

Scanning (new)  
Row OCS-G28666  
PSN 18823

March 18, 2013

In Reply Refer To: GE 1035A

Mr. Mark W. Bauer  
Apache Corporation  
2000 W. Sam Houston Parkway South  
Suite 1600  
Houston, Texas 77042

Dear Mr. Bauer:

Reference is made to the following application that has been reviewed by this office:

Application Type: New Right-of-Way Pipeline  
Application Date: January 30, 2013  
Work Description: Create 200-foot wide right-of-way and install, operate, and maintain the following:

A 3.5-inch pipeline, 2.17 statute miles in length, to transport gas from Platform B to Platform E, all located in Block 69 in the South Marsh Island Area.

Assigned Right-of-Way Number: OCS-G28666  
Assigned Segment Number: 18823

Pursuant to 43 U.S.C. 1334(e) and 30 CFR 250.1000(d), your application is hereby approved.

The approval is subject to the following:

Our review indicates that your proposed activities are in the vicinity of the unidentified magnetic anomalies and side-scan sonar targets listed in Enclosure 1, features that may represent significant archaeological resources. In accordance with 30 CFR 250.1007(a)(5), you must either (1) conduct an underwater archaeological investigation (diver and/or ROV investigations) prior to commencing activities to determine whether these features represent archaeological resources, or (2) ensure that all seafloor disturbing actions resulting from the proposed activities avoid the unidentified features by a distance greater than that listed in Enclosure 1. If you conduct an underwater archaeological investigation prior to commencing operations, contact either Dr. Jack Irion at (504) 736-1742 or Dr. Christopher Horrell at (504) 736-2796 at least two weeks prior to performing operations to obtain the investigation methodology. If you choose to avoid the features, submit anchor position plats, at a scale of 1-in. = 1,000-ft. with DGPS accuracy, with your pipeline construction report required by 30 CFR 250.1008(b). These plats must depict the "as-placed" location of all anchors, anchor chains, wire ropes and cables on the seafloor (including sweep) and demonstrate that the features were not physically impacted by the construction activities. If you choose to avoid

the features and no anchoring activities were conducted during pipeline construction, provide a statement to that effect in lieu of the required anchor position plats.

Assigned MAOP (psi): 1,480  
MAOP Determination : Gas-Lift Manifold Tie-in

The Right-of-Way No. OCS-G28666 is described as follows:  
A 200-foot wide right-of-way to install, operate, and maintain a 3.5-inch pipeline, 2.17 statute miles in length, to transport gas from Platform B to Platform E, all located in Block 69 in the South Marsh Island Area.

Please be reminded that, in accordance with 30 CFR 250.1008(a), you must notify the Regional Supervisor at least 48 hours prior to commencing the installation or relocation of a pipeline or conducting a pressure test on the pipeline. Commencement notification(s) should be faxed to (504) 736-2408. In accordance with 30 CFR 250.1008(b), you are reminded to submit a report to the Regional Supervisor within 90 days after completion of any pipeline construction. Also, in accordance with a Letter to Lessees dated April 18, 1991, a copy of the as-built plat(s) must be submitted to the NOAA-National Ocean Service-OCS, Chief, Nautical Data Branch, N/CS26, 1315 East West Highway, Silver Spring, MD, 20910-3282.

Sincerely,

**(org. sgd.) B. Shrestha**

(for) Nick Wetzel  
Regional Supervisor  
Regional Field Operations

bcc: 1502-01 Segment No. 18823, ROW OCS-G28666 (GE 1035A)  
1502-01 ROW OCS-G28666 (Scanning) (GE 274E)  
MS 5280 Lafayette District  
JCaraher: Segment No. 18823

**Magnetic Anomalies**

Area/ Block	Line Number	Shot Point Number	Intensity (Gammas)	Duration (Feet)	Coordinates	Minimum Avoidance Distance (Feet)
SM 69	2	41	116	215	X= 1761811 Y= -15567 LAT=8.621740732 LON=2.075563417	100
SM 69	6	42	39	160	X= 1764790 Y= -16100 LAT=8.620327901 LON=92.06627007	100
SM 68	7	19	25	215	X= 1765625 Y= -5774 LAT=8.648735431 LON=2.063873336	100
SM 68	8	45	8	300	X= 1766759 Y= -17716 LAT=8.615918972 LON=2.060102706	150
SM 69	1	32	15	275	X= 1760794 Y= -12419 LAT=8.630378447 LON=2.078796258	150
SM 69	1	41	10	325	X= 1760845 Y= -16499 LAT=8.619160831 LON=2.078554636	150
SM 68	8	44	114	290	X= 1766750 Y= -16931 LAT=28.61807728 LON=2.060146264	150
SM 68	7	12	90	725	X= 1766001 Y= -8412 LAT=8.641488424 LON=2.062649053	350

Side-Scan Sonar Targets

<u>Area/ Block</u>	<u>Magnetometer Association</u>	<u>Dimensions LxWxH (Feet)</u>	<u>Coordinates</u>	<u>Minimum Avoidance Distance (Feet)</u>
SM 68	YES	163x4x0	X= 1765944 Y= -8158 LAT=8.642185838 LON=2.062831743	350
SM 69	NO	31x18x0	X= 1765058 Y= -17191 LAT=8.617332758 LON=92.06541326	300

SN/BB23 JC  
G 28064



January 29, 2013

Minerals Management Service  
**RECEIVED**

JAN 30 2013

Office of Field Operations  
Pipeline Section

Mr. Nick Wetzel  
Regional Supervisor  
U.S. Department of the Interior  
Bureau of Safety & Environmental Enforcement  
1201 Elmwood Park Boulevard  
New Orleans, Louisiana 70123-2394

Attention: Ms. Angie Gobert

RE: **Application for Installation of 3.5" Gas Lift Right-of-Way Pipeline** Between South Marsh Island Block 69, Platform B and South Marsh Island Block 69, Platform E, OCS Federal Waters, Gulf of Mexico, Offshore, Louisiana

Gentlemen:

In accordance with regulations contained in Title 30 CFR, Part 250, Subpart J, Apache Corporation (Apache) hereby files this application in quadruplicate for a right-of-way easement two hundred (200') in width for the construction, maintenance and operation of a 3.5" gas lift right-of-way pipeline to be installed in block 69, South Marsh Island Area. Apache agrees that said right-of-way, if approved, will be subject to the terms and conditions of said regulations. Additionally, Apache will be the operator of the proposed right-of-way pipeline.

The proposed 3.5" gas lift pipeline will be installed between Ankor E&P Holdings Corporation's existing B platform to Apache's proposed South Marsh Island Block 69 E tripod in South Marsh Island Block 69 (approximately 11,464.38, 2.17 miles).

Apache's existing Oil Spill Response Plan, most recently approved on November 2, 2012, will be reviewed to determine if the proposed pipeline affects our current worst case discharge, and if so, will modify the plan at the next scheduled update. The worst case discharge of the pipeline has been calculated at less than 1000 barrels, therefore, Oil Spill Financial Responsibility coverage is not required. Additionally, the attached pipeline safety flow diagram outlines the safety devices for prevention and detection of spills in accordance with BSEE regulations.

Pipeline installation will be conducted utilizing a typical lay barge with a support base located in Intracoastal City, Louisiana. The maximum water depth is 136'; and therefore, the pipeline will be buried a minimum of 3' BML. No new or unusual technology will be utilized during the proposed pipeline installation.

*Bureau of Safety & Environmental Enforcement  
3.5" Gas Lift ROW Pipeline  
South Marsh Island Block 69  
January 29, 2013*

*Page Two*

The risers at the South Marsh Island Block 69 E tripod and the South Marsh Island Block 69 B platform shall be designed and installed inside of a jacket leg for protection.

Apache will comply with regulations set forth in NTL No. 2007-G01 which states that DGPS equipment shall be utilized on pipeline construction vessels to depict existing pipelines and other potential hazards. In addition, a plat depicting the location of the proposed pipeline will be provided to key personnel associated with the operations.

This application (and any amendments made hereto) is made with our full knowledge and concurrence with the OCS Lands Act (43 U.S.C. 1331 et. Seq.), as amended (P.L. 95-372), including the following: Sec. 5(e) addressing pipeline rights-of-way, requirements of the Federal Energy Regulatory Commission relating to notice of hearing, transportation and purchase of oil and gas without discrimination; Sec. 5 (f)(1) addressing operation of pipelines in accordance with competitive principles, including open and nondiscriminatory access to both owner and non-owner shippers, Sec. 5(f)(2) which may allow exemption of the requirements in Sec. 5(f)(1); Sec. 5(e) addressing the assuring of maximum environmental protection, including the safest practices for pipeline installation; and Sec. 5(f)(1)(B) which may require expansion of throughput capacity of any pipeline except for the Gulf of Mexico or the Santa Barbara Channel.

Additionally, we expressly agree that if any site, structure, or object of historical or archaeological significance should be discovered during the conduct of any operations within the permitted right-of-way, we shall report immediately such findings to the Director, Gulf of Mexico OCS Region, and make every reasonable effort to preserve and protect the cultural resource from damage until said Director has given directions as to its preservation.

In accordance with the regulations, we have forwarded one complete copy of the subject application via certified mail to each designated oil and gas lease operator or right-of-way holder whose lease or right-of-way is affected by the proposed pipeline installation. The proposed right-of-way does not adjoin or subsequently cross state submerged lands. A list of the affected lease operators or right-of-way holders is included as Enclosure A. A copy of the certified mail return receipts will be sent to your office upon receipt.

Applicant agrees to be bound by the foregoing regulations, and further agrees to comply with the applicable stipulations as set forth in Title 30 CFR 250 (Subpart J).

Apache Corporation hereby agrees to keep open at all reasonable times for inspection by the BSSE, the area covered by this right-of-way and all improvements, structures, and fixtures thereon and all records relative to the design, construction, operation, maintenance, and repairs, or investigations on or with regard to such area.

*Bureau of Safety & Environmental Enforcement  
3.5" Gas Lift ROW Pipeline  
South Marsh Island Block 69  
January 29, 2013*

*Page Three*

In support of our application, the following information is enclosed:

1. Originally signed copy of Nondiscrimination of Employment
2. General Information & Design Information for 3.5" Gas Lift Pipeline
3. Designated operators & right-of-way holders (Enclosure A)
4. Coastal Zone Management Consistency Certification and copy of pipeline submittal letter verifying submittal to CZM
5. Calculations for Oil Spill Financial Responsibility and Oil Spill Response Plan
6. Pipeline Route Maps & Vicinity Map
7. Pipeline Safety Flow Schematic
8. Shallow Hazards Statement
9. Riser Detail Drawings
10. 1 – Hard Copy Archaeological, Engineering & Hazard Survey, 1 Electronic CD.
11. Pay.gov receipt in the amount of \$2569.00 to cover the cost of the application fee. A check in the amount of \$45 will be sent to ONRR for cost of the first year ROW.

Please refer to Miscellaneous File No. 00105 for a copy of a resolution approved by the Board of Directors authorizing the undersigned to sign for and on behalf of Apache Corporation. Additionally, Apache Corporation has an approved \$300,000 right-of-way bond on file with BOEM.

