

UNITED STATES GOVERNMENT  
MEMORANDUM

December 19, 2005


To: Public Information (MS 5030)  
From: Plan Coordinator, FO, Plans Section (MS 5231)

Subject: Public Information copy of plan

Control #	-	S-06616
Type	-	Supplemental Exploration Plan
Lease(s)	-	OCS-G02598 Block - 252 South Marsh Island Area
Operator	-	Helis Oil & Gas Company, L.L.C.
Description	-	Well Protector and Well B
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.

  
Michelle Griffitt  
Plan Coordinator

Site Type/Name	Botm Lse/Area/Blk	Surface Location	Surf Lse/Area/Blk
WP/B		6670 FNL, 4118 FEL	G02598/SM/252
WELL/A	G02598/SM/252	6550 FNL, 4118 FEL	G02598/SM/252
WELL/B	G02598/SM/252	6670 FNL, 4118 FEL	G02598/SM/252

DEC 20 2005

NOTED - SCHEXNAILDRE

**HELIS OIL & GAS COMPANY, L.L.C.**

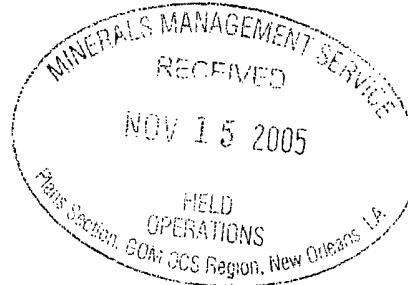
228 ST. CHARLES AVENUE, SUITE 912  
NEW ORLEANS, LOUISIANA 70130

**AMENDMENT**

Telephone:  
(504) 523-1831

Facsimile:  
(504) 522-6486

November 14, 2005



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

Attn: Mimi Griffitt

RE: Amendment to Supplemental Exploration Plan (Control No. S-6616) for Lease OCS-G 02598,  
South Marsh Island Block 252, OCS Federal Waters, Gulf of Mexico, Offshore, Louisiana

Gentlemen:

In accordance with the provisions of Title 30 CFR 250.204 and that certain Notice to Lessees (NTL 2000-G21), Helis Oil & Gas Company, L.L.C. (Helis) hereby submits for your review and approval nine (9) copies of an amendment to the Supplemental Exploration Plan (Control No. S-6616) for Lease OCS-G 02598, South Marsh Island Block 252, Offshore, Louisiana. Five (5) copies are "Proprietary Information" and four (4) copies are "Public Information".

Helis is currently in the process of becoming designated operator of South Marsh Island Block 252. Helis has elected not to drill Well Location "A"; therefore we respectfully request that this location (Well "A") be withdrawn from the subject plan. In support of this amendment, please find attached a revised OCS Information Plan and Air Emissions Information Page. The rest of the plan will remain the same.

Should additional information be required, please contact Cathy Thornton or Patty Brewer, J. Connor Consulting, Inc. at (281) 578-3388.

Sincerely,

*Patty Brewer*

for Bart J. Walker  
Operations Manager

BJW:pb  
Enclosures

CONTROL No. <u>S-6616</u>
REVIEWER: Michelle Griffitt
PHONE: (504) 736-2975

## OCS PLAN INFORMATION FORM

### GENERAL INFORMATION

Type of OCS Plan:		<input checked="" type="checkbox"/> Exploration Plan (EP)		Development Operations Coordination Document (DOCD)	
Company Name:		Helis Oil & Gas Company, L.L.C.		MMS Operator Number: 01978	
Address: 912 Whitney Bank Bldg. 228 St. Charles Avenue New Orleans, LA 70130		Contact Person: Cathy Thornton			
		Phone Number: (281) 578-3388			
		Email Address: cathy.thornton@jccteam.com			
Lease:	G02598	Area:	South Marsh Island	Block:	252
		Project Name (If Applicable): Not Applicable			
Objective:		<input type="checkbox"/> Oil <input checked="" type="checkbox"/> Gas <input type="checkbox"/> Sulphur <input type="checkbox"/> Salt		Onshore Base:	Intracoastal City, LA
				Distance to Closest Land (Miles): 16	

### Description of Proposed Activities (Mark all that apply)

<input checked="" type="checkbox"/> Exploration drilling	<input type="checkbox"/> Development drilling
<input checked="" type="checkbox"/> Well completion	<input type="checkbox"/> Installation of production platform
<input type="checkbox"/> Well test flaring (for more than 48 hours)	<input type="checkbox"/> Installation of production facilities
<input checked="" type="checkbox"/> Installation of caisson or platform as well protection structure	<input type="checkbox"/> Installation of satellite structure
<input type="checkbox"/> Installation of subsea wellheads and/or manifolds	<input type="checkbox"/> Commence Production
<input type="checkbox"/> Installation of lease term pipelines	<input type="checkbox"/> Other (Specify and describe)

Have you submitted or do you plan to submit a Conservation Information Document to accompany this plan?		Yes	<input checked="" type="checkbox"/> X	No
Do you propose to use new or unusual technology to conduct your activities?		Yes	<input checked="" type="checkbox"/> X	No
Do you propose any facility that will serve as a host facility for deepwater subsea development?		Yes	<input checked="" type="checkbox"/> X	No
Do you propose any activities that may disturb an MMS-designated high-probability archaeological area?	<input checked="" type="checkbox"/> X	Yes		No
Have all of the surface locations of your proposed activities been previously reviewed and approved by MMS?		Yes	<input checked="" type="checkbox"/> X	No

### Tentative Schedule of Proposed Activities

Proposed Activity	Start Date	End Date	No. of Days
Drill and Complete Well Location B – Install Well Protector Structure over Well Location B	12/15/05	01/28/06	45

Description of Drilling Rig		Description of Production Platform	
<input checked="" type="checkbox"/> Jackup	<input type="checkbox"/> Drillship	<input type="checkbox"/> Caisson	<input type="checkbox"/> Tension leg platform
<input type="checkbox"/> Gorilla Jackup	<input type="checkbox"/> Platform rig	<input checked="" type="checkbox"/> Well protector	<input type="checkbox"/> Compliant tower
<input type="checkbox"/> Semisubmersible	<input type="checkbox"/> Submersible	<input checked="" type="checkbox"/> Fixed platform	<input type="checkbox"/> Guyed tower
<input type="checkbox"/> DP Semisubmersible	<input type="checkbox"/> Other (Describe)	<input type="checkbox"/> Subsea manifold	<input type="checkbox"/> Floating production system
<input type="checkbox"/> Drilling Rig Name (If Known):		<input type="checkbox"/> Spar	<input type="checkbox"/> Other (Attach description)

### Description of Lease Term Pipelines

From (Facility/Area/Block)	TO (Facility/Area/Block)	Diameter (inches)	Length (Feet)	Product

**EXPLORATION PLAN (EP)  
AIR QUALITY SCREENING CHECKLIST**

OMB Control No. XXX-XXX  
Expiration Date: Pending

COMPANY	HELIS OIL & GAS COMPANY, L.L.C.
AREA	SOUTH MARSH ISLAND
BLOCK	252
LEASE	OCS-G 02598
PLATFORM	
WELL	LOCATION B
COMPANY CONTACT	CATHY THORNTON
TELEPHONE NO.	(281) 578-3388
REMARKS	DRILL & COMPLETE WELL LOCATION B AND INSTALL A WELL PROTECTOR STRUCTURE OVER WELL LOCATION B. HELIS WILL UTILIZE A TYPICAL JACK-UP TYPE DRILLING RIG DURING THE PROPOSED OPERATIONS.

"Yes"	"No"	Air Quality Screening Questions
	X	1. Is any calculated Complex Total (CT) Emission amount (in tons) associated with your proposed exploration activities more than 90% of the amounts calculated using the following formulas: $CT = 3400D^{2/3}$ for CO, and $CT = 33.3D$ for the other air pollutants (where D = distance to shore in miles)?
	X	2. Do your emission calculations include any emission reduction measures or modified emission factors?
	X	3. Are your proposed exploration activities located east of 87.5° W longitude?
	X	4. Do you expect to encounter H <sub>2</sub> S at concentrations greater than 20 parts per million?
	X	5. Do you propose to flare or vent natural gas for more than 48 continuous hours from any proposed well?
X		6. Do you propose to burn produced hydrocarbon liquids?

If ALL questions are answered "No":

Submit only this coversheet with your plan; a full set of spreadsheets is not needed.

