

**Santa Fe Energy Resources, Inc.**

G8600

SN  
7981

July 28, 1997



U. S. Department of the Interior  
Minerals Management Service  
1201 Elmwood Park Boulevard  
New Orleans, Louisiana 70123-2394

Attention: Mr. Alex Alvarado  
Pipeline Unit

RE: Actual Abandonment In-Place of Existing 6" Natural Gas Right-of-Way Pipeline (Segment No. 7981), Originating at Chandeleur Block 30, Platform "A" and Terminating at a Subsea Tie-In Point in Main Pass Block 89, OCS Federal Waters, Gulf of Mexico, Offshore, Louisiana

Dear Mr. Alvarado:

By letter dated September 9, 1996, Minerals Management Service approved Santa Fe Energy Resources, Inc.'s (Santa Fe Energy's) application to abandon in place an existing 6" natural gas right-of-way pipeline originating at Platform "A" in Chandeleur Block 30 and terminating at a subsea tie-in point with an existing pipeline in Main Pass Block 89.

In support of the subject approval, enclosed is the actual abandonment in place procedure for the referenced pipeline.

Should you have any questions or require additional information, please contact our regulatory agent, Connie Goers, J. Connor Consulting, Inc., at (281) 578-3388.

Sincerely,

SANTA FE ENERGY RESOURCES, INC.

*Del Ray Lamaire /cyg*

Del Ray Lamaire  
Division Production Superintendent

DRL:CJG  
Enclosure

*sn 7981*

*ak  
8/8/97  
fz*

**SANTA FE ENERGY RESOURCES, INC.**

**CHANDELEUR AREA BLOCK 30/MAIN PASS BLOCK 89**

**SEGMENT NO. 7981**

**PIPELINE ABANDONMENT IN PLACE PROCEDURE**

1. Mobilized dive boat on location on August 27, 1996. Set up at Platform "A" in Chandeleur Block 30.
2. Jumped diver and located subsea assembly and partially closed the 6" inlet valve assembly.
3. Displaced 6" pipeline with Polypig and seawater from Platform "A", Block 30 to the 12" subsea assembly in Main Pass Block 89.
4. Closed the 6" valve at the subsea assembly.
5. Bled pipeline to 0 psi at Platform "A", Chandeleur Block 30.
6. Disconnected the 6" pipeline at the subsea assembly in Main Pass Block 89 and installed blind flanges. Recovered subsea assembly and buried the pipeline at 3' BML.
7. Cut the 6" pipeline 6" above and 6" below the riser bend at Platform "A", Chandeleur Block 30.
6. Released dive boat on September 1, 1996.

SN 7981

Letter 8-26-96

In Reply Refer To: MS 5232

SEP 09 1996

Santa Fe Energy Resources, Inc.  
Attention: Mr. A. T. McCarroll  
1616 South Voss, Suite 1000  
Houston, Texas 77057

Gentlemen:

Your letter dated August 12, 1996, requests approval to permanently abandon in place approximately 5,888 feet (1.12 miles) of 6 5/8-inch pipeline designated as Segment No. 7981, and to relinquishment in its entirety, Right-of-Way Grant OCS-G 8600 associated therewith. The subject pipeline was used to transport gas from Platform A, Block 30, Chandeleur Area, to a 12-inch subsea tie-in in Block 89, Main Pass Area.

Pursuant to 30 CFR 250.4(b), approval is hereby granted to abandon the above described pipeline, and in accordance with 30 CFR 250.159(c), the requirement that the pipeline be removed is hereby waived. However, in the future, should it be determined that this abandoned pipeline constitutes a hazard to navigation or commercial fishing operations or unduly interferes with the other uses of the Outer Continental Shelf, Santa Fe Energy Resources, Inc. shall be required to remove it.

Pursuant to 30 CFR 250.150(b), the relinquishment of the right-of-way grant associated with the pipeline that is to be abandoned in place is hereby accepted effective August 14, 1996.