## NONDISCRIMINATION IN EMPLOYMENT

As a condition precedent to the approval of the granting of the subject pipeline right-of-way, the grantee, Apache Corporation, hereby agrees and consents to the following stipulation, which is to be incorporated into the application for said right-of-way.

During the performance of this grant, the grantee agrees as follows:

During the performance under this grant, the grantee shall fully comply with paragraphs (1) through (7) of section 202 of Executive Order 11246, as amended (reprinted in 41 CFR 60-1.4(a)), which are for the purpose of preventing discrimination against persons on the basis of race, color, religion, sex or national origin. Paragraphs (1) through (7) of section 202 of Executive Order 11246, as amended, are incorporated in this grant by reference.

*Melissa Casus*

Signature

01/29/13

Date



*Bureau of Safety & Environmental Enforcement  
3.5" Gas Lift ROW Pipeline  
South Marsh Island Block 69  
January 29, 2013*

*Page Four*

Should you have any questions or requests for additional information, please contact Melissa Casas at (713) 296-6948 or via email at [melissa.casas@apachecorp.com](mailto:melissa.casas@apachecorp.com).

Sincerely,

Apache Corporation



Mark W. Bauer  
Attorney in Fact

MWB:msc  
Enclosures

cc:

Ankor E&P Holdings Corporation  
1615 Poydras Street, Suite 1100  
New Orleans, Louisiana 70112  
(Certified Mail No. 7000 2870 0000 6220 3832)

**APACHE CORPORATION**

**SOUTH MARSH ISLAND BLOCK 69 "B"**

**TO**

**SOUTH MARSH ISLAND BLOCK 69 "E"**

**3.5" O.D. GAS LIFT PIPELINE**

**REVISION C**

**TEC PROJECT NO. 121225**

**PREPARED BY:**

**TECHNICAL ENGINEERING CONSULTANTS, LLC  
401 WHITNEY AVENUE, SUITE 600  
GRETN, LOUISIANA 70056  
(504) 362-0896**

**TECHNICAL ENGINEERING CONSULTANTS**

**GENERAL INFORMATION & CALCULATIONS**  
**3.5" O.D. GAS LIFT PIPELINE**  
**SOUTH MARSH ISLAND BLOCK 69 "B"**  
**TO**  
**SOUTH MARSH ISLAND BLOCK 69 "E"**  
**TEC PROJECT NO. 121225**  
**REVISION C**  
**JANUARY 21, 2013**

The proposed 3" pipeline will provide gas lift to Apache Corporation's new South Marsh Island Block 69 "E" Platform from Ankor E&P Holdings Corporation's South Marsh Island Block 69 "B" Platform. The design capacity of the pipeline was based on the following anticipated flow rates:

Natural Gas	2 MMSCFD
Maximum water depth	(-) 136 ft. MSL

The design of the proposed pipeline is in accordance with API RP 14E, DOI (BSEE) 30 CFR Part 250 Subparts H and J, ANSI B16.5 and ASME B31.8. Each code or regulation was applied within the intended scope of the proposed design.

**1. Description of the cathodic protection system:**

The cathodic protection system for the pipeline will use Galvalum III Alloy tapered semi-cylindrical bracelet anodes. Calculations are as follows:

- a. Anticipated line life is 20 years.
- b. Assumed maximum of 2% bare pipe.
- c. Current 6 mA/sq. ft
- d. Galvalum III Alloy Rate of Consumption 8#/amp year
- e. Anode spacing calculations:

$$\begin{aligned} \text{Area/Mile} &= 5,280 \text{ ft./mi.} \times 3.14 \times (3.5"/12 \text{ ft.}) \\ &= 4,835.6 \text{ sq.ft./mi} \end{aligned}$$

$$\begin{aligned} \text{Amps} &= 4,835.6 \text{ sq.ft./mi.} \times 0.02 \times 0.006 \text{ amps/sq. ft.} \\ &= 0.58 \text{ amps/mi.} \end{aligned}$$

Line Life =  $0.58 \text{ amps/mi.} \times 20 = 11.6 \text{ amp yr./mi.}$

#/mile =  $11.6 \text{ amp yr./mi.} \times 8\#/\text{amp yr.}$

= 92.8 #/mile

Anode quantity =  $(92.8/\text{mi})/15\# = 6.2 \text{ anodes/mi.}$

Anode spacing =  $(5280 \text{ ft./mi.})/(6.2 \text{ anodes/mi.}) = 852 \text{ ft./anode}$

Use on (1) 15# (net) Galvalum III Alloy anode every 852 feet

**2. Description of the external pipe coating system:**

Risers will be coated with 14 mils of fusion bonded epoxy from end to end with one-half inch Splashtron over the fusion bonded epoxy in the splash zone;  $\pm 10'$  of M.L.W. on South Marsh Island 69 "B" and South Marsh Island 69 "E". Welded joints are protected with heat shrinkable wraparound pipe sleeves. Above the splash zone, the line is protected by platform piping paint system.

Line pipe is coated with fusion bonded epoxy (14 mils). Welded joints are protected with heat shrinkable wraparound pipe sleeves.

**3. Description of the internal protective measures:**

Internal coating is not required. The analysis of transported products will be monitored and preventative measures will be employed as necessary.

**4. Specific gravity of the 3.5" line pipe (empty):**

Specific gravity of 3.5" OD x 0.300" W.T. empty pipe = 2.39

Calculated as follows:

The line pipe weighs 10.25 lbs./LF.

The pipe displaces  $[\text{AREA}(\text{sq. in.})/144] \times 62.4 \times 1.03 = 4.294\# \text{ seawater/ft.}$

Specific gravity of pipeline =  $10.25 / 4.294 = 2.39$

The weight of coatings, anodes, and other materials were not considered in these calculations.

**5. Maximum source pressure (MSP)**

MSP for the pipeline  $\leq$  1,480 psig. The pipeline shall be protected at Ankor E&P Holdings Corporation's South Marsh Island Block 69 "B" Platform by the following: One (1) high pressure monitoring device set at a maximum of 15% above the normal operating pressure, but in no case shall it be set above the maximum allowable operating pressure of the pipeline, and one (1) low pressure monitoring device, set at 15% below the normal operating pressure. The effect of any pressure exceeding either limit will cause the automatic and orderly shutdown of the well and any incoming pipelines.

**6. Maximum allowable operating pressure (MAOP) and calculations:**

The proposed 3" pipeline portion is approximately 11,465 feet (2.18 mi) in horizontal length. This does not include the approximate 291 feet of new vertical riser pipe used for the South Marsh Island 69 "B" and South Marsh Island 69 "E". The pipeline will transport natural gas (S.G. = 0.65). The pipeline design pressure is 1,480 psig

a. New Riser Pipe: 3.5" O.D. x 0.300" W.T. API 5L Grade B seamless;

$$t = PD/2SFET + C.A.$$

t = minimum wall thickness (inches)

$$t = 1,480 (3.5)/2(35,000)(0.6) \\ (1.0)(1.0) + C.A.$$

P = internal design pressure (psig)

$$P = 1,480 \text{ psig}$$

$$t = 0.123" + 0.05"$$

D = nominal outside diameter (inches)

$$D = 3.5"$$

$$t = 0.173" \text{ (minimum)}$$

S = SMYS [ASME B31.8]

$$S = 35,000 \text{ psi}$$

T = Temperature Factor

$$T = 1.0 \text{ [ASME B31.8, } < 250^\circ\text{F]}$$

E = Joint Factor

$$E = 1.0$$

F = Design Factor [30 CFR Part 250]

$$F = 0.6$$

C.A. = Corrosion Allowance

$$C.A. = 0.05"$$

Use 3.5" O.D. x 0.300" W.T. API 5L Grade B seamless

b. Line Pipe: 3.5" O.D. x 0.300" W.T. API 5L Grade B seamless;

$$t = PD/2S FET + C.A.$$

t = minimum wall thickness (inches)

$$t = 1,480(3.5)/2(35,000)(0.72) \\ (1.0)(1.0) + C.A.$$

P = internal design pressure (psig)

$$t = 0.103" + 0.05"$$

P = 1,480 psig

$$t = 0.153" \text{ (minimum)}$$

D = nominal outside diameter (inches)

$$D = 3.5"$$

S = SMYS [ASME B31.8]

S = 35,000 psi

T = Temperature Factor

T = 1.0 [ASME B31.8, < 250°F]

E = Joint Factor

E = 1.0

F = Design Factor [30 CFR Part 250]

F = 0.72

C.A. = Corrosion Allowance

C.A. = 0.05"

Use 3.5" O.D. x 0.300" W.T. API 5L Grade B seamless

c. 3.5" Riser & Line 5D Bends: 3.5" OD x 0.300" WT, API 5L Gr. B

Anticipated wall thinning = 8.00% (from Table 1-1 of TPA-IBS-98)

Calculated wall thickness of a 5D bend:

$$t_{\text{post bending}} = 0.300" - 0.08 (0.300")$$

$$t_{\text{post bending}} = 0.276"$$

$t_{\text{post bending}} \geq t_{\text{minimum}}$  for both the riser (0.173") and line pipe (0.153") calculations therefore is sufficient for MAOP = 1,480 psig.

d. Riser Valves and Flanges: Valves and flanges will be ANSI - 900 with a rated working pressure of 2,220 psig at 100°F.

7. Hydrostatic test pressure (HTP), test medium, and period of time:

Riser hydrostatic test pressure, to be tested post installation:

In accordance with ASME B31.8

$$\text{HTP} = 1.5 \times \text{MAOP} = 1.5 \times 1,480 \text{ psig}$$

$$\text{HTP} = 2,220 \text{ psig (when testing riser segment only)}$$

Line pipe hydrostatic test pressure, to be tested riser to riser post installation:

In accordance with DOI 30 (MMS) CFR Part 250 Subparts H & J

$$\text{HTP} = 1.25 \times \text{MAOP} + \text{external pressure}$$

$$= 1.25 \times 1,480 \text{ psig} + (1.03) (136 \text{ ft.}) / (2.31 \text{ psi/ft.})$$

$$\text{HTP} = 1,850 \text{ psig} + 61 \text{ psi} = 1,911 \text{ psig}$$

The hydrostatic test will be conducted in accordance with applicable regulations. Test duration will be a minimum of eight (8) hours per 30 CFR Part 250.1003(b)(1). The test medium will be inhibited seawater. The test pressure is not greater than 95% of the hoop stress pressure using 100% of the steel's SMYS.

a. Riser and Line Pipe (Worst Case):

$$P = 2St/D$$

$$= 2(0.300)(35,000)/3.5''$$

$$= 6,000 \text{ psig}$$

$$95\% \text{ of } P = 5,700 \text{ psig} > 2,220 \text{ psig}$$

P = max. hoop stress pressure (psig)

t = nominal wall thickness (inches)

S = SMYS = 35,000 psi

D = nominal outside diameter (inches)

b. Hydrotest:

Apache Corporation will hydrotest the riser and the pipeline to 2,220 psig for 8 hours (min.) from top of riser to top of riser post installation.