If ANY of questions 1 through 7 is answered "Yes":

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

# EMISSIONS FACTORS

OMB Control No. xxxx-xxxx

Expiration Date: Pending

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	PM	SOx	NOx	VOC	CO	REF.	DATE
NG Turbines	gms/hp-hr		0.00247	1.3	0.01	0.83	AP42 3.2-1& 3.1-1	10/96
NG 2-cycle lean	gms/hp-hr		0.00185	10.9	0.43	1.5	AP42 3.2-1	10/96
NG 4-cycle lean	gms/hp-hr		0.00185	11.8	0.72	1.6	AP42 3.2-1	10/96
NG 4-cycle rich	gms/hp-hr		0.00185	10	0.14	8.6	AP42 3.2-1	10/96
Diesel Recip. < 600 hp.	gms/hp-hr	1	1.468	14	1.12	3.03	AP42 3.3-1	10/96
Diesel Recip. > 600 hp.	gms/hp-hr	0.32	1.468	11	0.33	2.4	AP42 3.4-1	10/96
Diesel Boiler	lbs/bbl	0.084	2.42	0.84	0.008	0.21	AP42 1.3-12,14	9/98
NG Heaters/Boilers/Burners	lbs/mmescf	7.6	0.593	100	5.5	84	P42 1.4-1, 14-2, & 14	7/98
NG Flares	lbs/mmescf		0.593	71.4	60.3	388.5	AP42 11.5-1	9/91
Liquid Flaring	lbs/bbl	0.42	6.83	2	0.01	0.21	AP42 1.3-1 & 1.3-3	9/98
Tank Vapors	lbs/bbl				0.03		E&P Forum	1/93
Fugitives	lbs/hr/comp.				0.0005		API Study	12/93
Glycol Dehydrator Vent	lbs/mmescf				6.6		La. DEQ	1991
Gas Venting	lbs/scf				0.0034			

Sulfur Content Source	Value	Units
Fuel Gas	3.33	ppm
Diesel Fuel	0.4	% weight
Produced Gas( Flares)	3.33	ppm
Produced Oil (Liquid Flaring)	1	% weight

## EMISSIONS CALCULATIONS 1ST YEAR

OMB Control No. xxxx-xxxx  
Expiration Date: Pending

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL	CONTACT		PHONE	REMARKS							
HELIS OIL & GAS COMF	SOUTH MARSH ISLAND	252	OCS-G 02598	0	LOCATION B	CATHY THORNTON		(281) 578-3388								
OPERATIONS	EQUIPMENT	RATING	MAX. FUEL	ACT. FUEL	RUN TIME		MAXIMUM POUNDS PER HOUR					ESTIMATED TONS				
	Diesel Engines	HP	GAL/HR	GAL/D												
	Nat. Gas Engines	HP	SCF/HR	SCF/D												
	Burners	MMBTU/HR	SCF/HR	SCF/D	HR/D	DAYS	PM	SOx	NOx	VOC	CO	PM	SOx	NOx	VOC	CO
DRILLING	PRIME MOVER>600hp diesel	11400	550.62	13215	24	17	8.04	36.86	276.21	8.29	60.26	1.64	7.52	56.35	1.69	12.29
	VESSELS>600hp diesel(crew)	2065	99.7395	2394	6	5	1.46	6.68	50.03	1.50	10.92	0.02	0.10	0.75	0.02	0.16
	VESSELS>600hp diesel(supply)	2065	99.7395	2394	10	7	1.46	6.68	50.03	1.50	10.92	0.05	0.23	1.75	0.05	0.38
	VESSELS>600hp diesel(tugs)	4400	212.52	5100	18	1	3.10	14.23	106.61	3.20	23.26	0.03	0.13	0.96	0.03	0.21
FACILITY INSTALLATION	DERRICK BARGE diesel	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	MATERIAL TUG diesel	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel(crew)	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel(supply)	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	MISC. TANK-	BPD	SCF/HR	COUNT												
		0			0	0				0.00					0.00	
DRILLING	OIL BURN	250			24	0	4.38	71.15	20.83	0.10	2.19	0.00	0.00	0.00	0.00	0.00
WELL TEST	GAS FLARE		208333.33		24	0		0.12	14.87	12.56	80.94		0.00	0.00	0.00	0.00
2005 YEAR TOTAL							18.42	135.71	518.59	27.15	188.48	1.74	7.98	59.81	1.80	13.05
EXEMPTION CALCULATION	DISTANCE FROM LAND IN MILES											532.80	532.80	532.80	532.80	21588.65
	16.0															

## EMISSIONS CALCULATIONS 2ND YEAR

OMB Control No. xxxx-xxxx  
Expiration Date: Pending

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL		CONTACT			PHONE	REMARKS						
HELIS OIL & GAS COM	SOUTH MARSH ISLAND	252	OCS-G 02598	0	LOCATION B		CATHY THORNTON			(281) 578-3388							
OPERATIONS	EQUIPMENT	RATING	MAX. FUEL	ACT. FUEL	RUN TIME		MAXIMUM POUNDS PER HOUR					ESTIMATED TONS					
	Diesel Engines	HP	GAL/HR	GAL/D													
	Nat. Gas Engines	HP	SCF/HR	SCF/D													
	Burners	MMBTU/HR	SCF/HR	SCF/D	HR/D	DAYS	PM	SOx	NOx	VOC	CO	PM	SOx	NOx	VOC	CO	
DRILLING	PRIME MOVER>600hp diesel	11400	550.62	13215	24	28.00	8.04	36.86	276.21	8.29	60.26	2.70	12.39	92.81	2.78	20.25	
	VESSELS>600hp diesel(crew)	2065	99.7395	2394	6	8.00	1.46	6.68	50.03	1.50	10.92	0.03	0.16	1.20	0.04	0.26	
	VESSELS>600hp diesel(supply)	2065	99.7395	2394	10	12.00	1.46	6.68	50.03	1.50	10.92	0.09	0.40	3.00	0.09	0.65	
	VESSELS>600hp diesel(tugs)	4400	212.52	5100	18	1.00	3.10	14.23	106.61	3.20	23.26	0.03	0.13	0.96	0.03	0.21	
FACILITY INSTALLATION	DERRICK BARGE diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	MATERIAL TUG diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	VESSELS>600hp diesel(crew)	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	VESSELS>600hp diesel(supply)	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	MISC. TANK-	BPD	SCF/HR	COUNT						0.00					0.00		
		0			0	0											
DRILLING WELL TEST	OIL BURN GAS FLARE	250			2	0	4.38	71.15	20.83	0.10	2.19	0.00	0.00	0.00	0.00	0.00	
			208333.33		2	0		0.12	14.87	12.56	80.94		0.00	0.00	0.00	0.00	
2006 YEAR TOTAL							18.42	135.71	518.59	27.15	188.48	2.85	13.07	97.97	2.94	21.38	
EXEMPTION CALCULATION	DISTANCE FROM LAND IN MILES											532.80	532.80	532.80	532.80	21588.65	
	16.0																

## SUMMARY

OMB Control No. xxxx-xxxx  
Expiration Date: Pending

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL
HELIS OIL & GAS	SOUTH MARSH ISLAND	252	OCS-G 02598	0	LOCATION B
Year	Emitted Substance				
	PM	SOx	NOx	VOC	CO
2005	1.74	7.98	59.81	1.80	13.05
2006	2.85	13.07	97.97	2.94	21.38
Allowable	532.80	532.80	532.80	532.80	21588.65



## APPENDMENT

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

Type	Weekly Estimate (No.) of Roundtrips
Crew Boat	2
Supply Boat	3
Helicopter	As Needed

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

### ***(F) LEASE STIPULATION***

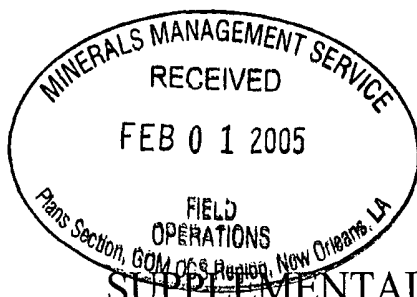
The MMS did not invoke lease stipulations for Lease OCS-G 02598, South Marsh Island Block 252.

### **SPECIAL CONDITIONS**

Helis will operate in accordance with NTL 2003-G10, to minimize the risk of vessel strikes to protected species and report observations of injured or dead protected species, and NTL 2003-G11 to prevent intentional and/or accidental introduction of debris into the marine environment.

### **ARCHAEOLOGY SURVEY BLOCKS**

South Marsh Island Block 252 has been determined as potentially containing prehistoric archaeological properties.