Santa Fe Energy Resources, Inc. shall cease transporting hydrocarbons through this pipeline immediately and complete the aforementioned abandonment operations within 60 days of the date of this letter. Additionally, Santa Fe Energy Resources, Inc. shall submit written notification to this office within 30 days of the completion of the pipeline abandonment. The notification shall include the date the abandonment was completed and an indication that the abandonment was completed as approved.

Sincerely,

(Orig. Sgd.) Kent E. Stauffer

Donald C. Howard  
Regional Supervisor  
Field Operations

bcc: 1502-01 (P/L OCS-G 8600) w/appln (MS 5232)  
1502-01 (P/L OCS-G 8600) w/cy of appln (Microfilm) (MS 5033)  
MS 5421  
MS 5232 Carto

FPatton:jvl:08/15/96:SantaFe.981

58600 SN 7981

on my 9/10/96

**Santa Fe Energy Resources, Inc.**

August 12, 1996

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

Attention: Mr. Warren Williamson  
Pipeline Unit

RE: Application for Abandonment In-Place of Existing 6" Natural Gas Right-Of-Way Pipeline, OCS-G 8600, Segment No. 7981, Chandeleur Area Block 30, Platform "A", OCS Federal Waters, Gulf of Mexico, Offshore, Louisiana

Dear Mr. Williamson:

Pursuant to regulations contained in Title 30 CFR 250.156(a)(1) and 30 CFR 250.164, Santa Fe Energy Resources, Inc. (Santa Fe Energy) hereby submits, in triplicate, an application to abandon in-place an existing 4" natural gas right-of-way pipeline, Right-of-Way No. OCS-G 8600 originating at Platform "A", Chandeleur Area Block 30 and terminating at a subsea located in Block 89, Main Pass Area, OCS Federal Waters, Gulf of Mexico, Offshore, Louisiana.

Santa Fe Energy proposes to abandon in-place existing Segment No. 7981 on or about August 19, 1996, subject to the approval of this application.

Santa Fe Energy will utilize a support base in Venice, Louisiana during the proposed operations, which is anticipated to take approximately two (2) days.

In support of this request, attached please find the Proposed Pipeline Abandonment In-Place Procedure, Chandeleur Area Block 30. The "as-built" pipeline route maps were submitted in 1987 and are on file with the Minerals Management Service.

Santa Fe Energy Resources, Inc.  
R-O-W Pipeline Abandonment  
Segment No. 7981, R-O-W OCS-G 8600  
Chandeleur Area Block 30  
August 12, 1996

Page 2

Should you have any questions or require additional information, please contact our regulatory agent, Sharon Perez, J. Connor Consulting, Inc., at (713) 578-3388.

Sincerely,

SANTA FE ENERGY RESOURCES, INC.

A handwritten signature in black ink, appearing to read "A. T. McCarroll". The signature is written in a cursive style with a large initial "A" and "M".

A. T. McCarroll  
Attorney-in-Fact

ATM:SP

**SANTA FE ENERGY RESOURCES, INC.**

**CHANDELEUR AREA BLOCK 30**

**· SEGMENT NO. 7981, R-O-W NO. OCS-G 8600**

**PROPOSED PIPELINE ABANDONMENT IN-PLACE PROCEDURE**

1. Move in dive boat and set up at Platform "A", Chandeleur Area Block 30.
2. Jump diver, locate subsea assembly and partially close 6" inlet valve to assembly.
3. Displace 6" pipeline with Polypig and seawater from Platform "A", Chandeleur Area Block 30 to the 12" subsea assembly in Block 89, Main Pass Area.
4. Close 6" valve at the subsea assembly.
5. Bleed pipeline to 0 psi at Platform "A".
6. Disconnect the 6" pipeline at the subsea assembly and install blind flanges. Recover subsea assembly and bury pipeline the required 3 feet below the mudline.
7. Cut the 6" pipeline 6" above and 6" below the riser bend at Platform "A". Plug the end and bury the pipeline the required 3 feet below the mudline.
8. Release dive boat.