**8. MAOP of the tie-in piping:**

The pipeline will tie into a new gas lift manifold on Apache Corporation's South Marsh Island Block 69 "E". The manifold will have a design pressure of 1,480 psig and outfitted with valves and flanges rated for 1,480 psig.

**9. Proposed date for commencing installation and estimated time for construction:**

Commence construction date: March 30, 2013

Estimated construction time: 14 days

**10. Type of protection to the risers and crossing pipelines:**

The new riser at Ankor E&P Holdings Corporation's South Marsh Island Block 69 and Apache Corporation's South Marsh Island Block 69 "E" shall be designed and installed inside of a jacket leg for protection from potential boat impact.

The pipeline will be buried to a minimum depth of 3 feet.

The proposed pipeline will not cross any pipelines.



## PIPELINE SUMMARY

1. Line Pipe Specifications:

<u>O.D.</u>	<u>W.T.</u>	<u>Material Spec.</u>	<u>Length</u>	<u>MAOP</u>
3.5"	0.300"	API 5L Grade B SMLS	11,465 ft.	1,480 PSIG

2. Riser Pipe Specifications:

<u>O.D.</u>	<u>W.T.</u>	<u>Material Spec.</u>	<u>Length</u>	<u>MAOP</u>
3.5"	0.300"	API 5L Grade B SMLS	291 ft.	1,480 PSIG

3. Pipeline Hydrostatic Test Pressure:

Riser and Line Pipe = 2,220 psig for 8 hours (min.)  
from top of riser to top of riser post installation

4. Line Pipe Coating:

Coating will be thin film fusion bonded epoxy (14 mils). Welded joints protected with heat shrinkable pipe sleeves.

5. Name of Product:

Natural gas (S.G. = 0.65)

6. Class Location:

Class 1

7. Governing Codes:

DOI 30 CFR Part 250 Subparts H and J, API RP 14E, ANSI B16.5, and ASME B31.8

Application by:  
Apache Corporation  
January 21, 2013  
Revision C

3.5" O.D. Gas Lift Pipeline  
South Marsh Island Block 69 "B"  
To  
South Marsh Island Block 69 "E"  
Gulf of Mexico

- SUMMARY -

TECHNICAL ENGINEERING CONSULTANTS

**Enclosure A**

*The following affected designated lease operators and right-of-way holders have been furnished one complete copy of the subject pipeline application.*

**Lease OCS- G 01201, South Marsh Island Block 69**

Designated Operator: Apache Corporation  
Ankor E&P Holdings Corporation

Right-of-Way Holder: None



January 29, 2013

Certified Mail No. 7000 2870 0000 6220 3832

Ankor E&P Holdings Corporation  
1615 Poydras Street, Suite 1100  
New Orleans, LA 70112

Attention: Jane Chady

Gentlemen:

This letter serves as notification that Apache Corporation (Apache) is submitting an application to BSSE providing for the installation of a 3.5" gas lift right-of-way pipeline to be installed between South Marsh Island Block 69, Platform B and South Marsh Island Block 69, Platform E; a portion of which is in your lease.

In accordance with BSSE requirements, a complete copy of the subject application is enclosed.

Please indicate your consent to the proposed by signing in the space provided below and returning a signed copy to the undersigned at 2000 W. Sam Houston Parkway South, Suite 1000, Houston, Texas 77042.

Should you have any questions or require any additional information, please contact the undersigned at (713) 296-6948 or via email at [melissa.casas@apachecorp.com](mailto:melissa.casas@apachecorp.com).

Sincerely,

Melissa Casas  
Regulatory Specialist

MSC:me

Consent granted this \_\_\_\_\_ day of \_\_\_\_\_, 2013.

By: \_\_\_\_\_

Title: \_\_\_\_\_

**Coastal Zone Management Program  
Consistency Certification**

South Marsh Island Block 69  
(from area/block)

South Marsh Island Block 69  
(to area/block)

11,464.38' (2.17 miles)  
(length)

The proposed activities described in detail in this right-of-way pipeline application comply with the enforceable policies of the State of Louisiana's approved Coastal Management Program and will be conducted in a manner consistent with such Program.

Apache Corporation



Certifying Official

January 29, 2013

Date



January 29, 2013

Louisiana Department of Natural Resources  
Coastal Zone Management Division  
617 North 3<sup>rd</sup> Street, Suite 1048  
Baton Rouge, Louisiana 70802

Attention: Mr. Greg DuCote

RE: **Application for Installation of 3.5" Gas Lift Right-of-Way Pipeline** Between South Marsh Island Block 69, Platform B and South Marsh Island Block 69, Platform E, OCS Federal Waters, Gulf of Mexico, Offshore, Louisiana

Gentlemen:

By letter dated January 29, 2013, Apache Corporation submitted an application to the Bureau of Safety & Environmental Enforcement providing for the installation of a 3.5" gas lift right-of-way pipeline to be installed in South Marsh Island Block 69.

Apache Corporation hereby submits a copy of the subject application for your review along with a check in the amount of \$300.00 to cover the cost of the processing fee.

Should you have any questions or requests for additional information, please contact the undersigned at (713) 296-6948 or via email at [melissa.casas@apachecorp.com](mailto:melissa.casas@apachecorp.com).

Sincerely,

A handwritten signature in black ink that reads "Melissa Casas".

Melissa Casas  
Regulatory Specialist

MSC:me  
Enclosure



DATE 1/21/2013  
BY BMS

SUBJECT Apache Corp.  
3" Gas Lift PL SM 69"B" to SM 69 "E"

JOB NO. 121225

SHEET 1  
OF 1

**MAXIMUM RELEASE CALCULATION  
PIPELINE SPILL ESTIMATOR  
(OCS STUDY MMS 2002-033)**

$$V_{REL} = \text{Total Volume released} \\ = 0.1781 \times V_{pipe} \times f_{rel} \times f_{GOR} + V_{pre\ shut} = 16 \text{ Bbls}$$

where:

$$V_{pipe} = (I.D. / 24)^2 \times \text{Length} \times \pi = 539 \text{ ft}^3$$

where:

$$I.D. = 2.9 \text{ inches} \\ \text{Length} = 11,756 \text{ feet}$$

$$f_{rel} = 0.64 \text{ per Table 1.3} \\ G_{max} = 337 \text{ per Table 1.3}$$

where:

$$\Delta P_{rel} = P_{pipe} / P_{amb} = 19.76 \text{ psi}$$

where:

$$P_{pipe} = 1200 \text{ psig} \\ P_{amb} = 0.446533 \times d = 60.7 \text{ psi}$$

where:

$$d = \text{water depth, ft} \\ d = 136 \text{ ft}$$

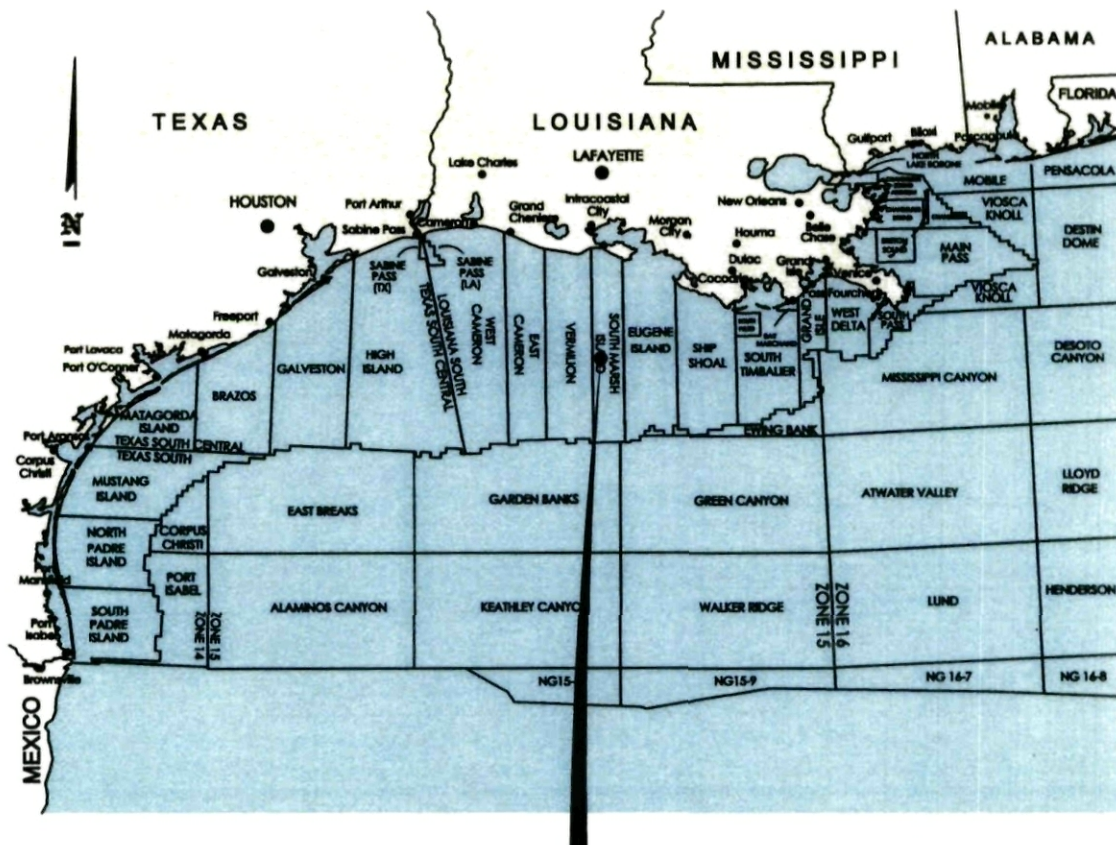
$$f_{GOR} = 0.26 \text{ From Table 1.4}$$

$$GOR = 2,000,000 \text{ SCF/BBL}$$

$$V_{pre\ shut} = Q \times t / 1440 = 0.01 \text{ bbls}$$

where:

$$Q = 20 \text{ BBL/Day} \quad (\text{Allowable Min. for Max. Release Calc.}) \\ t = 1 \text{ min.}$$