**PUBLIC COPY**

January 27, 2005

## SUPPLEMENTAL EXPLORATION PLAN

Lease Number: OCS-G 02598  
Area/Block: South Marsh Island Block 252  
Prospect Name: Not Applicable  
Offshore: Louisiana

Submitted by: Helis Oil & Gas Company, L.L.C.  
912 Whitney Bank Building  
228 St. Charles Avenue  
New Orleans, Louisiana 70130

Dan McKnight  
(504) 523-1831  
dmcknight@helisoil.com

Estimated start up date: April 1, 2005

Authorized Representative:  
Cathy Thornton  
J. Connor Consulting, Inc.  
16225 Park Ten Place, Suite 700  
Houston, Texas 77084  
(281) 578-3388  
[Cathy.thornton@jccteam.com](mailto:Cathy.thornton@jccteam.com)

No. Copies Being Submitted:

Proprietary: 5  
Public Info: 4

For MMS:

Plan No. 5-6616  
Assigned to: \_\_\_\_\_

**HELIS OIL & GAS COMPANY, L.L.C.**  
**SUPPLEMENTAL EXPLORATION PLAN**  
**LEASE OCS-G 02598**  
**SOUTH MARSH ISLAND BLOCK 252**

APPENDIX A	<i>Contents of Plan</i>
APPENDIX B	<i>General Information</i>
APPENDIX C	<i>Geological, Geophysical &amp; H<sub>2</sub>S Information</i>
APPENDIX D	<i>Biological and Physical Information</i>
APPENDIX E	<i>Wastes and Discharge Information</i>
APPENDIX F	<i>Oil Spill Information</i>
APPENDIX G	<i>Air Emissions Information</i>
APPENDIX H	<i>Environmental Impact Analysis</i>
APPENDIX I	<i>Coastal Zone Management Consistency Information</i>
APPENDIX J	<i>Plan Information Form and Well Information Form</i>

## APPENDIX A CONTENTS OF PLAN

Helis Oil & Gas Company, L.L.C. (Helis) is in the process of becoming the designated operator of the subject oil and gas lease through a farm-in agreement with The Houston Exploration Company.

### **(A) DESCRIPTION, OBJECTIVES AND SCHEDULE**

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

### **(B) LOCATION**

Included as *Attachment A-1* is a map showing the locations of the proposed wells. There will not be any anchors associated with the proposed operations. A bathymetry map depicting water depths has been previously submitted. Additional well information is included in Appendix J, on the Well Information Form.

### **(C) DRILLING UNIT**

Helis will utilize a typical jack-up type drilling rig during the proposed operations.

Well Location A will be protected by the existing A platform. Platform A is a 3-pile production platform installed in 1978. Well Location B will be protected by a single well protector structure. A schematic of the A platform is included as *Attachment A-2* and a schematic of the well protector structure is included as *Attachment A-3*.

A description of the drilling unit is included in Appendix J, on the Plan Information Form. Rig specifications will be made a part of each Application for Permit to Drill.

Safety features on the drilling unit will include well control, pollution prevention, and blowout prevention equipment as described in Title 30 CFR Part 250, Subparts C, D, E, and G; and as further clarified by MMS Notices to Lessees, and current policy making invoked by the MMS, Environmental Protection Agency and the U.S. Coast Guard. Appropriate life rafts, life jackets, ring buoys, etc., will be maintained on the facility at all times.

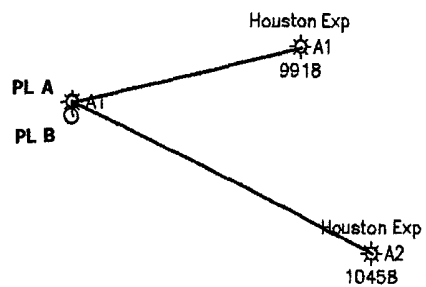
Helis will ensure employees and contractor personnel engaged in well control operations understand and can properly perform their duties.

Pollution prevention measures include installation of curbs, gutters, drip pans, and drains on drilling deck areas to collect all contaminants and debris.

Helis does not propose additional safety, pollution prevention, or early spill detection measures beyond those required by 30 CFR 250.

Prod  
1  
10

Houston Exp  
★ 3  
10500



Tenneco  
★ 1  
13200

Loc. A	6,550'FNL, 4,118'FEL	X=1,820,361 Y=210,083	Lat. 29.24315 Long. 91.89659
Loc. B	6,670'FNL, 4,118'FEL	X=1,820,361 Y=209,963	Lat. 29.24283, Long. 91.89659