# United States Department of the Interior

SN 7981

## MINERALS MANAGEMENT SERVICE

Gulf of Mexico OCS Region  
1201 Elmwood Park Boulevard  
New Orleans, Louisiana 70123-2394

In Reply Refer To: MS 5421  
OCS-G 8600

SN 7981

### Instrument:

Filed : October 3, 1995  
Executed : July 20, 1995  
Approved : December 7, 1995  
Effective : May 1, 1995

Apache Corporation  
Assignor

Santa Fe Energy Resources, Inc. <sup>1551</sup>  
Assignee

ACTION: ASSIGNMENT APPROVED

Right-of-way

The approval of this assignment is restricted to record title interest only, and by virtue of this approval, the Assignee is subject to, and shall fully comply with, all applicable regulations now or to be issued under the Outer Continental Shelf Lands Act, as amended. Notwithstanding any agreement between the Assignor and Assignee, the parties remain subject to the liability provisions of the Minerals Management Service regulations codified under 30 CFR 250, Subpart J.

Assignor assigned unto Assignee all of Assignor's right, title and interest.

Record title interest is now held as follows:

OCS-G 8600 Block 30, Chandeleur Area; Block 89, Main Pass Area

Santa Fe Energy Resources, Inc. 100%

*Chris C. Oynes*

Chris C. Oynes  
Regional Director

cc: Assignor  
Assignee  
Case File

*BM mgp  
2/24/96  
15*



**Santa Fe Energy Resources, Inc.**

September 28, 1995

Minerals Management Service  
Gulf of Mexico OCS Region  
1201 Elmwood Park Boulevard  
New Orleans, LA 70123-2394

Attn: Adjudication Unit - MS 5421

**RECEIVED**  
OCT 3 1995

MINERALS MANAGEMENT SERVICE  
LEASING & ENVIRONMENT

RE: Request for Approval of Assignments of Right-of-Way  
Apache Corporation to Santa Fe Energy Resources, Inc.  
OCS - Gulf of Mexico

Gentlemen:

Please find enclosed for your approval six (6) Assignments of Right-of-Way, in triplicate, whereby Apache Corporation assigns all its right, title and interest into Santa Fe Energy Resources, Inc. in the right-of-ways set forth on Exhibit "A" attached hereto.

Please refer to N.O. Misc. File No. 0105 for Apache Corporation and N.O. Misc. File No. 1551 for Santa Fe Energy Resources, Inc. for documents qualifying said parties to hold leases and rights-of-way on the Outer Continental Shelf in the Gulf of Mexico.

Santa Fe has enclosed Check No. A 11963 in the amount of \$300.00 to cover the filing fees for these assignments.

We hereby request the enclosed assignments be approved effective May 1, 1995 and that one approved copy be returned to Mike Dichiara - Director of Land Administration, at the address provided below. Additionally, please stamp "Received" by the Minerals Management Service on the enclosed copy of this transmittal letter and return it to Mike Dichiara. If you have any questions regarding this matter, please contact Mike Dichiara at 713/507-5560.

Very truly yours,

J. R. Womack  
Vice President - Business Development

xc: Apache Corporation  
2000 Post Oak Boulevard, Suite 100  
Houston, TX 77056-4400  
Attention: Ms. Nancy Kerby



**EXHIBIT "A"**

**Filing of Assignments of Right-of-Way**

**OCS-G**

8600

10073

10074

11715

12723

12745

RECEIVED

OCT 3 1995

ASSIGNMENT OF RIGHT-OF-WAY

MINERALS MANAGEMENT SERVICE  
LEASING & ENVIRONMENT

UNITED STATES OF AMERICA §  
§  
OUTER CONTINENTAL SHELF §

KNOW ALL MEN BY THESE PRESENTS:

THAT, WHEREAS, the United States Department of the Interior, Minerals Management Service has approved an Application for a Right-of-Way described on Exhibit "A" attached hereto (hereinafter "Right-of-Way").