**FROM SOUTH MARSH ISLAND AREA BLOCK 69 "B" STRUCTURE  
TO SOUTH MARSH ISLAND AREA BLOCK 69 "E" STRUCTURE**

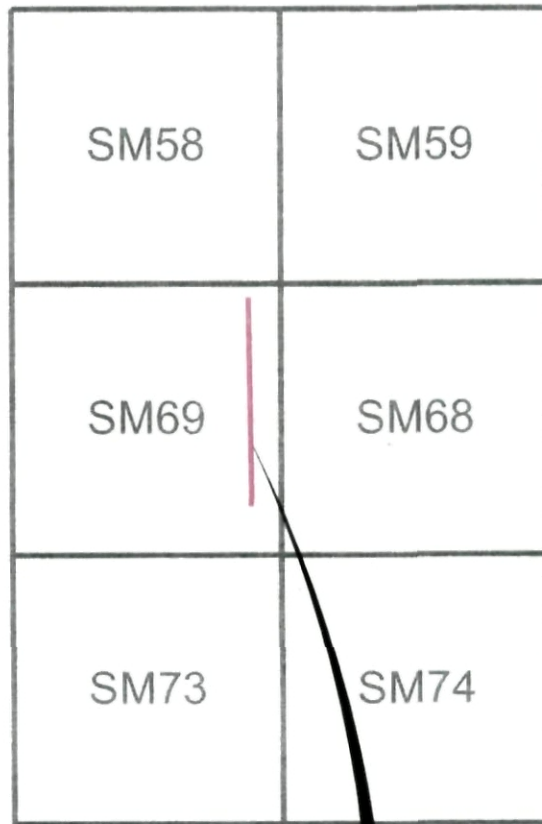
**VICINITY MAP**



**PROPOSED 3" GAS LIFT**

FROM SOUTH MARSH ISLAND AREA BLOCK 69 "B" STRUCTURE  
TO SOUTH MARSH ISLAND AREA BLOCK 69 "E" STRUCTURE

PREPARED FOR:	PALOMA ENERGY CONSULTANTS	FILENAME:	12-1214_Permit_3-in
DATE SURVEYED:	DEC 22, 2012	DRAFTED BY:	C.D.B.
 <b>GULF OCEAN SERVICES</b> <small>OFFSHORE GEOPHYSICAL SURVEYS</small>		DATE:	JAN 15, 2013
		REV NO.:	1
		SHEET:	1 OF 6




**FROM SOUTH MARSH ISLAND AREA BLOCK 69 "B" STRUCTURE  
TO SOUTH MARSH ISLAND AREA BLOCK 69 "E" STRUCTURE**

**AREA MAP**

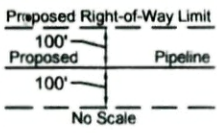


**PROPOSED 3" GAS LIFT PIPELINE**

FROM SOUTH MARSH ISLAND AREA BLOCK 69 "B" STRUCTURE  
TO SOUTH MARSH ISLAND AREA BLOCK 69 "E" STRUCTURE

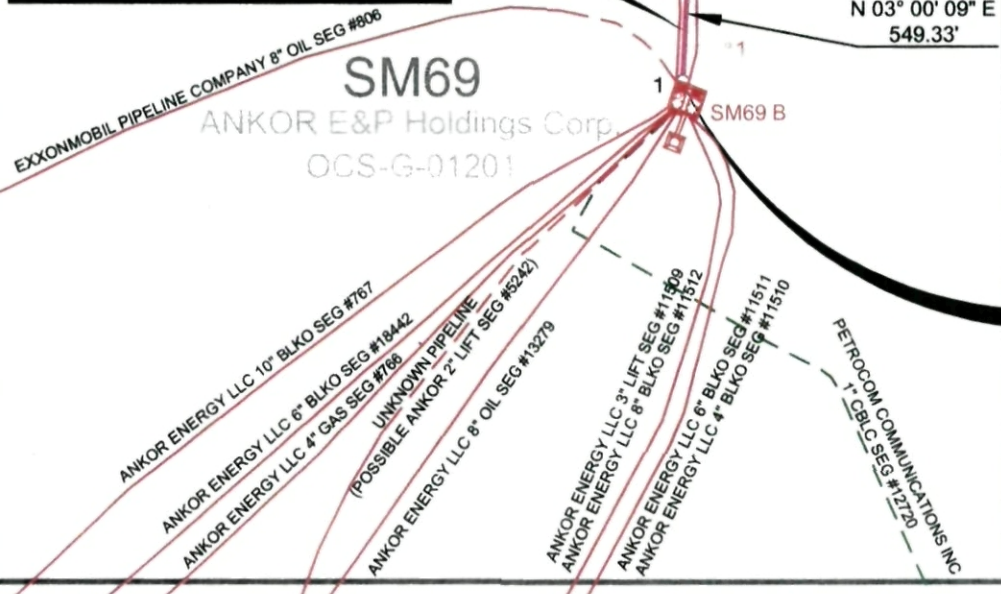
PREPARED FOR:	PALOMA ENERGY CONSULTANTS	FILENAME:	12-1214_Permit_3-in
DATE SURVEYED:	DEC 22, 2012	DRAFTED BY:	C.D.B.
	<b>GULF OCEAN SERVICES</b> OFFSHORE GEOPHYSICAL SURVEYS	DATE:	JAN 15, 2013
		REV NO.:	1
		SHEET:	2 OF 6





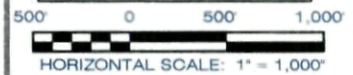
SHEET 4 OF 6  
MATCH LINE N 00° 44' 40" W 10,915.05'

**PROPOSED 3" GAS LIFT PIPELINE**  
TOTAL LENGTH IN FEET = 11,464.38  
TOTAL LENGTH IN STATUTE MILES = 2.17



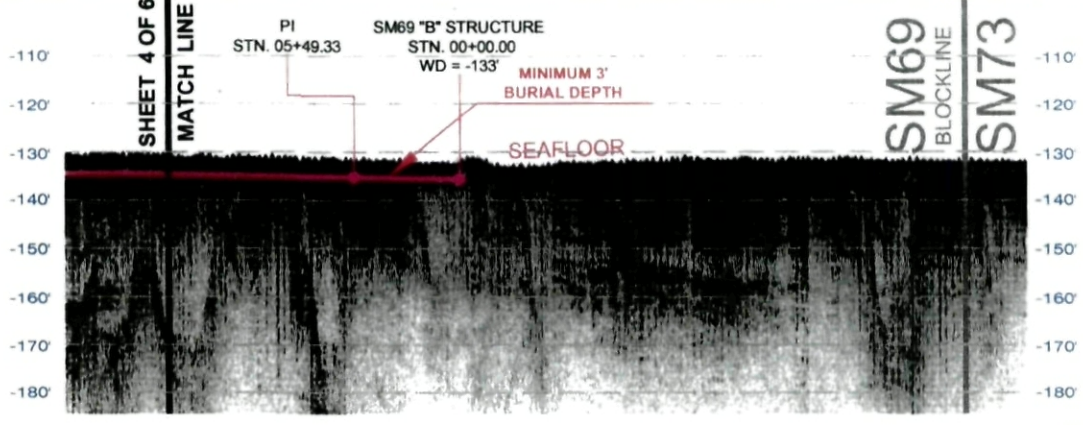
PI STN. 05+49.33 6.7  
X= 1,763,792.81'  
Y= -16,387.12'  
Lat. 28° 37' 10.275"N  
Long. 92° 04' 09.738"W

**SM69 'B' STRUCTURE**  
STN. 00+00.00  
X= 1,763,764.04'  
Y= -16,935.70'  
Lat. 28° 37' 04.843"N  
Long. 92° 04' 10.021"W  
NAD 83  
Lat. 28° 37' 05.707"N  
Long. 92° 04' 10.464"W

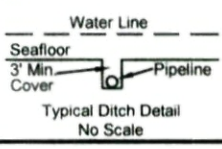


**PROPOSED PIPELINE COORDINATES**

TIE	X	Y	TIE	X	Y
1 (SM69 'B')	1,763,764.04'	-16,935.70'	2 (PI)	1,763,792.81'	-16,387.12'



**PROFILE**



I certify this plat represents the proposed pipeline route based on a survey performed under my supervision in accordance with generally accepted offshore survey practices.



RAYNOLD D. VINCENT, P.L.S.  
STATE OF LOUISIANA, REGISTRATION NO. 4727

- NOTES:**
- Coordinates are referenced to the Louisiana Coordinate System of 1927, South Zone. Units are in U.S. Survey Feet.
  - Features of record which may exist outside the survey area are not represented on this map.
  - Lease information shown on this map was obtained from the BSEE.
  - Revised 1/15/2013 to adjust coordinate and change designation of SM69 'E' Structure.
- Legend:**
- PROPOSED PIPELINE ROUTE.
  - BLOCK LINE.
  - PIPELINE POSITION BASED ON BSEE DATA. (DASHED WHERE UNVERIFIED)
  - PIPELINE POSITION BASED ON SURVEY DATA. (DASHED WHERE UNVERIFIED)
  - PLATFORM LOCATION BASED ON SURVEY DATA.
  - WELL LOCATION BASED ON BSEE DATA.
  - PROPOSED PIPELINE POINT.

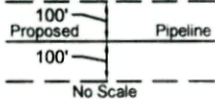


**PROPOSED 3" GAS LIFT PIPELINE**  
FROM SOUTH MARSH ISLAND AREA BLOCK 69 "B" STRUCTURE TO SOUTH MARSH ISLAND AREA BLOCK 69 "E" STRUCTURE

PREPARED FOR:	PALOMA ENERGY CONSULTANTS	FILENAME:	12-1214_Permit_3-in
DATE SURVEYED:	DEC 22, 2012	DRAFTED BY:	C.D.B.
		DATE:	JAN 15, 2013
		REV NO.:	1
		SHEET:	3 OF 6



Proposed Right-of-Way Limit



SHEET 5 OF 6  
MATCH LINE

0.4



SM69

ANKOR E&P Holdings Corp  
OCS-G-01201

SM68

ANKOR E&P Holdings Corp  
OCS-G-017535

**PROPOSED 3" GAS LIFT PIPELINE**  
 TOTAL LENGTH IN FEET = 11,464.38  
 TOTAL LENGTH IN STATUTE MILES = 2.17

10,915.05'  
 N 00° 44' 40" W  
 FLOW  
 EXXONMOBIL PIPELINE COMPANY 10" OIL SEG #15086

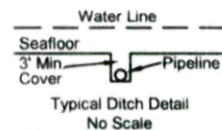
MATCH SHEET LINE 3 OF 6



2



### PROFILE



I certify this plat represents the proposed pipeline route based on a survey performed under my supervision in accordance with generally accepted offshore survey practices.



RAYNOLD D. VINCENT, P.L.S.  
 STATE OF LOUISIANA, REGISTRATION NO. 4727

**NOTES:**

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- Features of record which may exist outside the survey area are not represented on this map.
- Lease information shown on this map was obtained from the BSEE.
- Revised 1/15/2013 to adjust coordinate and change designation of SM69 "E" Structure.


**Legend:**

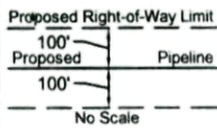
- PROPOSED PIPELINE ROUTE.
- BLOCK LINE.
- PIPELINE POSITION BASED ON SURVEY DATA. (DASHED WHERE UNVERIFIED)
- WELL LOCATION BASED ON BSEE DATA.



