. Alternatives

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

# VI. Mitigation Measures

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

# VII. Consultation

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

# VIII. References

- Geracie, J. R. and D. J. St. Aubin
  - 1980 Offshore petroleum resource development and marine mammals: a review and research recommendations. Marine Fisheries Review. 42:1-12.
- Laist, D. W., A. R. Knowlton, J. G. Mead, A. S. Collet, and M. Podesta 2001 Collisions between ships and whales. Marine Mammal Science. 17:35-75.
- U. S. Department of the Interior, Fish and Wildlife Service
  - 1976 Endangered and threatened species of the southeastern United States. Region IV, Atlanta, Georgia (periodically updated).
- U. S. Department of the Interior, Minerals Management Service
  - 2002 Final Environmental Impact Statement, Gulf of Mexico OCS Oil and Gas Lease Sales: 2003-2007, Central Planning Area Sales 185, 190, 194, 198, and 2001: Western Planning Area Sales 187, 192, 196, and 200, Volume I. Prepared by Minerals Management Service, Gulf of Mexico, OCS Region, New Orleans, Louisiana.

# WASTES AND DISPOSAL TABLES

ATTACHMENT "J"

# Wastes and Discharges Information Table 1. Discharges Table (Wastes to be discharged overboard)

Type of Waste Approximate Composition	Amount to be Discharged (volume or rate)	Maximum Discharge Rate	Treatment and/or Storage, Discharge Location*, * and Discharge Method
Water-based drilling fluids	820 bbl/well	220 bbl/hr	EC 281 Loc 'H', 'I', &'J' Discharge at Surface
Drill cuttings associated with water-based fluids	4700 bbl/well	2200 bbl/hr	EC 281 Loc 'H', 'I', &'J' Discharge at Surface
Drill cuttings associated with synthetic drilling fluids	1200 bbl/well	320 bb/hr	EC 281 'Loc 'H','I',&'J' Recycle & Discharge at Surface
Muds, cuttings and cement at the seafloor – Subsea Wells only	Not Applicable	Not Applicable	Not Applicable
Well Completion, Treatment, or Workover Fluids	Compl- 2800 bbl/well Workover-300 bbl/well Treatment-250 bbl/well	300 bbl/well every 3 years after initial completion	EC 281 Loc 'H', 'I',&'J' Discharge used fluids overboard, return excess to shore for credit.
Miscellaneous discharges (permitted under NPDES) (Excess cement with cementing chemicals)	500 bbl/well	900 bbl/hr	EC 281 Loc 'H', 'I',&'J' Discharge at Surface
Uncontaminated fresh or seawater (cooling water)	216,000 bbl/well (drilling/rig operations) avg. daily – 2500 bbl/day	150 bbl/hr	EC 281 'Loc 'H','I',&'J' Discharge at Surface
Uncontaminated ballast seawater	32,000 bbl per well	15,000 bbl/hr	EC 281 Loc 'H', 'I',&'J' Discharge at Surface
Uncontaminated bilge water	Not Applicable	Not Applicable	EC 281 Loc 'H', 'I',&'J' Discharge at Surface
Desalinization Unit	402,000 bbl/well 6700 bbl/day	Not Applicable	EC 281 Loc 'H', 'I',&'J' Discharge at Surface
Sanitary wastes	20 gal/person/day	Not Applicable	EC 281 Loc 'H', 'I',&'J' Chlorinate & Discharge at Surface
Domestic waste-food	1800/well 30 gal/day	Not Applicable	EC 281 'Loc 'H','I',&'J' Remove solids & Discharge at Surface
Deck Drainage	1)Dependant upon rainfall 2)Wash/Rinse water -1500 bbl (25bbl/day 2) 100 bbl/day 2) 100 bbl/day		EC 281 'Loc 'H','I',&'J' Treated to Remove oil & grease. Discharge overboard

<sup>•</sup> Area, block, MMS facility ID (if available)

# Wastes and Discharges Information Table 1. Discharges Table (Wastes to be discharged overboard) PAGE 2 – <u>PRODUCTION</u> <u>EC 281 Locations H, I, & J to be processed at EC 281 'A' PLATFORM ID: #21764 1</u>