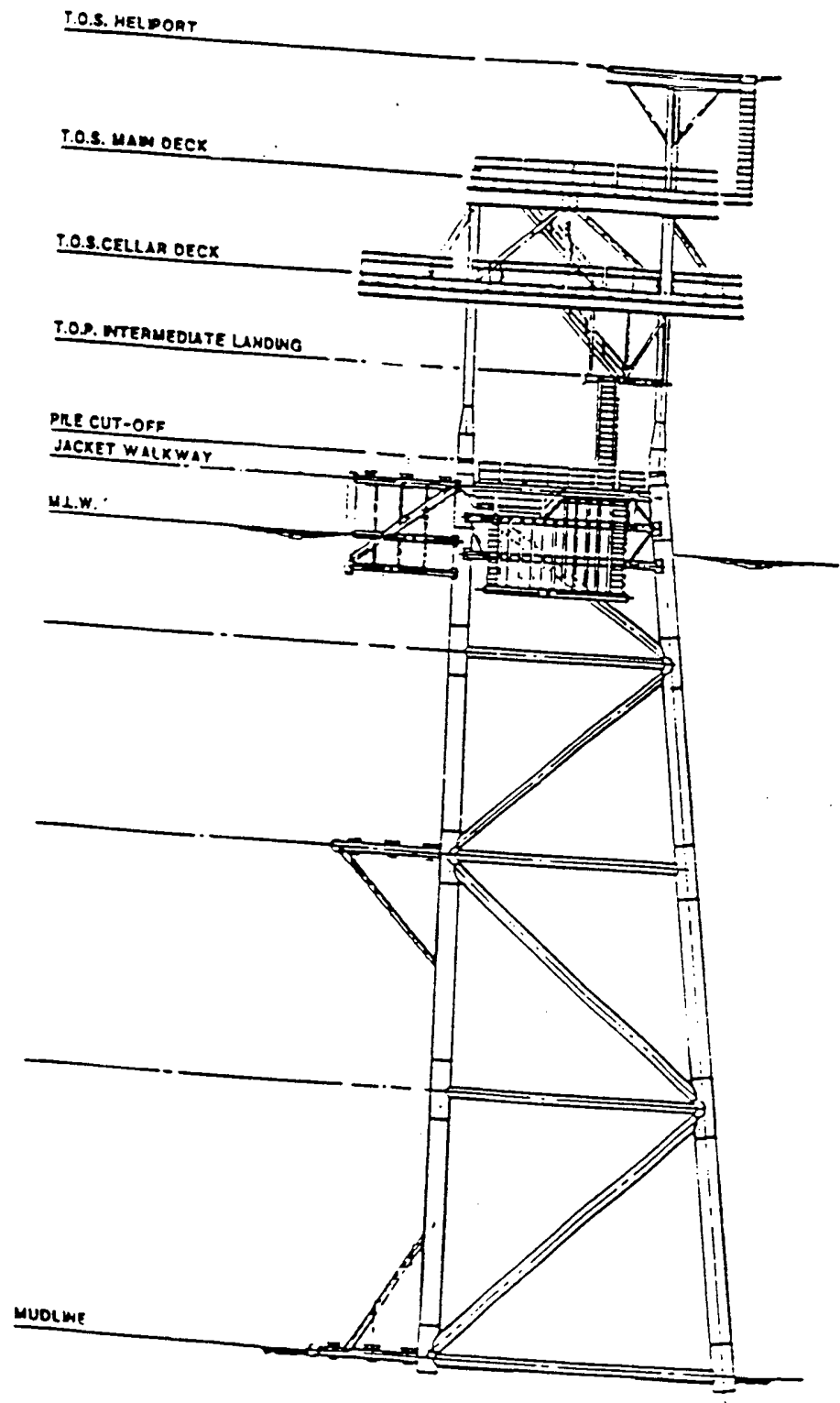
ATTACHMENT A-1

Helis Oil and Gas Company

South Marsh Island Block 252

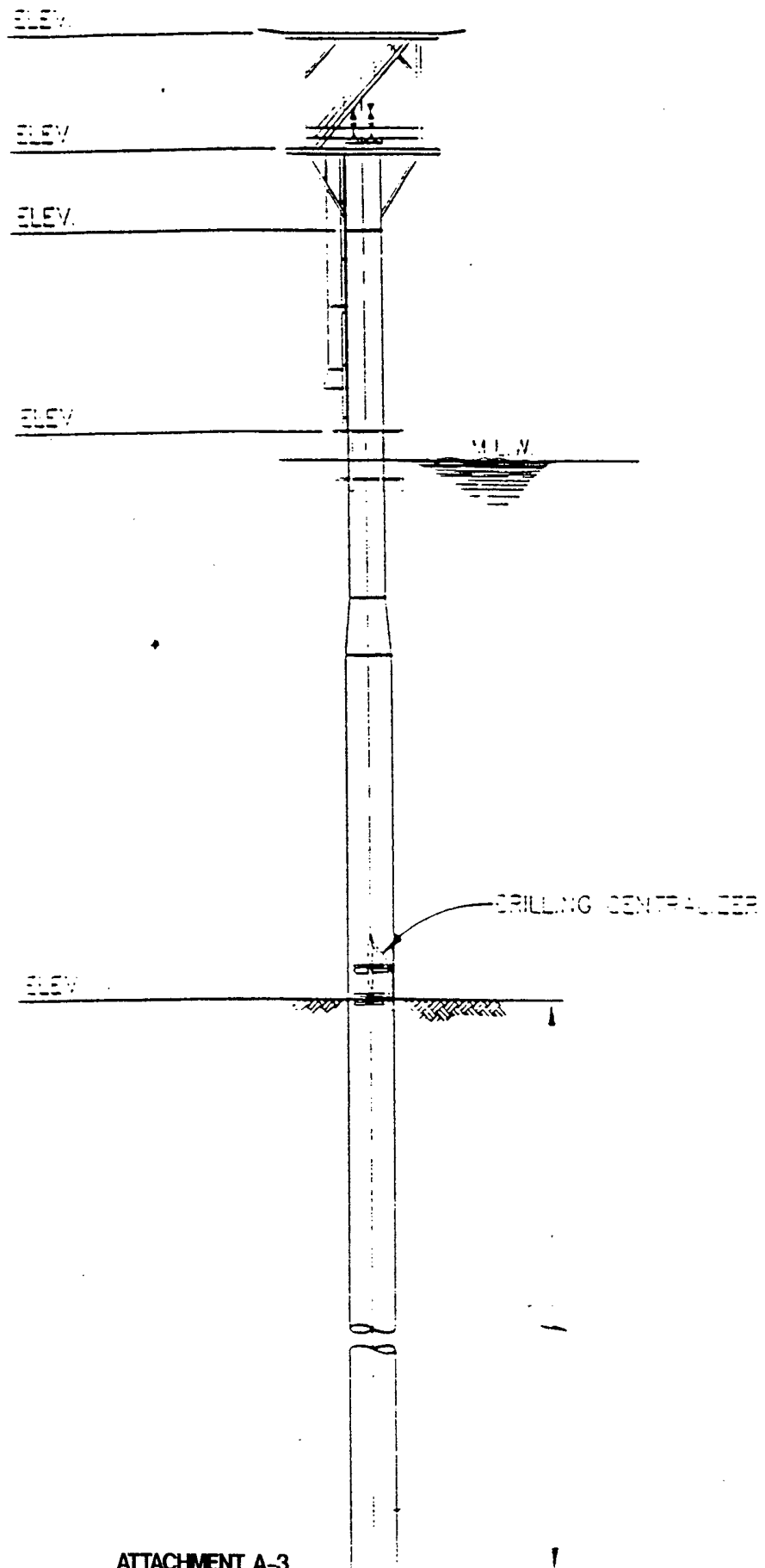
Scale: 1" = 2,000'

# TYPICAL TRIPOD PRODUCTION PLATFORM SCHEMATIC



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

# TYPICAL WELL PROTECTOR CAISSON



## **APPENDIX B GENERAL INFORMATION**

### ***(A) CONTACT***

Inquiries may be made to the following authorized representative:

Cathy Thornton  
J. Connor Consulting, Inc.  
16225 Park Ten Place, Suite 700  
Houston, Texas 77084  
(281) 578-3388  
E-mail address: [Cathy.thornton@jccteam.com](mailto:Cathy.thornton@jccteam.com)

### ***(B) PROSPECT NAME***

Not applicable

### ***(C) NEW OR UNUSUAL TECHNOLOGY***

Helis does not propose to use any new or unusual technology to carry out the proposed exploration activities. New or unusual technology is defined as equipment and/or procedures that:

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

### ***(D) BONDING INFORMATION***

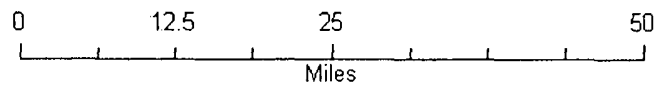
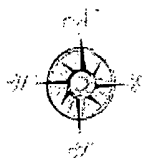
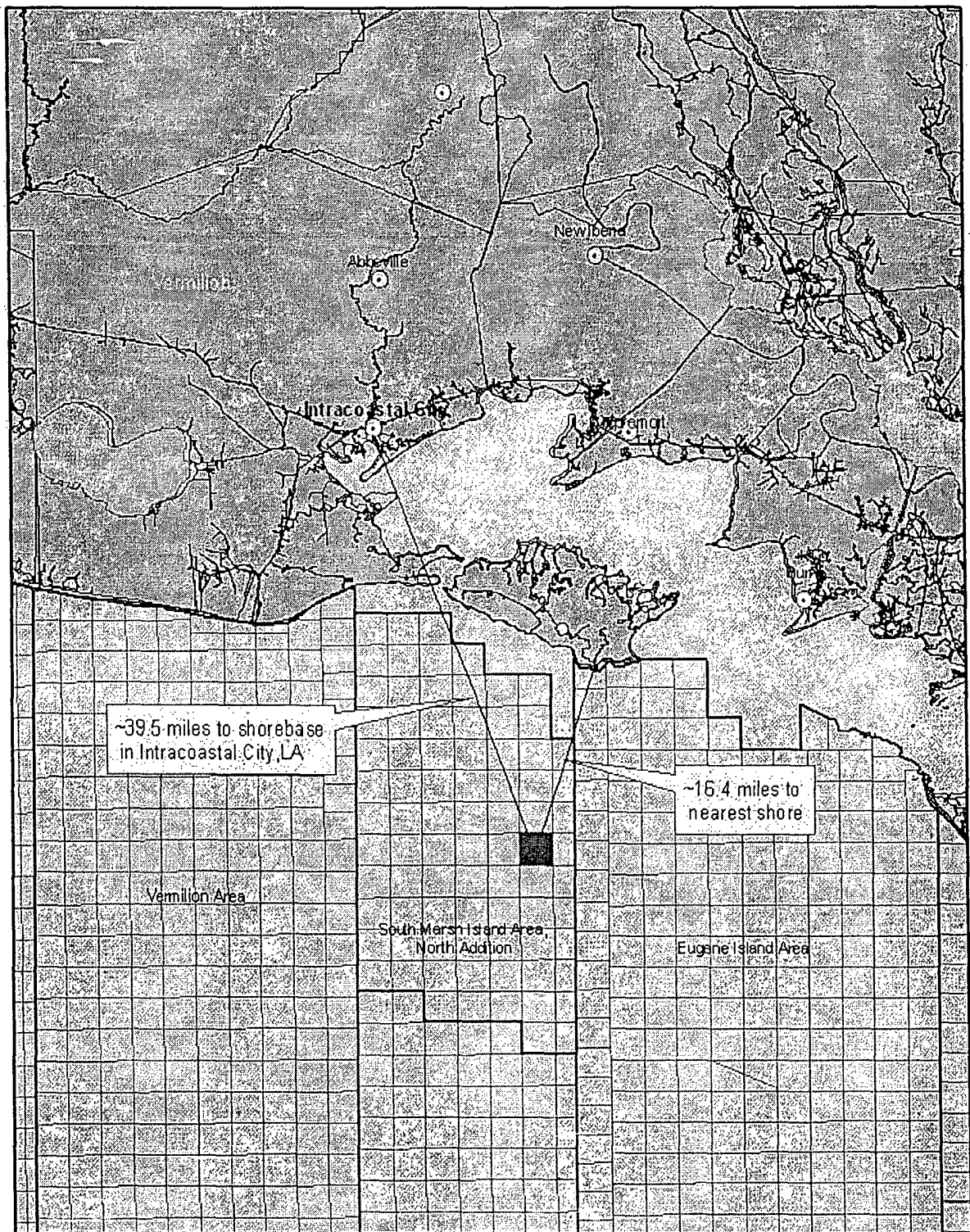
The bond requirements for the activities and facilities proposed in this EP are satisfied by an area wide bond, furnished and maintained according to 30 CFR 256, Subpart I; NTL No. 2000-G16, "Guidelines for General Lease Surety Bonds", dated September 7, 2000.