### PROPOSED 3" GAS LIFT PIPELINE

FROM SOUTH MARSH ISLAND AREA BLOCK 69 "B" STRUCTURE  
 TO SOUTH MARSH ISLAND AREA BLOCK 69 "E" STRUCTURE

PREPARED FOR:	PALOMA ENERGY CONSULTANTS	FILENAME:	12-1214_Permit_3-in
DATE SURVEYED:	DEC 22, 2012	DRAFTED BY:	C.D.B.
 <b>GULF OCEAN SERVICES</b> OFFSHORE GEOPHYSICAL SURVEYS	DATE:	JAN 15, 2013	
	REV NO.:	1	
	SHEET:	4 OF 6	



SHEET 6 OF 6  
MATCH LINE



SM69

ANKOR E&P Holdings Corp  
OCS-G-01201

10,915.05'  
S 00° 44' 40" E  
FLOW

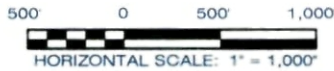
EXXONMOBIL PIPELINE COMPANY 10" OIL SEG #15086

SM68

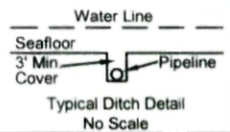
ANKOR E&P Holdings Corp  
OCS-G-01201

**PROPOSED 3" GAS LIFT PIPELINE**  
TOTAL LENGTH IN FEET = 11,464.38  
TOTAL LENGTH IN STATUTE MILES = 2.17

MATCH LINE  
SHEET 4 OF 6



**PROFILE**



I certify this plat represents the proposed pipeline route based on a survey performed under my supervision in accordance with generally accepted offshore survey practices.



RAYNOLD D. VINCENT, P.L.S.  
STATE OF LOUISIANA, REGISTRATION NO. 4727

**NOTES:**

- Coordinates are referenced to the Louisiana Coordinate System of 1927, South Zone. Units are in U.S. Survey Feet.
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- Lease information shown on this map was obtained from the BSEE.
- Revised 1/15/2013 to adjust coordinate and change designation of SM69 "E" Structure.


**Legend:**

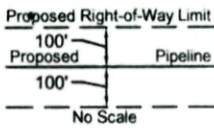
- PROPOSED PIPELINE ROUTE.
- BLOCK LINE.
- PIPELINE POSITION BASED ON SURVEY DATA. (DASHED WHERE UNVERIFIED)
- WELL LOCATION BASED ON BSEE DATA.



**PROPOSED 3" GAS LIFT PIPELINE**

FROM SOUTH MARSH ISLAND AREA BLOCK 69 "B" STRUCTURE TO SOUTH MARSH ISLAND AREA BLOCK 69 "E" STRUCTURE

PREPARED FOR: PALOMA ENERGY CONSULTANTS	FILENAME: 12-1214_Permit_3-in
DATE SURVEYED: DEC 22, 2012	DRAFTED BY: C.D.B.
 <b>GULF OCEAN SERVICES</b> OFFSHORE GEOPHYSICAL SURVEYS	DATE: JAN 15, 2013
	REV NO.: 1
SHEET: 5 OF 6	



**SM58**  
Apache Corporation  
OCS-G-01194

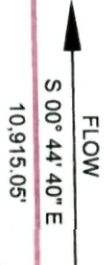
**SM59**

SM69 "E" STRUCTURE STN. 114+64.38	
X=	1,763,651.00'
Y=	-5,473.00'
Lat.	28° 38' 58.302"N
Long.	92° 04' 12.116"W
NAD 83	
Lat.	28° 38' 59.163"N
Long.	92° 04' 12.561"W

**SM69**  
ANKOR E&P Holdings Corp.  
OCS-G-01201

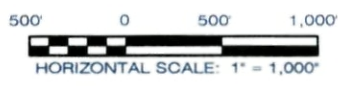
**SM68**  
ANKOR E&P Holdings Corp.  
OCS-G-01205

**PROPOSED 3" GAS LIFT PIPELINE**  
TOTAL LENGTH IN FEET = 11,464.38  
TOTAL LENGTH IN STATUTE MILES = 2.17



EXXONMOBIL PIPELINE COMPANY 10" OIL SEG #15086

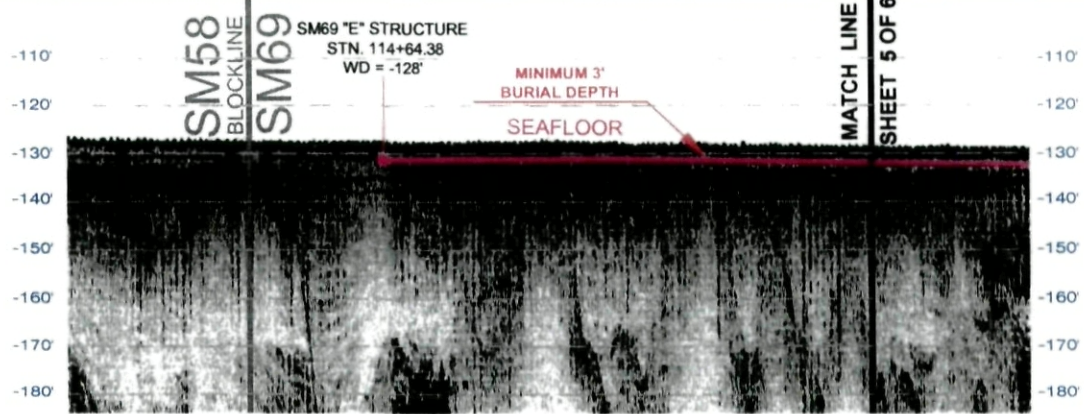
.8



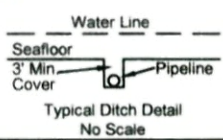
**MATCH LINE**  
SHEET 5 OF 6

**PROPOSED PIPELINE COORDINATES**

TIE	X	Y
3 (SM69 "E")	1,763,651.00'	-5,473.00'



**PROFILE**



I certify this plot represents the proposed pipeline route based on a survey performed under my supervision in accordance with generally accepted offshore survey practices.



RAYNOLD D. VINCENT, P.L.S.  
STATE OF LOUISIANA, REGISTRATION NO. 4727

- NOTES:**
- Coordinates are referenced to the Louisiana Coordinate System of 1927, South Zone. Units are in U.S. Survey Feet.
  - Features of record which may exist outside the survey area are not represented on this map.
  - Lease information shown on this map was obtained from the BSEE.
  - Revised 1/15/2013 to adjust coordinate and change designation of SM69 "E" Structure.

- Legend:**
- PROPOSED PIPELINE ROUTE.
  - BLOCK LINE.
  - PIPELINE POSITION BASED ON SURVEY DATA. (DASHED WHERE UNVERIFIED)
  - - WELL LOCATION BASED ON BSEE DATA.
  - - PROPOSED PIPELINE POINT.



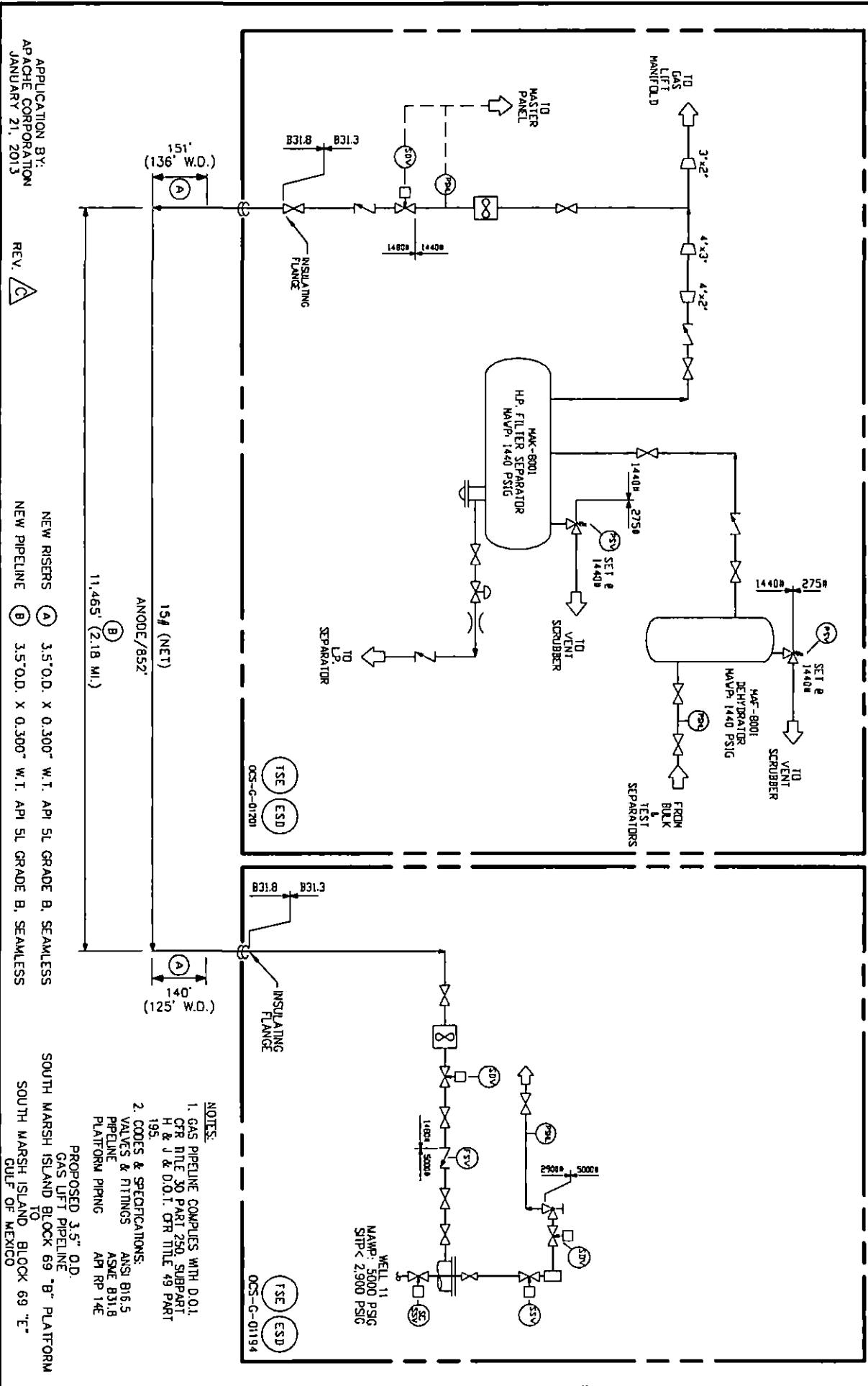
**PROPOSED 3" GAS LIFT PIPELINE**  
FROM SOUTH MARSH ISLAND AREA BLOCK 69 "B" STRUCTURE  
TO SOUTH MARSH ISLAND AREA BLOCK 69 "E" STRUCTURE

PREPARED FOR:	PALOMA ENERGY CONSULTANTS	FILENAME:	12-1214_Permit_3-in
DATE SURVEYED:	DEC 22, 2012	DRAFTED BY:	C.D.B.
		DATE:	JAN 15, 2013
		REV NO.:	1
		SHEET:	6 OF 6



ANKOR E&P HOLDINGS CORPORATION  
SOUTH MARSH ISLAND BLOCK 69 "B"

APACHE CORPORATION  
SOUTH MARSH ISLAND BLOCK 69 "E"



APPLICATION BY:  
APACHE CORPORATION  
JANUARY 21, 2013

REV. C

NEW RISERS (A) 3.5" O.D. X 0.300" W.T. API 5L GRADE B, SEAMLESS  
NEW PIPELINE (B) 3.5" O.D. X 0.300" W.T. API 5L GRADE B, SEAMLESS