Type of Waste Approximate Composition	Amount to be Discharged (volume or rate)	Maximum Discharge Rate	Treatment and/or Storage, Discharge Location*,,* and Discharge Method
Produced Water	2,555 bbl/yr	7 bbl/day	EC 281 "A" Treated to Remove oil & grease. Discharge overboard
Sanitary wastes	20 gal/person/day	Not Applicable	EC 281 "A" Chlorinate & Discharge
Deck Drainage	0 - 365 bbl/yr Dependant upon rainfall	1 bbl/day	EC 281 "A" Treated to remove oil & grease. Discharged overboard

# Wastes and Discharges Information Table 2. Disposal Table (Wastes to be disposed of, not discharged overboard)

Type of Waste Approximate Composition	Amount	Rate per Day	Name/Location of Disposal Facility	Treatment and/or Storage, Transport and Disposal Method
Spent oil-based drilling fluids and cuttings	1200 bbl/well	320 bbl/hr	Newpark Intracoastal City, LA	Transport in USCG approved temporary storage tank on offshore service vessels to shorebase.
Spent synthetic-based drilling fluids and cuttings	1200 bbl/well	320 bbl/hr	Newpark Intracoastal City, LA	Transport in USCG approved temporary storage tank on offshore service vessels to shorebase.
Workover fluids	150 bbl	5 bbl/day	Stone Energy Intracoastal City, LA	Transport in USCG approved temporary storage tank on offshore service vessels to shorebase.
Trash and debris	60,000 ft 3/well	12 ft 5/day	Stone Energy Intracoastal City, LA	Transport in storage bins on offshore service vessels to shorebase
PRODUCTION				
Oil-contaminated Produced sand	200 lb/yr	0.2 bbl/day	Newpark Intracoastal City, LA	Store in cutting box and transport to land farm
Waste Oil	100 lb/yr Treated and Sales	0.1 bbl/day	Stone Energy Intracoastal City, LA	Tote tanks or drums and transported onshore and picked up by vendors
Scrap Iron / Recycled sent to other locations	1000 lb	2.7 bbl/day	Stone Energy Intracoastal City, LA	Transport in scrap iron bin to shore location
Workover fluids	150 bbl	5 bbl/day	Stone Energy Intracoastal City, LA.	Transport in USCG approved temporary storage tank on offshore service vessels to shorebase.
Trash and debris	724 ft3	2 ft3	Stone Energy Intracoastal City, LA	Transport in compactor bas or trash bin
Chemical product wastes	100 ьы	2 bbl/day	Stone Energy, Intracoastal, LA	Transport in barrels on Crew boat to shore location

# **SPILL RESPONSE**

	OFFSHORE SKIMMING EQUIPMENT (CLEAN GULF SUPPLIED)						
TYPE	QUANTITY	RECOVERY CAPACITY	STORAGE CAPACITY	MAN POWER REQUIRED	Operating Limitations	Location	Estimated Response Times
CGA 200	1	43,000 Bbls derated capacity	4,130 Bbls	12	7 Foot Seas	CGA/Houma	18 Hours
TUG BOATS	1	None	None	4	None	Delta Towing/Houma	31.5 Hours
R.W. ARMSTRONG	1	5,000 Bbls/day	65 Bbls	4	6 Foot Seas	CGA/Houma	10 Hours
FRU UNIT	1	3,400 Bbls derated capacity	188 Bbls	6	4 Foot Seas	CGA/ICY	11 Hours
UTILITY BOAT	1	None	500 Bbls	2	None	Trico Marine/Cameron	16.5 Hours
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# POLLUTION PREVENTION MEASURES

# LAND SEGMENT IDENTIFICATION

According to the risk assessment analysis conducted by the Minerals Management Service as part of their OSRAM project, spills originating in the East Cameron Block 281, Launching Area C34, have the potential for impacting land segments from Kenedy, TX to Iberia, LA within 30 days of oil persisting on the water. The probabilities of impacts are summarized below. The most likely impacted areas are the Galveston, TX and Cameron, LA areas.