### ***(E) ONSHORE BASE AND SUPPORT VESSELS***

A Vicinity Map is included as *Attachment B-1*, showing South Marsh Island Block 252 located approximately 16 miles from the nearest shoreline and approximately 40 miles from the onshore support base in Intracoastal City, Louisiana.

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





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

Type	Weekly Estimate (No.) of Roundtrips
Crew Boat	2
Supply Boat	3
Helicopter	As Needed

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

***(F) LEASE STIPULATION***

The MMS did not invoke lease stipulations for Lease OCS-G 02598, South Marsh Island Block 252.

**SPECIAL CONDITIONS**

Helis will operate in accordance with NTL 2003-G10, to minimize the risk of vessel strikes to protected species and report observations of injured or dead protected species, and NTL 2003-G11 to prevent intentional and/or accidental introduction of debris into the marine environment.

**ARCHAEOLOGY SURVEY BLOCKS**

South Marsh Island Block 252 has been determined as potentially containing prehistoric archaeological properties; therefore, an Archaeological Survey Report was prepared in accordance with NTL 2002-G01, and previously submitted.

## **APPENDIX C**

### **GEOLOGICAL, GEOPHYSICAL, AND H<sub>2</sub>S INFORMATION**

#### ***(A) STRUCTURE CONTOUR MAP***

A current structure contour map drawn on the top of each prospective hydrocarbon sand, showing the entire lease block, the location of the proposed wells, and the locations of geological cross-section is included as proprietary data.

#### ***(B) TRAPPING FEATURES***

Proprietary data.

#### ***(C) DEPTH OF GEOPRESSURE***

Proprietary data.

#### ***(D) INTERPRETED 3-D SEISMIC LINES***

Attached to one Proprietary Information copy of this plan are interpreted 3-D seismic lines. These lines are migrated, annotated with depth scale, and are within 500' of the surface locations of the proposed wells.

#### ***(E) GEOLOGICAL STRUCTURE CROSS-SECTIONS***

An interpreted geological structure cross-sections showing the location and depth of each proposed well and at least one key horizon or objective sand is included as proprietary data.

#### ***(F) SHALLOW HAZARDS REPORT***

A shallow hazards survey was conducted over South Marsh Island Block 252.

Copies of the report have been previously submitted to the Minerals Management Service.

#### ***(G) SHALLOW HAZARDS ASSESSMENT***

The proposed operations will be conducted from an MMS previously approved surface location; therefore, a shallow hazards assessment is not being provided.

#### ***(H) HIGH-RESOLUTION SEISMIC LINES***

The proposed operations will be conducted from a previously approved surface location; therefore, high-resolution seismic lines are not being submitted.

#### ***(I) STRATIGRAPHIC COLUMN***

A generalized biostratigraphic/lithostratigraphic column depicting each well from the seafloor to total depth, with each horizon labeled, is included as proprietary data.

#### ***(J) TIME VS DEPTH TABLES***

Appropriate tables providing seismic time versus depth for the proposed well locations in areas where there is no well control is included as proprietary data.

***(K) HYDROGEN SULFIDE INFORMATION***

In accordance with Title 30 CFR 250. 490(c) and NTL No. 2003-G17, Helis requests that South Marsh Island Block 252 be classified by the MMS as H<sub>2</sub>S absent.

## **APPENDIX D**

### **BIOLOGICAL AND PHYSICAL INFORMATION**

#### ***CHEMOSYNTHETIC INFORMATION***

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

#### ***TOPOGRAPHIC FEATURES INFORMATION***

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

#### ***LIVE BOTTOM (PINNACLE TREND) INFORMATION***

South Marsh Island Block 252 is not located within 100 feet of any pinnacle trend feature with vertical relief equal to or greater than 8 feet; therefore, live bottom information is not required.

## **APPENDIX E**

### **WASTES AND DISCHARGES INFORMATION**

#### ***DISCHARGES***

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

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

#### ***WASTES***

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

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

Type of Waste Approximate Composition	Amount*	Rate per Day	Name/Location of Disposal Facility	Treatment and/or Storage, Transport and Disposal Method
Norm- contaminated wastes	1 ton	NA	Chemical Waste Management, Carlyss, Louisiana	Transport to a transfer station via dedicated barge
Trash and debris	1,000 ft <sup>3</sup>	3 ft <sup>3</sup> /day	Waste Management, Berwick, Louisiana	Transport in storage bins on crew boat to shorebase; truck to landfill

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

## APPENDIX F OIL SPILL INFORMATION

### **1. Site-Specific OSRP** N/A

### **2. Regional OSRP Information**

Helis Oil & Gas Company, L.L.C.'s Regional Oil Spill Response Plan (OSRP) was originally approved on May 21, 2003 and most recently updated on February 3, 2005. Activities proposed in this EP will be covered by the Regional OSRP.

### **3. OSRO Information**

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

### **4. Worst-Case Scenario Comparison**

Category	Regional OSRP WCD	EP WCD
Type of Activity	Exploratory Drilling	Exploratory Drilling
Facility Location (Area/Block)	SM 252	SM 252
Facility Designation		Well Locations A & B
Distance to Nearest Shoreline (miles)	16	16
Volume		
Storage tanks (total)	NA	NA
Uncontrolled blowout	3300	3300
Total Volume	3300	3300
Type of Oil(s) (crude, condensate, diesel)	Condensate	Condensate
API Gravity	41°	41°

Helis has determined that the worst-case scenario from the activities proposed in this EP does supercede the worst-case scenario from our approved regional OSRP for exploratory activities.



Since Helis has the capability to respond to the worst-case spill scenario included in our regional OSRP originally approved on May 21, 2003 and most recently updated on February 3, 2005, I hereby certify that Helis has the capability to respond, to the maximum extent practicable, to a worst-case discharge, or a substantial threat of such a discharge, resulting from the activities proposed in our EP.

**5. FACILITY TANKS, PRODUCTION FACILITIES**

All facility tanks of 25 barrels or more.

Type of Storage Tank	Type of Facility	Tank Capacity (bbls)	Number of Tanks	Total Capacity (bbls)	Fluid Gravity (API)
Fuel Oil (Marine Diesel)	Jack-up	1418	2	2836	32.4°
Production	NA	NA	NA	NA	NA

## APPENDIX G AIR EMISSIONS INFORMATION

### ***AIR EMISSIONS INFORMATION***

Screen Procedures for EP's	Yes	No
Is any calculated Complex Total (CT) Emission amount (tons) associated with your proposed exploration activities more than 90% of the amounts calculated using the following formulas: $CT = 3400D^{2/3}$ for CO, and $CT = 33.3D$ for the other air pollutants (where D = distance to shore in miles)?		X
Do your emission calculations include any emission reduction measures or modified emission factors?		X
Are your proposed exploration activities located east of 87.5° W longitude?		X
Do you expect to encounter H <sub>2</sub> S at concentrations greater than 20 parts per million (ppm)?		X
Do you propose to flare or vent natural gas for more than 48 continuous hours from any proposed well?		X
Do you propose to burn produced hydrocarbon liquids?	X	

### **Summary Information**

There is an existing facility co-located with the currently proposed activities, however, the plan emission amounts and the calculated complex total emission amounts will not change because no new equipment is being added.

Air Pollutant	Plan Emission Amounts <sup>1</sup> (tons)	Calculated Exemption Amounts <sup>2</sup> (tons)	Calculated Complex Total Emission Amounts <sup>3</sup> (tons)
Particular matter (PM)	9.59	532.80	9.59
Sulphur dioxide (SO <sub>2</sub> )	46.45	532.80	46.45
Nitrogen oxides (NO <sub>x</sub> )	324.15	532.80	324.15
Volatile organic compounds (VOC)	10.28	532.80	10.28
Carbon Monoxide (CO)	74.34	21588.65	74.34

<sup>1</sup>For activities proposed in your EP, list the projected emissions calculated from the worksheets.

<sup>2</sup>List the exemption amounts for your proposed activities calculated by using the formulas in 30 CFR 250.303(d).

<sup>3</sup>List the complex total emissions associated with your proposed activities calculated from the worksheets.

Enclosed as ***Attachment G-1*** are the emissions worksheets prepared in accordance with 30 CFR 250.303(d).