SOUTH MARSH ISLAND BLOCK 69 "B" PLATFORM  
SOUTH MARSH ISLAND BLOCK 69 "E"  
GULF OF MEXICO

- NOTES:
1. GAS PIPELINE COMPLIES WITH D.O.I. CFR TITLE 30 PART 250, SUBPART H & J & D.O.I. CFR TITLE 49 PART 195.
  2. CODES & SPECIFICATIONS:  
VALVES & FITTINGS: ANSI B16.5  
PIPELINE: ASME B31.8  
PLATFORM PIPING: API RP 14E

PROPOSED 3.5" O.D. GAS LIFT PIPELINE



### 3.6 CONCLUSIONS AND RECOMMENDATIONS

The following conclusions and recommendations should be considered during pipeline installation and lay barge anchor deployment operations within the study area:

1. The seabed along the route slopes evenly to the south at a rate of two feet per mile (0.02°). Water depths along the proposed route range from -128 feet below sea level at the future "E" Structure site increasing to -133 feet at the "B" Structure in the southern end of the route. The fathometer data indicates that the seafloor along the route is smooth and devoid of significant pipeline laying topographic anomalies.
2. The side scan sonar data indicate an uniform seafloor with occasional pock marks and anchor/drag scars. The side scan sonar records showed one sonar contact representing a probable discarded segment of chain or small diameter cable/pipe. Its location has been plotted for avoidance purposes. The centerline or planned path of the pipeline appears clear of debris.
3. An underlying salt diapir was detected on the high-frequency data just to the west of the survey corridor. The uplifting of the sediments resulted in the visible tilting of the shallow beds. The sediments over the proposed route are horizontal and not affected by the movement of the salt dome.
4. Much of the survey area is dissected by shallow filled channels that appear to be entrenched from just below the seafloor to a surface eight feet below the seabed. Thalweg values varied from 15 feet to up to 93 feet. The lateral extents of all mapped channels have been graphically projected on The Archaeological, Engineering, and Hazard Map (Map No. 1). The presence of the shallow channels is not considered to be an impediment to the laying or burial of the proposed pipelines.
5. Public and company database indicate that there are 20 existing pipelines and 23 well/structure locations currently within or adjacent to the survey corridor. The positions of most of this infrastructure were verified or updated with the collected geophysical data as plotted. However, several pipelines were found to be slightly off of their reported locations. All pipeline positions as they were found by the survey are depicted on the Archaeological, Engineering, and Hazard Map (Map No. 1). All pipeline positions should also be noted before the commencement of any pipeline installation activities and lay barge anchors deployments.
6. The magnetometer system also recorded 52 magnetic anomalies that could not be correlated with existing infrastructure and their sources are thus considered unknown.. Anomaly No. 124 was recorded about 15 feet west of the proposed pipeline centerline. Sonar data shows what possibly could be debris in this area. This anomaly should be investigated to determine its exact nature and position or approached with caution prior to any pipe installation or lay barge activities in the area. Another magnetic anomaly (No. 48) was registered approximately 213 feet west of the proposed centerline. All of the unidentified magnetic anomalies have been plotted on the included Archaeological, Engineering, and Hazard Map (Map No. 1). We also recommend that their positions be avoided during the all aspects of pipeline installation and lay barge anchor positioning.

3.5" D.D. x 0.300" WT.  
API 5L GR.B  
PROPOSED RISER

RISER  
CLAMP  
(TYP. 3)

EL. (+) 10'-0"

1/2" SPLASHTRON COATING  
BELOW

MLW EL. 0'-0"

EL. (-) 10'-0"

1/2" SPLASHTRON COATING  
ABOVE


JACKET LEG

MUDLINE EL. (-) 136'-0"

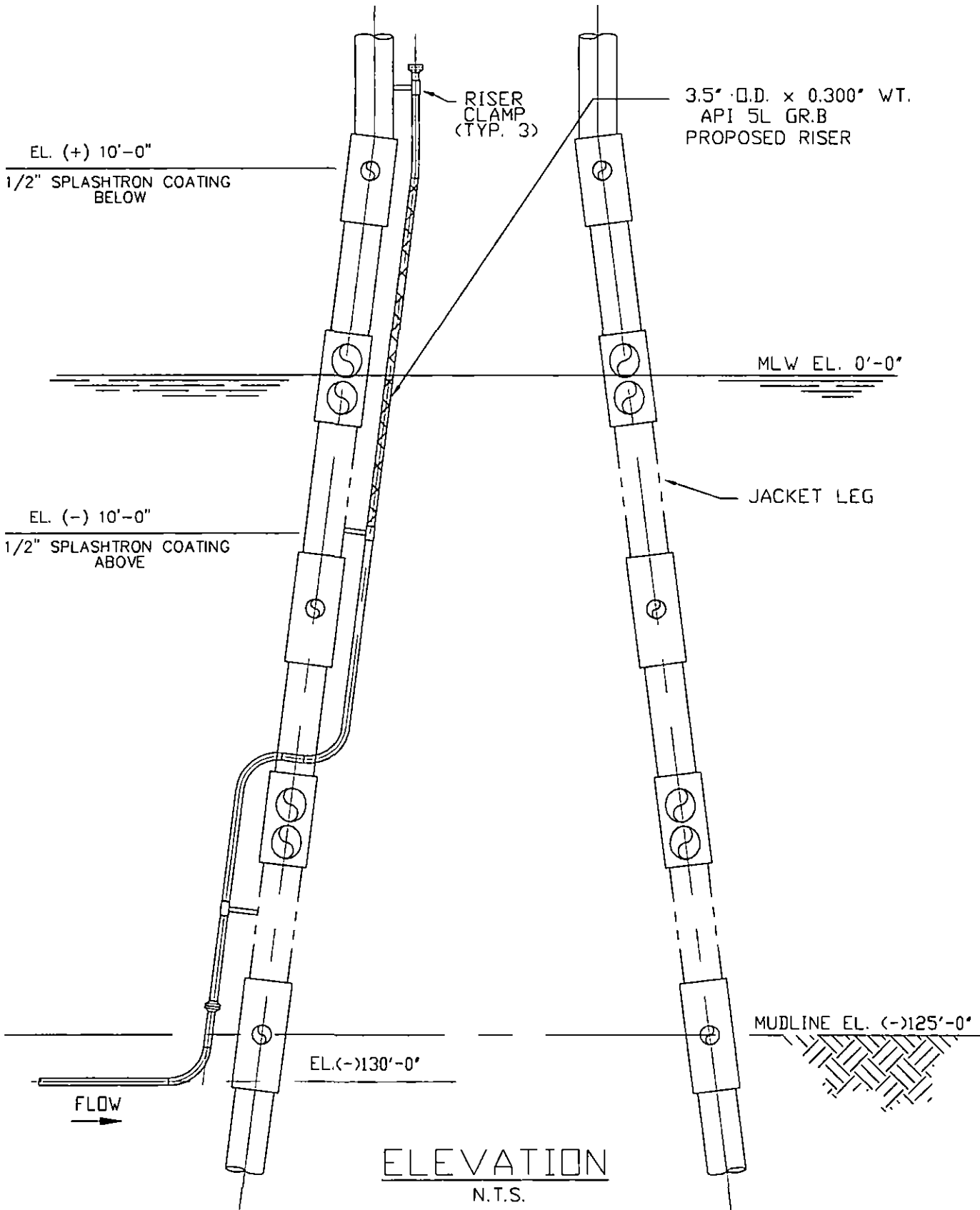
EL. (-) 141'-0"

FLOW  
→


ELEVATION  
N.T.S.

APPLICATION BY:  
APACHE CORPORATION  
JANUARY 21, 2013  
REVISION: 

PROPOSED 3.5" GAS LIFT PIPELINE  
RISER ELEVATION  
SOUTH MARSH ISLAND BLOCK 69 "B"  
GULF OF MEXICO



BLO ZN Apache \1212253 in. PIPELINE PERMITS \121225PP-3.dwg Mon, January 21 2013 9:59 AM

APPLICATION BY:  
 APACHE CORPORATION  
 JANUARY 21, 2013  
 REVISION: 

PROPOSED 3.5" GAS LIFT PIPELINE  
 RISER ELEVATION  
 SOUTH MARSH ISLAND BLOCK 69 "E"  
 GULF OF MEXICO



Apache Corporation's Oil Spill Response Plan for the proposed pipeline activity from SM 69 B to SM 69 E was last approved by BSEE on 11/2/12.

#### *Discussion of Worst Case Discharge Scenario*

For the purpose of Coastal Zone Management Act analysis, the largest spill volume originating from the proposed activity would be the loss due to a rupture in the pipeline, estimated to be 16 barrels of condensate with an API gravity of 62°. The terminating point of the pipeline in SM 69 E was selected as the site of the spill due to its proximity to shore.

Apache Corporation's Oil Spill Response Plan includes alternative response technologies such as dispersants. Strategies will be decided by Unified Command based on the size of the spill, weather and potential impacts. If aerial dispersants are utilized, 8 sorties (9,600 gallons) from two of the DC-3 aircrafts and 4 sorties (8,000 gallons) from the Basler aircraft would provide a daily dispersant capability of 7,540 barrels. Slick containment boom along with sorbent boom would be immediately called out and on-scene as soon as possible. Offshore response strategies may include collection of condensate with sorbent boom (inside hard boom), attempting to skim utilizing one Fast Response Unit (FRU), with a total derated skimming capacity of 4,251 barrels. Temporary storage associated with skimming equipment equals 200 barrels. If additional storage is needed, a 20,000 barrel storage barge may be mobilized and centrally located to provide temporary storage allowing the skimmers to stay in the area of operations as much as possible. **Safety is first priority. Air monitoring will be accomplished and operations deemed safe prior to any containment/skimming attempts.**

#### *Location of Primary Response Equipment, & Staging areas*

Please refer to Table 2.

#### *Estimated Time of Spill Response*

Please refer to Table 2.

#### *Discussion of New or Unusual Technology*

Apache Corporation's Oil Spill Response Plan includes alternative response technologies such as dispersants and in-situ burn. Strategies will be decided by Unified Command based on size of the spill, weather and potential impacts.

Based on the anticipated worst case discharge scenario, Apache Corporation can be onsite with contracted oil spill recovery equipment with adequate response capacity to contain and recover surface hydrocarbons, and prevent land impact, to the maximum extent practicable, within an estimated 29 hours (based on the equipment's Effective Daily Recovery Capacity (EDRC)).

#### *Discussion of Potential Shoreline Impacts*

If the spill went unabated, shoreline impact in Cameron Parish, Louisiana would depend upon existing environmental conditions. Shoreline protection would include the use of CGA's near shore and shallow water skimmers with a totaled derated skimming capacity of 3,588 barrels. Temporary storage associated with skimming equipment equals 20 barrels. If additional storage is needed, a 20,000 barrel storage barge may be mobilized and centrally located to provide temporary storage allowing the skimmers to stay in the area of operations as much as possible. Onshore response may include the deployment of shoreline boom on beach areas, or protection and sorbent boom on vegetated areas. A Master Service Agreement with OMI Environmental will ensure access to 30,000 feet of 18" shoreline protection boom. **Figure 2** (below) outlines individual times needed for procurement, load out, travel time to the site and deployment. Strategies would be based upon surveillance and real time trajectories that depict areas of potential impact given actual sea and weather conditions. The State of Louisiana Initial Oil Spill Response Plan for Cameron Parish and Unified Command would be consulted to ensure that environmental and special economic resources would be correctly identified and prioritized to ensure optimal protection. Shoreline protection strategies depict the protection response modes applicable for oil spill clean-up

operations. The State of Louisiana Initial Oil Spill Response Plan provides detailed shoreline protection strategies for this area, and it describes necessary action to keep the oil spill from entering Louisiana's coastal wetlands, based on the assumption that removal of the released oil will be much easier and less damaging to fragile coastal ecosystems if done in the open waters of the Gulf of Mexico. Supervisory personnel have the option to modify the deployment and operation of equipment allowing a more effective response to site-specific circumstances. Apache Corporation's contract Spill Management Team holds a copy of the State of Louisiana Initial Oil Spill Response Plan.