PROBABILITY OF LAND	IMPACT FROM Eas	st Cameron 281 (	% Chance)
LAND AREA	3 DAYS	10 DAYS	30 DAYS
Kenedy, TX	-	-	1
Kleberg, TX	<b>-</b> ,	-	1
Nueces, TX	-	-	1
Aransas, TX	-	-	2
Calhoun, TX	-	-	3
Matagorda, TX	-	1	9
Brazoria, TX	_	1	5
Galveston, TX	-	4	12
Chambers, TX	-	-	_
Jefferson, TX	-	2	6
Cameron, LA	-	3	11
Vermillion, LA		1	3
Iberia, LA	-	-	1

# SHALLOW HAZARD STATEMENT

**ATTACHMENT "M"** 

# STONE ENERGY CORP OCS G 02050, BLOCK 281, LOCATION H, I, J

EAST CAMERON AREA, OFFSHORE LOUISIANA

July 22, 2004

# Shallow Drilling Hazards - Archaeological Statement

On October, 1988 John E. Chance & Associates, Inc. completed a geophysical and archaeological survey of East Cameron Block 281 as contractor for Tenneco Oil Company. The purpose of the study was to examine seafloor and subsurface conditions within the survey area and inspect for potential hazards to future drilling and construction activity. Comments in this statement are based on survey data and the report entitled <a href="Hazard Study of Block 281">Hazard Study of Block 281</a> (OCS G 2050) East Cameron Area Offshore Louisiana. This study and report was approved by MMS for use in this application by letter on 5/24/2004 (attached).

The survey field operations were conducted aboard the M/V Geodetic Surveyor on June 19-20, 1988. Horizontal positioning of the survey vessel was accomplished with the STARFIX® differential global positioning system. Survey instruments include the EDO Narrow Beam Bathymetric System, O.R.E. Pinger Subbottom Profiler, GeoMetrics Marine Proton Magnetometer, SMS 960 Side Scan Sonar, Sparker Profiler with DFS-V Digital Recording System.

The survey grid is laid out northeast of the Calcasieu Pass shipping fairway and consists of 16 primary N – S tracklines spaced 300 meters apart (lines 1 - 16) and 6 E–W tielines spaced 900 meters apart (lines 17 - 22). The trackline grid was designed to provide 100 percent sonar imagery and magnetic coverage and a representative sampling of seismic and magnetic systems to conform to MMS guidelines in effect at the time of the survey.

Water depths in the survey area plotted on the Bathymetry Map (Map 1) range from -169 feet to -178 feet with zero datum at sea level. The seafloor topography is irregular with a shallow hump in the east-central part of the block. The bottom gradually slopes from this high area toward the block boundaries. An area of outcrops occurs in the extreme northwest corner of the block. Seafloor sediments in the area are reported to be clayey sand. Regional core studies indicate that shear strengths range from 600 lbs/sq.ft at the sea floor to 2000 lbs/sq.ft. at 150 feet below the seafloor.

Geologic and manmade bottom features are shown on the Hazard Map (Map 2). Parallel strata of the area are cut by relict stream channels buried 2 to 12 feet and cutting 25 to 55 feet below the seafloor. Channel margins should be avoided because of the variable strength of the sediments inside and outside the channel. Gas migration zones and acoustic voids caused by biogenic gas in the bottom sediments are mapped as areas where sediment strengths are affected by included methane accumulations.

Shallow structure mapping shows a broad anticlinal high trending north in the northwest portion of the block. The east half of the block features east to southeast dip at about 50'/mile (Structure Map). No shallow faults are mapped in the survey area.

Manmade features in the study area include well structures, pipelines and anchor piles shown on the Hazard Map and the 2004 Updated Infrastructure Map (attached). Seventy-one magnetic anomalies are listed on pages 13 - 16 of the report. Seven of these are unidentified, probably oilfield debris, and posted on the Hazard Map.

Stone Energy Corporation plans to drill from the following surface location in East Cameron Block 281:

Location H, I, J X = 1,476,333 Y = -109,127 3667' FEL, 3131' FSL Block 281 Lat: 28° 21' 22.9835" Long: 92° 57' 39.3285"

Location H,I,J is in 175 feet of water in an area free from acoustic void zones or shallow amplitude anomalies. The location is 300 feet northeast of a 12 gamma unidentified magnetic anomaly believed to be oilfield debris. A CNG 20" pipeline trending northwest is located 500 feet southwest of the proposed location. Both of these features are far enough from the proposed location that they will not interfere with drilling operations. No other hazardous features are located near proposed location H,I,J.

Stone's proposed location H,I,J is clear of any natural or manmade hazards that would preclude or interfere with drilling operations.

Attached are sample copies of the geophysical data strip charts pertaining to the proposed location H,I,J.