This information was calculated by: Cathy Thornton  
(281) 578-3388  
Cathy.thornton@jccteam.com

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

EXPLORATION PLAN (EP)  
AIR QUALITY SCREENING CHECKLIST

OMB Control No. XXX-XXX  
Expiration Date: Pending

COMPANY	HELIS OIL & GAS COMPANY, L.L.C.
AREA	SOUTH MARSH ISLAND
BLOCK	252
LEASE	OCS-G 02598
PLATFORM	A (EXISTING)
WELL	LOCATIONS A AND B
COMPANY CONTACT	CATHY THORNTON
TELEPHONE NO.	(281) 578-3388
REMARKS	DRILL & COMPLETE WELL LOCATIONS A & B, INSTALL A WELL PROTECTOR STRUCTURE OVER WELL LOCATION B. HELIS WILL UTILIZE A TYPICAL JACK-UP TYPE DRILLING RIG DURING THE PROPOSED OPERATIONS.

"Yes"	"No"	Air Quality Screening Questions
	X	1. Is any calculated Complex Total (CT) Emission amount (in tons) associated with your proposed exploration activities more than 90% of the amounts calculated using the following formulas: $CT = 3400D^{2/3}$ for CO, and $CT = 33.3D$ for the other air pollutants (where D = distance to shore in miles)?
	X	2. Do your emission calculations include any emission reduction measures or modified emission factors?
	X	3. Are your proposed exploration activities located east of 87.5° W longitude?
	X	4. Do you expect to encounter H <sub>2</sub> S at concentrations greater than 20 parts per million?
	X	5. Do you propose to flare or vent natural gas for more than 48 continuous hours from any proposed well?
X		6. Do you propose to burn produced hydrocarbon liquids?

If ALL questions are answered "No":  
Submit only this coversheet with your plan; a full set of spreadsheets is not needed.

If ANY of questions 1 through 7 is answered "Yes":  
Prepare and submit a full set of EP spreadsheets with your plan.

ATTACHMENT G-1

# EMISSIONS FACTORS

OMB Control No. xxxx-xxxx  
Expiration Date: Pending

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	PM	SOx	NOx	VOC	CO	REF.	DATE
NG Turbines	gms/hp-hr		0.00247	1.3	0.01	0.83	AP42 3.2-1& 3.1-1	10/96
NG 2-cycle lean	gms/hp-hr		0.00185	10.9	0.43	1.5	AP42 3.2-1	10/96
NG 4-cycle lean	gms/hp-hr		0.00185	11.8	0.72	1.6	AP42 3.2-1	10/96
NG 4-cycle rich	gms/hp-hr		0.00185	10	0.14	8.6	AP42 3.2-1	10/96
Diesel Recip. < 600 hp.	gms/hp-hr	1	1.468	14	1.12	3.03	AP42 3.3-1	10/96
Diesel Recip. > 600 hp.	gms/hp-hr	0.32	1.468	11	0.33	2.4	AP42 3.4-1	10/96
Diesel Boiler	lbs/bbl	0.084	2.42	0.84	0.008	0.21	AP42 1.3-12,14	9/98
NG Heaters/Boilers/Burners	lbs/mmscf	7.6	0.593	100	5.5	84	AP42 1.4-1, 14-2, & 14	7/98
NG Flares	lbs/mmscf		0.593	71.4	60.3	388.5	AP42 11.5-1	9/91
Liquid Flaring	lbs/bbl	0.42	6.83	2	0.01	0.21	AP42 1.3-1 & 1.3-3	9/98
Tank Vapors	lbs/bbl				0.03		E&P Forum	1/93
Fugitives	lbs/hr/comp.				0.0005		API Study	12/93
Glycol Dehydrator Vent	lbs/mmscf				6.6		La. DEQ	1991
Gas Venting	lbs/scf				0.0034			

Sulfur Content Source	Value	Units
Fuel Gas	3.33	ppm
Diesel Fuel	0.4	% weight
Produced Gas( Flares)	3.33	ppm
Produced Oil (Liquid Flaring)	1	% weight

## EMISSIONS CALCULATIONS 1ST YEAR

OMB Control No. xxxx-xxxx  
Expiration Date: Pending

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL		CONTACT		PHONE		REMARKS					
HELIX OIL & GAS COMPANY	SOUTH MARSH ISLAND	252	OCS-G 02598	A (EXISTING)	LOCATIONS A AND B		CATHY THORNTON		(281) 578-3388							
OPERATIONS	EQUIPMENT	RATING	MAX. FUEL	ACT. FUEL	RUN TIME		MAXIMUM POUNDS PER HOUR					ESTIMATED TONS				
	Diesel Engines	HP	GAL/HR	GAL/D												
	Nat. Gas Engines	HP	SCF/HR	SCF/D												
	Burners	MMBTU/HR	SCF/HR	SCF/D	HR/D	DAYS	PM	SOx	NOx	VOC	CO	PM	SOx	NOx	VOC	CO
DRILLING	PRIME MOVER>600hp diesel	11400	550.62	13215	24	92	8.04	36.86	276.21	8.29	60.26	8.87	40.70	304.94	9.15	66.53
	VESSELS>600hp diesel(crew)	2065	99.7395	2394	6	26	1.46	6.68	50.03	1.50	10.92	0.11	0.52	3.90	0.12	0.85
	VESSELS>600hp diesel(supply)	2065	99.7395	2394	10	39	1.46	6.68	50.03	1.50	10.92	0.28	1.30	9.76	0.29	2.13
	VESSELS>600hp diesel(tugs)	4400	212.52	5100	18	4	3.10	14.23	106.61	3.20	23.26	0.11	0.51	3.84	0.12	0.84
FACILITY INSTALLATION	DERRICK BARGE diesel	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	MATERIAL TUG diesel	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel(crew)	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel(supply)	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	MISC. TANK-	BPD	SCF/HR	COUNT												
		0			0	0				0.00					0.00	
DRILLING WELL TEST	OIL BURN	250			24	4	4.38	71.15	20.83	0.10	2.19	0.21	3.42	1.00	0.00	0.11
	GAS FLARE		208333.33		24	4		0.12	14.87	12.56	80.94		0.01	0.71	0.60	3.88
2005 YEAR TOTAL							18.42	135.71	518.59	27.15	188.48	9.59	46.45	324.15	10.28	74.34
EXEMPTION CALCULATION	DISTANCE FROM LAND IN MILES											532.80	532.80	532.80	532.80	21588.65
	16.0															

## SUMMARY

OMB Control No. xxxx-xxxx  
Expiration Date: Pending

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL
HELIS OIL & GAS	SOUTH MARSH ISLAND	252	OCS-G 02598	A (EXISTING)	LOCATIONS A AND B
Year	Emitted Substance				
	PM	SOx	NOx	VOC	CO
2005	9.59	46.45	324.15	10.28	74.34
Allowable	532.80	532.80	532.80	532.80	21588.65

## APPENDIX H ENVIRONMENTAL IMPACT ANALYSIS (EIA)

### (A) Impact Producing Factors

#### ENVIRONMENTAL IMPACT ANALYSIS WORKSHEET

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

## Footnotes for Environmental Impact Analysis Matrix

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



## **(B) Analysis**

### **Site-Specific at South Marsh Island Block 252**

Proposed operations consist of the drilling and completion of Well Locations A & B. Location A will be drilled from the existing A Platform and a single well protector structure will be installed over Well Location B. These operations will be conducted using a jack-up rig.

#### **1. Designated Topographic Features**

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

**Physical disturbances to the seafloor:** South Marsh Island Block 252 is 62 miles from the closest designated Topographic Features Stipulation Block (Sonmier Banks); therefore, no adverse impacts are expected.

**Effluents:** South Marsh Island Block 252 is 62 miles from the closest designated Topographic Features Stipulation Block (Sonmier Banks); therefore, no adverse impacts are expected.

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

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

#### **2. Pinnacle Trend Area Live Bottoms**

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

**Physical disturbances to the seafloor:** South Marsh Island Block 252 is 205 miles from the closest live bottom (pinnacle trend) area; therefore, no adverse impacts are expected.

**Effluents:** South Marsh Island Block 252 is 205 miles from the closest live bottom (pinnacle trend) area; therefore, no adverse impacts are expected.

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

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

### **3. Eastern Gulf Live Bottoms**

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

**Physical disturbances to the seafloor:** South Marsh Island Block 252 is not located in an area characterized by the existence of live bottoms, and this lease does not contain a Live-Bottom Stipulation requiring a photo documentation survey and survey report.

**Effluents:** South Marsh Island Block 252 is not located in an area characterized by the existence of live bottoms; therefore, no adverse impacts are expected.

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

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

#### **4. Chemosynthetic Communities**

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

Operations proposed in this plan are in water depths of 23 feet. High-density chemosynthetic communities are found only in water depths greater than 1,312 feet (400 meters); therefore, Helis's proposed operations in South Marsh Island Block 252 would not cause impacts to chemosynthetic communities.

#### **5. Water Quality**

IPFs that could result in water quality degradation from the proposed operations in South Marsh Island Block 252 include disturbances to the seafloor, effluents and accidents.