Trajectory of a spill and the probability of it impacting a land segment have been projected utilizing Apache Corporation's WCD and information in BSEE Oil Spill Risk Analysis Model (OSRAM) for the Central and Western Gulf of Mexico available on BSEE website using 3 day impact. The results are tabulated below.				
Area/Block	ROW	Launch Area	Land Segment and/or Resource	Conditional Probability (%) within 3 days
Pipeline Segment No. TBD  SM 69 B to SM 69 E  <i>58 miles from shore</i>	TBD	C33	<b>Cameron, LA</b>	<b>1</b>

***Environmental Sensitivities***  
**CAMERON PARISH, LOUISIANA**

Cameron Parish includes the east side of Sabine Lake, Sabine National Wildlife Refuge, Calcasieu Lake, Lacassine National Wildlife Refuge (inland) and Grand Lake. Cameron Parish also includes the area along the coastline from Sabine Pass to Big Constance Lake in Rockefeller Wildlife Refuge. This region is composed of open public beaches, marshlands and swamps. It serves as a habitat for numerous birds, finfish and other animals, including several rare, threatened and endangered species.

Sensitive Areas	Descriptions	Access	Wildlife	Contact
1) CAMERON AREA	On the Calcasieu River and Ship Channel 2.5 miles north of the GOM shoreline. Only route for marine life to enter and/or leave Calcasieu Lake and River Basin.	Take TX Hwy 82 south and then east from Port Arthur to Cameron. Also accessible by boat from the Calcasieu Ship Channel from the GOM. Oil company landings, USCOE facility and helicopter landing/fueling facilities	RTE: <b>Brown pelican</b>  Others: Waterfowl, long-billed curlew, peregrine falcon, marbled godwit, spotted sea trout, shrimp and blue crab, drum, southern flounder, gulf menhaden	N/A
2) LOUISIANA GULF COAST AND JOHNSON'S BAYOU	GOM coastline from Louisiana Point (east of Sabine Pass) extending easterly to the west bank of Johnson's Bayou. Primarily composed of marshland and swamps.	Shoreline accessible by shallow draft vessels. Vehicle access is limited to 4-wheel drive vehicles via LA Hwy 82.	RTE: <b>Bald eagle, piping plover</b>  Others: Songbirds, shorebirds, gulls, ruddy duck and other waterfowl, finfish	N/A

Sensitive Areas	Descriptions	Access	Wildlife	Contact
3) LOUISIANA GULF COAST MUD LAKE TO WHITE LAKE INLAND TO GIWW	Shoreline on the GOM from Mud Lake to White Lake inland to the GIWW.	LA Hwy 82 parallels the coast about 5 miles from the beach. The beach is marshy salt grass and accessible only by marsh buggy, helicopter or airboat.	<b>RTE:</b> <b>None known</b>  <b>Others:</b> Waterfowl, snowy egret, oliveaceous cormorant, peregrine falcon, roseate spoonbill, white and brown shrimp, blue crab, finfish	N/A
4) ROCKEFELLER STATE WILDLIFE REFUGE	76,000 acres of brackish to saltwater marshes, shallow lakes and bayous in southwest LA. This area borders the Gulf of Mexico for 26.5 miles and extends inland toward the Grand Chenier ridge, a stranded beach ridge, six miles from the Gulf. Surveys indicate a wintering waterfowl population reaching 160,000.	There are few roads on the refuge. Major access is by small boat, marsh buggy or amphibious vehicle. The best location for a remote command post is at headquarters located on LA Hwy 82 approximately 10 miles east of Grand Chenier, LA. Equipment available: 1 amphibious dragline with 0.5 yard bucket, 1 marsh buggy, small boats, air boats and farm tractors.	<b>RTE:</b> <b>American alligator</b>  <b>Others:</b> Egrets and herons, dabbling ducks, Canada goose and white-fronted goose, peregrine falcon, roseate spoonbill, eastern oyster, menhaden, redfish, flounder, speckled trout, white and brown shrimp and blue crabs, furbearers	Rockefeller SWR 5476 Grand Chenier Hwy Grand Chenier, LA 70643 Phone: (337) 538-2276
5) SABINE WILDLIFE REFUGE	125,000 acres of freshwater and brackish marshes interspersed with low prairie ridges. Calcasieu Lake transects the refuge on the east, and Sabine Lake adjoins it on the west.	By small boat, airboat, amphibious vehicle or marsh buggy. Launching facilities are at Johnson's Bayou landing for the southwest part of the refuge, at refuge headquarters for the west side of Calcasieu Lake, and on the east side of the Cameron Ferry crossing for the east side of Calcasieu Lake. Remote command post could be set up at the refuge headquarters. Equipment available: 1 airboat, 4 outboard boats.	<b>RTE:</b> <b>Bald eagle, brown pelican, Kemp's ridley sea turtle</b>  <b>Others:</b> Canada goose, white-fronted goose and other waterfowl (winter), peregrine falcon (winter), shrimp, sunfish, bass, spotted sea trout, southern flounder, blue catfish, red drum, alligator gar, small mammals, snakes	Sabine NWR 3000 Holly Beach Hwy Hackberry, LA 70645 Phone: (337) 558-5574 Phone: (337) 558-5631

Areas of Socio-Economic Concern in Cameron Parish:

- Commercial fishing in Sabine Lake area
- Gas field in SNWR just north of Mud Lake
- Gulf States Utilities (GSU) water intake canal at the end of Old River Cove on the north end of Sabine Lake
- Heavy vessel traffic in Lake Charles
- Pleasure Island Marina
- Public beaches and recreational areas (Martin Beach, Gulfview Beach, Holly Peveto Beach, Rutherford Beach)
- Sabine Pass Battleground historical site

Protection Priorities for Cameron Parish:

- GSU intake canal
- Rockefeller Wildlife Refuge
- Sabine National Wildlife Refuge
- Other coastal marshlands

*Name of Primary Oil Spill Removal Organization (OSRO)*

Apache Corporation has a contract with *Clean Gulf Associates (CGA)* which will provide immediate access to appropriate spill response equipment and personnel.

*Waste/Discharge Disposal*

Oil spill cleanup by mechanical recovery will involve the further handling of recovered oil and oiled materials. These should be transported from offshore to the staging area for proper handling or from onshore directly to the appropriate reclamation/disposal site. Normally, the waste generated from a mechanical recovery operation will be classified as a Non-hazardous Oilfield Waste (NOW). In rare instances where it is suspected that extraneous substances have been introduced into a spill, it is appropriate to test the recovered oil for hazardous waste characteristics (Ignitability, Reactivity, Corrosivity, and Toxicity). Transportation of oil and oily waste may be accomplished by tank truck, vacuum truck or barge. OSROs have (or can obtain) trucks certified for waste oil transport.

See **Table 1** for a list of potential waste disposal sites.

**Table 1  
Waste Disposal Sites**

State	Waste Site	Type of Operation	Wastes Accepted	Site Location	Phone Number
LA	CHI (Charles Holston Inc.)	Saltwater Disposal	Saltwater and Clear Completion Fluids	Richard and Gueydan, LA	(800) 252-5563
LA	Coastal Chemical	Glycol Recycler	Glycols, amines	Abbeville, LA	(337) 898-0001
LA	Newpark Environmental Servs.	Transfer Station	Non-hazardous E&P waste	Cameron, LA	(337) 775-5605
LA	Newpark Environmental Services	Transfer Station	Non-hazardous E&P waste	Fourchon, LA	(985) 396-2755
LA	Newpark Environmental Services	Transfer Station	Non-hazardous E&P waste	Fourchon, LA	(985) 396-2804
LA	Newpark Environmental Services	Transfer Station	Non-hazardous E&P waste	Intracoastal City, LA	(337) 893-3239
LA	Newpark Environmental Services	Transfer Station	Non-hazardous E&P waste	Morgan City, LA	(985) 384-4460
LA	Newpark Environmental Services	Transfer Station	Non-hazardous E&P waste	Venice, LA	(504) 534-2027
LA	Houma SWD	Salt Water Disposal	Saltwater and Clear Completion Fluids	Houma, LA	(985) 851-0643
LA	Industrial Waste Services (Waste Management)	Landfill	Hazardous and Non-Hazardous waste	Carlyss, LA	(800) 673-5541
LA	Louisiana Tank	Salt Water Disposal	Saltwater and Clear Completion Fluids	Bell City, LA	(337) 436-1000
LA	PSC Industrial Outsourcing	Reclaimer/SWDW	Waste crude oil, E&P waste fluids	Jeanerette, LA	(337) 276-5163
LA	Siemens Water Technology	Reclaimer	Waste, refined, and crude oil	New Orleans, LA	(504) 254-2982
LA	U. S. Liquids	Transfer Station	Non-hazardous E&P waste	Cameron, LA	(337) 775-5455
LA	U. S. Liquids	Land Treatment/SWDW	All E&P waste	Mementau, LA	(337) 824-8588
LA	Woodside Landfill (Waste Management)	Landfill	Industrial waste	Walker, LA	(800) 673-5541

Notes:

- E&P waste—exploration and production waste, exempt from RCRA
- RCRA—Resource Conservation and Recovery Act ("listed" or "characteristic" hazardous waste)

WCD Scenario for Pipeline from SM 69 B to SM 69 E – BASED ON RUPTURE IN PIPELINE (58 miles from shore)  
 16 bbls of Condensate  
 API Gravity 62°

**Table 2 – Equipment Response Time to SM 69**

*Dispersants/Surveillance*

Dispersant/Surveillance	Dispersant Capacity (gal)	Storage Capacity	Persons Req.	From	Hrs to Procure	Hrs to Loadout	Travel to site	Total Hrs
CGA								
Basler 67T	2000	NA	2	Houma	1	1	0.5	2.5
ASI								
DC 3	1200	NA	2	Houma	1	1	0.7	2.7
DC 3	1200	NA	2	Houma	1	1	0.7	2.7
Aero Commander	NA	NA	2	Houma	1	1	0.5	2.5

*Offshore Response*

Recovered Oil Storage No Staging	EDRC	Storage Capacity	VOO	Persons Required	From	Hrs to Procure	Hrs to Loadout	Hrs to GOM	Travel to Spill Site	Hrs to Deploy	Total Hrs
Enterprise Marine Services LLC (available through contract with CGA)											
CTCo 2604	NA	20000	1 Tug	6	Amelia	4	12	4	7.5	1	28.5