Sincerely,

Theodore M. Gard

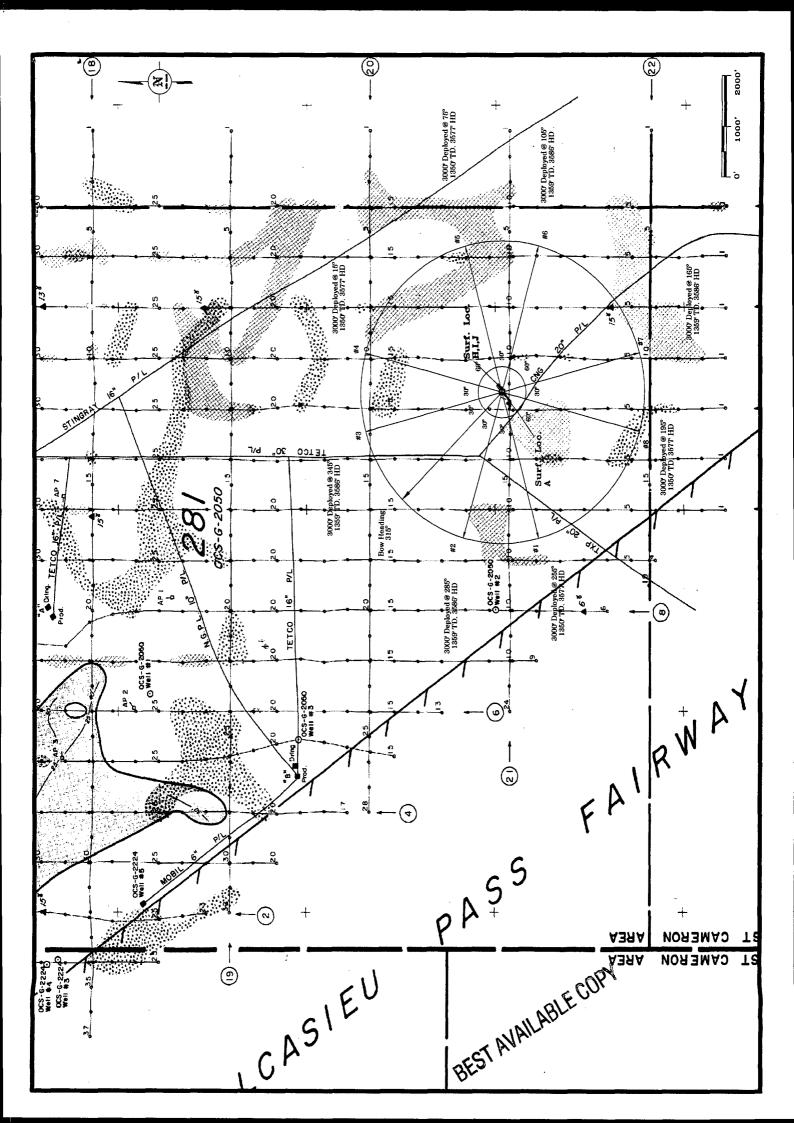
Mars

Geologist

Nick Repar

Chief Geophysicist

# **ANCHOR PATTERNS**



# COASTAL ZONE CONSISTENCY CERTIFICATE

# COASTAL ZONE MANAGEMENT CONSISTENCY CERTIFICATE DEVELOPMENT OPERATIONS COORDINATION DOCUMENT GULF OF MEXICO

FOR

EAST CAMERON AREA BLOCK 281

OCS-G-02050

SUBMITTED TO:

MS. AMY FELL

STONE ENERGY CORPORATION

P. O. BOX 52807

LAFAYETTE, LOUISIANA 70505

(337/237-0410)

**AUGUST 5, 2004** 

PREPARED BY:

TIM MORTON & ASSOCIATES, INC.

REGULATORY & ENVIRONMENTAL CONSULTANTS

PROJECT NO. 04-198

COASTAL ZONE MANAGEMENT
CONSISTENCY CERTIFICATION

DEVELOPMENT/PRODUCTION

Type of Plan

EAST CAMERON AREA BLOCK 281

Area and Block

OCS-G-02050

Lease Number

The proposed activities described in detail in the attached Plan comply with Louisiana's approved Coastal Management Program and all relevant enforceable policies and will be conducted in a manner consistent with such Program.

STONE ENERGY CORPORATION

Lessee or Operator

Certifying Official

8-6-04

Date

# **TYPICAL 4-PILE PLATFORM**