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

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

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

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

## **6. Fisheries**

IPFs that could cause impacts to fisheries as a result of the proposed operations in South Marsh Island Block 252 include physical disturbances to the seafloor, effluents and accidents.

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

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

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

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

## **7. Marine Mammals**

GulfCet II studies revealed that cetaceans of the continental shelf and shelf-edge were almost exclusively bottlenose dolphin and Atlantic spotted dolphin. Squid eaters, including dwarf and pygmy killer whale, Risso's dolphin, rough-toothed dolphin, and Cuvier's beaked whale, occurred most frequently along the upper slope in areas outside of anticyclones. IPFs that could cause impacts to marine mammals as a result of the proposed operations in South Marsh Island Block 252 include emissions, effluents, discarded trash and debris, and accidents.

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

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

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

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

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

**Accidents:** Collisions between support vessels and cetaceans would be unusual events, however should one occur, death or injury to marine mammals is possible. Contract vessel operators can avoid marine mammals and reduce potential deaths by maintaining a vigilant watch for marine mammals and maintaining a safe distance when they are sighted. Vessel crews should use a reference guide to help identify the twenty-eight species of whales and dolphins, and the single species of manatee that may be encountered in the Gulf of Mexico OCS. Vessel crews must report sightings of any injured or dead protected marine mammal species immediately, regardless of whether the injury or death is caused by their vessel, to the Marine Mammal and Sea Turtle Stranding Hotline at (800) 799-6637, or the Marine Mammal Stranding Network at

(305) 862-2850. In addition, if the injury or death was caused by a collision with a contract vessel, the MMS must be notified within 24 hours of the strike by email to [protectedspecies@mms.gov](mailto:protectedspecies@mms.gov). If the vessel is the responsible party, it is required to remain available to assist the respective salvage and stranding network as needed.

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

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

## **8. Sea Turtles**

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

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

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

**Discarded trash and debris:** Both entanglement in, and ingestion of, debris have caused the death or serious injury of sea turtles (Balazs, 1985). The limited amount of marine debris, if any, resulting from the proposed activities is not expected to substantially harm sea turtles. Operators are prohibited from deliberately discharging debris as mandated by MARPOL-Annex V and the Marine Plastic Pollution Research and Control Act, and regulations imposed by various agencies including the United States Coast Guard (USCG) and the Environmental Protection Agency (EPA). Helis will operate in accordance with the regulations and also avoid accidental loss of

solid waste items by maintaining waste management plans, manifesting trash sent to shore, and using special precautions such as covering outside trash bins to prevent accidental loss of solid waste. Special caution will be exercised when handling and disposing of small items and packaging materials, particularly those made of non-biodegradable, environmentally persistent materials such as plastic or glass.

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

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

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

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

## 9. Air Quality

South Marsh Island Block 252 is located 163 miles from the Breton Wilderness Area and 16 miles from shore. Applicable emissions data is included in Appendix G of the Plan.

There would be a limited degree of air quality degradation in the immediate vicinity of the proposed activities. Plan Emissions for the proposed activities do not exceed the annual exemption levels as set forth by MMS. Accidents and blowouts can release hydrocarbons or chemicals, which could cause the emission of air pollutants. However, these releases would not impact onshore air quality because of the prevailing atmospheric conditions, emission height, emission rates, and the distance of South Marsh Island Block 252 from the coastline. There are no other IPFs (including effluents, physical disturbances to the seafloor, wastes sent to shore for treatment or disposal) from the proposed activities which would impact air quality.

#### **10. Shipwreck Sites (known or potential)**

IPFs that could impact known or unknown shipwreck sites as a result of the proposed operations in South Marsh Island Block 252 include disturbances to the seafloor. South Marsh Island Block 252 is not located in or adjacent to an OCS block designated by MMS as having a high probability for occurrence of shipwrecks. Helis will report to MMS the discovery of any evidence of a shipwreck and make every reasonable effort to preserve and protect that cultural resource. There are no other IPFs (including emissions, effluents, wastes sent to shore for treatment or disposal, or accidents) from the proposed activities which could impact shipwreck sites.

#### **11. Prehistoric Archaeological Sites**

IPFs that could cause impacts to prehistoric archaeological sites as a result of the proposed operations in South Marsh Island Block 252 are physical disturbances to the seafloor and accidents (oil spills).

**Physical Disturbances to the seafloor:** South Marsh Island Block 252 is located inside the Archaeological Prehistoric high probability lines. Helis will report to MMS the discovery of any object of prehistoric archaeological significance and make every reasonable effort to preserve and protect that cultural resource.

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

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



## Vicinity of Offshore Location

### 1. Essential Fish Habitat (EFH)

IPFs that could cause impacts to EFH as a result of the proposed operations in South Marsh Island Block 252 include physical disturbances to the seafloor, effluents and accidents. EFH includes all estuarine and marine waters and substrates in the Gulf of Mexico.

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

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

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

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

### 2. Marine and Pelagic Birds

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

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

**Accidents:** An oil spill would cause localized, low-level petroleum hydrocarbon contamination. However, it is unlikely that an oil spill would occur from the proposed activities (refer to **Item 5**, Water Quality). Marine and pelagic birds feeding at the spill location may experience chronic,

nonfatal, physiological stress. It is expected that few, if any, coastal and marine birds would actually be affected to that extent. The activities proposed in this plan will be covered by Helis's Regional OSRP (refer to information submitted in **Appendix F**).

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

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

### **3. Public Health and Safety Due to Accidents.**

There are no IPFs (emissions, effluents, physical disturbances to the seafloor, wastes sent to shore for treatment or disposal or accidents, including an accidental H<sub>2</sub>S releases) from the proposed activities which could cause impacts to public health and safety. In accordance with NTL No. 2003 G-17, sufficient information is included in **Appendix C** to justify our request that our proposed activities be classified by MMS as H<sub>2</sub>S absent.

## **Coastal and Onshore**

### **1. Beaches**

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

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

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

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

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

## **2. Wetlands**

Salt marshes and seagrass beds fringe the coastal areas of the Gulf of Mexico. Due to the distance from shore (16 miles), accidents (oil spills) represent an IPF which could impact these resources.

**Accidents:** Level of impact from an oil spill will depend on oil concentrations contacting vegetation, kind of oil spilled, types of vegetation affected, season of the year, pre-existing stress level of the vegetation, soil types, and numerous other factors. Light-oiling impacts will cause plant die-back with recovery within two growing seasons without artificial replanting. However, it is unlikely that an oil spill would occur from the proposed activities (refer to **Item 5**, Water quality). If a spill were to occur, response capabilities as outlined in Helis's Regional OSRP (refer to information submitted in Appendix F) would be implemented.

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

### **3. Shore Birds and Coastal Nesting Birds**

Marsh Island WMA, Atchafalaya Delta WMA, and Paul J Rainey WMA (<30 miles from South Marsh Island Block 252) are highly productive habitat for wildlife. Thousands of shore birds use the refuge as a wintering area. Also, wading birds nest on the refuge. The Marsh Island WMA, Atchafalaya Delta WMA, and Paul J Rainey WMA provide habitat for colonies of nesting wading birds and seabirds as well as wintering shorebirds and waterfowl. The most abundant nesters are brown pelicans, laughing gulls, and royal, Caspian, and sandwich terns. IPFs from the proposed activities that could cause impacts to shore birds and coastal nesting birds are accidents (oil spills) and discarded trash and debris.

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

Oil-spill cleanup operations will result in additional disturbance of coastal birds after a spill. However, it is unlikely that an oil spill would occur from the proposed activities (refer to **Item 5**, Water quality). Due to the distance from shore being 16 miles, Helis would immediately implement the response capabilities outlined in their Regional OSRP (refer to information submitted in **Appendix F**).

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

Informational placards will be posted on vessels and every facility that has sleeping or food preparation capabilities. All offshore personnel, including contractors and other support services-related personnel (e.g. helicopter pilots, vessel captains and boat crews) will be

indoctrinated on waste procedures, and will view the video (or Microsoft PowerPoint presentation), "All Washed Up: The Beach Litter Problem". Thereafter, all personnel will view the marine trash and debris training video annually.

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

#### **4. Coastal Wildlife Refuges**

**Accidents:** South Marsh Island Block 252 is less than 30 miles from the Marsh Island WMA, Atchafalaya Delta WMA, and Paul J Rainey WMA. Management goals of the Marsh Island WMA, Atchafalaya Delta WMA, and Paul J Rainey WMA are waterfowl habitat management, marsh restoration, providing sanctuary for nesting and wintering seabirds, and providing sandy beach habitat for a variety of wildlife species. IPFs from the proposed activities that could cause impacts to this coastal wildlife refuge are accidents (oil spills) and discarded trash and debris.