**Staging Area: Intracoastal City**

Offshore Equipment With Staging	EDRC	Storage Capacity	VOO	Persons Req.	From	Hrs to Procure	Hrs to Loadout	Travel to Staging	Travel to Site	Hrs to Deploy	Total Hrs
CGA											
FRU (1) + 100 bbl Tank (2)	4251	200	1 Utility	6	Morgan City	1	2	1.75	6.3	1	12.05

Offshore Equipment With Staging	EDRC	Storage Capacity	VOO	Persons Req.	From	Hrs to Procure	Hrs to Loadout	Travel to Staging	Travel to Site	Hrs to Deploy	Total Hrs
CGA											
42" Auto Boom (5000')	NA	NA	10 Crew	20	Galveston	1	2	5	6.3	1	15.3
42" Auto Boom (10000')	NA	NA	20 Crew	40	Harvey	1	2	3	6.3	1	13.3
42" Auto Boom (2500')	NA	NA	6 Crew	12	Ingleside	1	2	7.5	6.3	1	17.8
42" Auto Boom (5000')	NA	NA	10 Crew	20	Lake Charles	1	2	2	6.3	1	12.3
42" Auto Boom (2500')	NA	NA	6 Crew	12	Pascagoula	1	2	4.5	6.3	1	14.8

*Nearshore Response*

Nearshore Recovered Oil Storage No Staging	EDRC	Storage Capacity	VOO	Persons Required	From	Hrs to Procure	Hrs to Loadout	Hrs to GOM	Travel to Spill Site	Hrs to Deploy	Total Hrs
Enterprise Marine Services LLC (available through contract with CGA)											
CTCo 2605	NA	20000	1 Tug	6	Amelia	4	12	4	13.75	1	34.75

**Staging Area: Cameron**

Nearshore and Inland Skimmers With Staging	EDRC	Storage Capacity	VOO	Persons Req.	From	Hrs to Procure	Hrs to Loadout	Travel to Staging	Travel to Deployment	Hrs to Deploy	Total Hrs
CGA											
SWS Marco	3588	20	NA	3	Lake Charles	1	2	1	2	0	6



*Shoreline Protection*

**Staging Area: Cameron**

Shoreline Protection Boom	VOO	Persons Req.	Storage/Warehouse Location	Hrs to Procure	Hrs to Loadout	Travel to Staging	Travel to Deployment Site	Hrs to Deploy	Total Hrs
OMI Environmental (available through MSA)									
10,000' 18" Boom	4 Crew	10	New Iberia, LA	1	1	2.5	2	3	9.5
10,000' 18" Boom	4 Crew	10	Houston, TX	1	1	2.5	2	3	9.5
10,000' 18" Boom	4 Crew	10	Port Arthur, TX	1	1	1.25	2	3	8.25

Beach Boom	EDRC	Storage Capacity	VOO	Persons Req.	From	Hrs to Procure	Hrs to Loadout	Travel to Staging	Travel to Deployment	Hrs to Deploy	Total Hrs
CGA											
Beach Boom (2000')	NA	NA	NA	6	Galveston	1	2	3.5	1	2	9.5
Beach Boom (1000')	NA	NA	NA	4	Ingleside	1	2	6	1	2	12
Beach Boom (2000')	NA	NA	NA	6	Pascagoula	1	2	5.5	1	2	11.5

Wildlife Response	EDRC	Storage Capacity	VOO	Persons Req.	From	Hrs to Procure	Hrs to Loadout	Travel to Staging	Travel to Deployment	Hrs to Deploy	Total Hrs
CGA											
Wildlife Support Trailer	NA	NA	NA	2	Houma	1	2	4	1	2	10
Bird Scare Guns (24)	NA	NA	NA	2	Belle Chasse	1	2	4.5	1	2	10.5
Bird Scare Guns (12)	NA	NA	NA	2	Galveston	1	2	3.5	1	2	9.5
Bird Scare Guns (24)	NA	NA	NA	2	Houma	1	2	4	1	2	10
Bird Scare Guns (12)	NA	NA	NA	2	Ingleside	1	2	6	1	2	12
Bird Scare Guns (24)	NA	NA	NA	2	Lake Charles	1	2	1	1	2	7
Bird Scare Guns (24)	NA	NA	NA	2	Pascagoula	1	2	5.5	1	2	11.5

Response Asset	Total
Offshore EDRC	4,251
Offshore Recovered Oil Storage	20,200
Nearshore / Shallow Water EDRC	3,588
Nearshore / Shallow Water Recovered Oil Storage	20,020

## Casas, Melissa

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**From:** paygovadmin@mail.doc.twai.gov  
**Sent:** Tuesday, January 29, 2013 7:30 AM  
**To:** Casas, Melissa  
**Subject:** Pay.gov Payment Confirmation: BSEE Pipeline ROW Grant Application - CI/RG

Your payment has been submitted to Pay.gov and the details are below. If you have any questions regarding this payment, please contact Pay.gov Customer Service by phone at (800) 624-1373 or by email at [pay.gov.clev@clev.frb.org](mailto:pay.gov.clev@clev.frb.org).

Application Name: BSEE Pipeline ROW Grant Application - CI/RG  
Pay.gov Tracking ID: 259E0S5I  
Agency Tracking ID: 74404884659  
Transaction Type: Sale  
Transaction Date: Jan 29, 2013 8:29:59 AM

Account Holder Name: Apache Corporation  
Transaction Amount: \$2,569.00  
Billing Address: PO Box 27709  
City: Houston  
State/Province: TX  
Zip/Postal Code: 770277709  
Country: USA  
Card Type: Visa  
Card Number: \*\*\*\*\*8394

Region : Gulf of Mexico  
Contact: Melissa Casas 713-296-6948  
Company /Co No: Apache Corporation 00105  
Originating Area/Block: South Marsh Island SM, 69  
Terminating Area/Block: South Marsh Island SM, 69  
Pipeline Length/Rental Years: 2.17

THIS IS AN AUTOMATED MESSAGE. PLEASE DO NOT REPLY.



# AMENDMENT 1

Caraher, Jason <jason.caraher@bsee.gov>

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## FW: ROW PL from south marsh 69 to south marsh 69 - Segment 18823

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Casas, Melissa <Melissa.Casas@apachecorp.com>

Thu, Feb 14, 2013 at 7:48 AM

To: "Caraher, Jason P (Jason.Caraher@bsee.gov)" <Jason.Caraher@bsee.gov>

Cc: "Carol.Crapanzano@LA.GOV" <Carol.Crapanzano@la.gov>

Good Morning Jason,

Please let this email serve as an amendment to the 3.5" gas lift, ROW pipeline application for SM69 Segment No. 18823.

Statement: Apache can control, contain and cleanup any discharge in the event of a spill.

Thank you,

*Melissa Casas*

Apache Corporation

Regulatory Specialist

713-296-6948 (office)

713-376-2207 (cell)

melissa.casas@apachecorp.com

---

**From:** Carol Crapanzano [mailto:Carol.Crapanzano@LA.GOV]

**Sent:** Wednesday, February 13, 2013 3:41 PM

**To:** Casas, Melissa

**Subject:** ROW PL from south marsh 69 to south marsh 69

Hi Melissa

For Apache's gas ROW PL in South Marsh Island, can you help with the following?

**BOBBY JINDAL**  
GOVERNOR



**STEPHEN CHUSTZ**  
INTERIM SECRETARY

**State of Louisiana**  
**DEPARTMENT OF NATURAL RESOURCES**  
**OFFICE OF COASTAL MANAGEMENT**

February 26, 2013

Melissa Casas  
Apache Corporation  
2000 W. Sam Houston Pkwy. S.  
Suite 1600  
Houston, Texas 77042-3622

MAR 04 2013

Consistency Section

RE: **C20130031**, Coastal Zone Consistency  
**Apache Corporation**  
Bureau of Safety and Environmental Enforcement  
Federal License or Permit  
Install 3.5 inch Gas Right of Way Pipeline from South Marsh Island 69 to South Marsh  
Island 69, OCS Federal Waters, Offshore, Louisiana

Dear Ms. Casas:

The above referenced project has been reviewed for consistency with the approved Louisiana Coastal Resources Program (LCRP) as required by Section 307 of the Coastal Zone Management Act of 1972, as amended. The project, as proposed in the application, is consistent with the LCRP.

If you have any questions concerning this determination please contact Carol Crapanzano of the Consistency Section at (225) 342-9425 or [Carol.Crapanzano@la.gov](mailto:Carol.Crapanzano@la.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Keith Lovell".

Keith Lovell  
Acting Administrator  
Interagency Affairs/Field Services Division

KOL/JDH/emc

cc: ✓ BSEE ATTENTION PIPELINE APPROVALS  
Tershara Matthews, BOEM 5412  
Brian Cameron, BOEM 5412

Post Office Box 44487 • Baton Rouge, Louisiana 70804-4487  
617 North Third Street • 10th Floor • Suite 1078 • Baton Rouge, Louisiana 70802  
(225) 342-7591 • Fax (225) 342-9439 • <http://www.dnr.louisiana.gov>

All Equal Opportunity Employees



JC

Minerals Management Service  
**RECEIVED**

FEB 13 2013

Office of Field Operations  
Pipeline Section

February 11, 2013

Mr. Nick Wetzel  
Regional Supervisor – Field Operations  
Bureau of Safety & Environmental Enforcement  
1201 Elmwood Park Blvd.  
New Orleans, Louisiana 70123-2394

Attention: Angie Gobert

RE: Application for Installation of 3.5" Gas Lift ROW Pipeline, Segment No. 18823,  
Between South Marsh Island Block 69, Platform B and South Marsh Island Block 69,  
Platform E, OCS Federal Waters, Gulf of Mexico, Offshore, Louisiana

Gentlemen:

By letter dated January 29, 2013, Apache Corporation (Apache) submitted to your office an application for the installation of right-of-way pipeline, Segment No. 18823.

In accordance with the regulations contained in Title 30 CFR 250.1015, please find a copy of the executed certified mail return receipts from the affected operators.

Should you have any questions or requests for additional information, please contact the undersigned at (713) 296-6948 or [melissa.casas@apachecorp.com](mailto:melissa.casas@apachecorp.com).

Sincerely,

Melissa Casas  
Regulatory Specialist

MSC:me  
Enclosure

**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Ankor E&P Holdings Corporation  
ATTN: Jane Chady  
1615 Poydras Street, Suite 1100  
New Orleans, LA 70112

**COMPLETE THIS SECTION ON DELIVERY**

A. Received by (Please Print Clearly) B. Date of Delivery

Scott Curry 2/4/13

C. Signature

x Scott Curry  Agent  
 Addressee

D. Is delivery address different from item 1?  Yes

If YES, enter delivery address below:  No

3. Service Type

Certified Mail  Express Mail  
 Registered  Return Receipt for Merchandise  
 Insured Mail  C.O.D.

4. Restricted Delivery? (Extra Fee)  Yes

2. Article Number (Copy from service label)

7000 2870 0000 6220 3832

RCVD: Feb 11, 2013