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

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

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

#### **5. Wilderness Areas**

An accidental oil spill from the proposed activities could cause impacts to wilderness areas. However, it is unlikely that an oil spill would occur from the proposed activities (refer to **Item 5**, Water Quality). Due to the distance from the nearest designated Wilderness Area (163 miles) and the response capabilities that would be implemented, no significant adverse impacts are expected. The activities proposed in this plan will be covered by Helis's Regional OSRP (refer to information submitted in **Appendix F**).

#### **6. Other Environmental Resources Identified**

None

**(C) Impacts on your proposed activities.**

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

**(D) Alternatives**

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

**(E) Mitigation Measures**

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

**(F) Consultation**

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

**(G) References**

Authors:

American Petroleum Institute (API). 1989. Effects of offshore petroleum operations on cold water marine mammals: a literature review. Washington, DC: American Petroleum Institute. 385 pp.

Balazs, G.H. 1985. Impact of ocean debris on marine turtles: entanglement and ingestion. In: Shomura, R.S. and H.O. Yoshida, eds. Proceedings, Workshop on the Fate and Impact of Marine Debris, 26-29 November 1984, Honolulu, HI. U.S. Dept. of Commerce. NOAA Tech. Memo. NOAA-TM-NMFS-SWFC-54. Pp 387-429.

Burke, C.J. and J.A. Veil. 1995. Potential benefits from regulatory consideration of synthetic drilling muds. Environmental Assessment Division, Argonne National Laboratory, ANL/EAD/TM-43

Daly, J.M. 1997. Controlling the discharge of synthetic-based drilling fluid contaminated cuttings in waters of the United States. U.S. Environmental Protection Agency, Office of Water. Work Plan, June 24, 1997.

Hansen, D.J. 1981. The relative sensitivity of seabird populations in Alaska to oil pollution. U.S. Dept. of the Interior, Bureau of Land Management, Alaska OCS Region, Anchorage. BLM-YK-ES-81-006-1792.

Laist, D.W. 1997. Impacts of marine debris: entanglement of marine life in marine debris including a comprehensive list of species with entanglement and ingestion records. In: Coe, J.M. and D.B. Rogers, eds. Marine debris: sources, impacts, and solutions. New York, NY: Springer-Verlag. Pp. 99-139

Majors, A.P. and A.C. Myrick, Jr. 1990. Effects of noise on animals: implications for dolphins exposed to seal bombs in the eastern tropical Pacific purse-seine fishery—an annotated bibliography. NOAA Administrative Report LJ-90-06.

Marine Mammal Commission. 1999. Annual report to Congress – 1998

Piatt, J.F., C.J. Lensink, W. Butler, M. Kendziorek, and D.R. Nysewander. 1990. Immediate impact of the Exxon Valdez oil spill on marine birds. *The Auk*. 107 (2): 387-397

Vauk, G., E. Hartwig, B. Reineking, and E. Vauk-Hentzelt. 1989. Losses of seabirds by oil pollution at the German North Sea coast. *Topics in Marine Biology*. Ros, J.D, ed. *Scient. Mar.* 53 (2-3): 749-754

Vermeer, K. and R. Vermeer, 1975 Oil threat to birds on the Canadian west coast. *The Canadian Field-Naturalist*. 89:278-298.

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

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

## **APPENDIX I**

### **COASTAL ZONE MANAGEMENT CONSISTENCY INFORMATION**

A certificate of Coastal Zone Management Consistency for the state of Louisiana is not required for the proposed supplemental activities.



## OCS PLAN INFORMATION FORM

### GENERAL INFORMATION

Type of OCS Plan:		<input checked="" type="checkbox"/> Exploration Plan (EP)	Development Operations Coordination Document (DOCD)		
Company Name:		Helis Oil & Gas Company, L.L.C.		MMS Operator Number: 01978	
Address: 912 Whitney Bank Bldg. 228 St. Charles Avenue New Orleans, LA 70130		Contact Person: Cathy Thornton			
		Phone Number: (281) 578-3388			
		Email Address: cathy.thornton@jccteam.com			
Lease:	G02598	Area:	South Marsh Island	Block: 252	
Project Name (If Applicable): Not Applicable					
Objective:	<input type="checkbox"/> Oil	<input checked="" type="checkbox"/> Gas	<input type="checkbox"/> Sulphur	<input type="checkbox"/> Salt	Onshore Base: Intracoastal City, LA
Distance to Closest Land (Miles): 16					

### Description of Proposed Activities (Mark all that apply)

<input checked="" type="checkbox"/> Exploration drilling	<input type="checkbox"/> Development drilling
<input checked="" type="checkbox"/> Well completion	<input type="checkbox"/> Installation of production platform
<input type="checkbox"/> Well test flaring (for more than 48 hours)	<input type="checkbox"/> Installation of production facilities
<input checked="" type="checkbox"/> Installation of caisson or platform as well protection structure	<input type="checkbox"/> Installation of satellite structure
<input type="checkbox"/> Installation of subsea wellheads and/or manifolds	<input type="checkbox"/> Commence Production
<input type="checkbox"/> Installation of lease term pipelines	<input type="checkbox"/> Other (Specify and describe)

Have you submitted or do you plan to submit a Conservation Information Document to accompany this plan?	Yes	<input checked="" type="checkbox"/> X	No
Do you propose to use new or unusual technology to conduct your activities?	Yes	<input checked="" type="checkbox"/> X	No
Do you propose any facility that will serve as a host facility for deepwater subsea development?	Yes	<input checked="" type="checkbox"/> X	No
Do you propose any activities that may disturb an MMS-designated high-probability archaeological area?	X	Yes	No
Have all of the surface locations of your proposed activities been previously reviewed and approved by MMS?	Yes	<input checked="" type="checkbox"/> X	No

### Tentative Schedule of Proposed Activities

Proposed Activity	Start Date	End Date	No. of Days
Drill and Complete Well Location A	04/01/05	05/15/05	45
Drill and Complete Well Location B – Install Well Protector Structure over Well Location B	05/16/05	07/01/05	47

### Description of Drilling Rig

### Description of Production Platform

<input checked="" type="checkbox"/> Jackup	<input type="checkbox"/> Drillship	<input type="checkbox"/> Caisson	<input type="checkbox"/> Tension leg platform
<input type="checkbox"/> Gorilla Jackup	<input type="checkbox"/> Platform rig	<input checked="" type="checkbox"/> Well protector	<input type="checkbox"/> Compliant tower
<input type="checkbox"/> Semisubmersible	<input type="checkbox"/> Submersible	<input checked="" type="checkbox"/> Fixed platform	<input type="checkbox"/> Guyed tower
<input type="checkbox"/> DP Semisubmersible	<input type="checkbox"/> Other (Describe)	<input type="checkbox"/> Subsea manifold	<input type="checkbox"/> Floating production system
<input type="checkbox"/> Drilling Rig Name (If Known):	<input type="checkbox"/> Spar	<input type="checkbox"/> Other (Attach description)	

### Description of Lease Term Pipelines

From (Facility/Area/Block)	To (Facility/Area/Block)	Diameter (inches)	Length (Feet)	Product

### Proposed Well/Structure Location

Well or Structure Name/Number:	Location A (Existing Platform A)	Subsea Completion	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Anchor Radius (if applicable) in feet: NA				
	Surface Location	Bottom-Hole Location (For Wells)		
Lease No.	OCS-G 02598			
Area Name	South Marsh Island			
Block No.	252			
Blockline Departures (in feet)	N/S Departure: 6550' FNL			
	E/W Departure: 4118' FEL			
Lambert X-Y coordinates	X = 1,820,361'			
	Y = 210,083'			
Latitude/ Longitude	Latitude: 29° 14' 35.34"			
	Longitude: 91° 53' 47.72"			
	TVD (Feet):		MD (Feet):	
			Water Depth (Feet):	23'

# Proposed Well/Structure Location

Well or Structure Name/Number: Location B		Subsea Completion		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Anchor Radius (if applicable) in feet: NA					
	Surface Location	Bottom-Hole Location (For Wells)			
Lease No.	OCS-G 02598				
Area Name	South Marsh Island				
Block No.	252				
Blockline Departures (in feet)	N/S Departure: 6670' FNL				
	E/W Departure: 4118' FEL				
Lambert X-Y coordinates	X = 1,820,361'				
	Y = 209,963'				
Latitude/ Longitude	Latitude: 29° 14' 34.19"				
	Longitude: 91° 53' 47.72"				
	TVD (Feet):		MD (Feet):		Water Depth (Feet): 23'