WHEREAS, APACHE CORPORATION (hereinafter referred to as "Assignor") desires to transfer all its right, title and interest in and to said Right-of-Way to SANTA FE ENERGY RESOURCES, INC. (hereinafter referred to as "Assignee");

NOW THEREFORE, Assignor, for and in consideration of Fifty Dollars (\$50.00) cash in hand paid and other good and valuable considerations, the receipt and adequacy of which are hereby acknowledged, does hereby grant, bargain, sell, assign and convey unto Assignee, its successors and assigns, the Right-of-Way described above.

TO HAVE AND TO HOLD the Right-of-Way unto Assignee, its successors and assigns, forever, subject to the terms and provisions of the Right-of-Way and this Assignment. This Assignment is made without warranty of title, express, implied or statutory (even as to the return of the purchase price), but with full substitution and subrogation of Assignee, to the extent assignable, in and to all covenants and warranties by predecessors in title to Assignor. This Assignment is expressly made and accepted subject to the terms and conditions of a Purchase and Sale Agreement dated June 30, 1995, between Assignor and Assignee. Copies of the Purchase and Sale Agreement are retained in the offices of Assignor and Assignee.

IT IS UNDERSTOOD AND AGREED that such transfer shall cause the Assignee to assume all costs, expenses and other obligations chargeable under the Right-of-Way to such interest and shall likewise operate to give and grant to the Assignee all benefits owing thereunder to the ownership of such interest.

This Assignment shall be effective for all purposes as of May 1, 1995, subject to the approval by the Minerals Management Service.

Executed in triplicate originals this 28th day of July, 1995.

WITNESSES:

Nancy Martin

[Signature]

ASSIGNOR:

APACHE CORPORATION

[Signature]  
James R. Barman  
Senior Vice President

APPROVED

Chris C. Dynes  
Regional Director

Effective Date MAY 1 1995

ACCEPTANCE OF ASSIGNMENT

SANTA FE ENERGY RESOURCES, INC., Assignee herein, expressly assumes and agrees to discharge all duties and obligations arising out of or imposed by and under each and all of the terms and provision of the Right-of-Way.

WITNESSES:

ASSIGNEE:

[Signature]

SANTA FE ENERGY RESOURCES, INC.

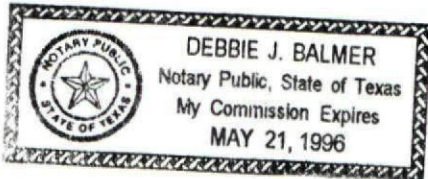
[Signature]

[Signature]

J. R. Womack  
Vice President - Business Development

THE STATE OF TEXAS §  
  §  
COUNTY OF HARRIS §

On this 20th day of July, 1995, before me appeared **James R. Bauman**, to me personally knows, who being by me duly sworn (or affirmed) did say that he is the Senior Vice President of **APACHE CORPORATION** and that the instrument was signed on behalf of the corporation and that **James R. Bauman** acknowledged the instrument to be the free act and deed of the corporation.



[Signature]  
Notary Public, State of Texas

THE STATE OF TEXAS §  
  §  
COUNTY OF HARRIS §

On this 20th day of July, 1995, before me appeared **J. R. Womack**, to me personally knows, who being by me duly sworn (or affirmed) did say that he is the Vice President - Business Development of **SANTA FE ENERGY RESOURCES, INC.** and that the instrument was signed on behalf of the corporation and that **J. R. Womack** acknowledged the instrument to be the free act and deed of the corporation.



[Signature]  
Notary Public, State of Texas

**EXHIBIT "A"**

ROW

CHANDELEUR 30

---

LEASE NO: 4002095  
MMS SERIAL NO: OCS-G 8600  
LESSEE: APACHE OIL & GAS TRANSMISSION  
LEASE DATE: 12/18/86  
DESCRIPTION: CHANDELEUR 30 #1 CHANDELEUR 30 #2 RIGHT-OF-WAY 200 FEET (200') IN WIDTH FOR THE CONSTRUCTION, OPERATION AND MAINTENANCE OF A 6-5/8 INCH NATURAL GAS PIPELINE, 1.12 MILES IN LENGTH AS CONSTRUCTED, FROM HALL-HOUSTON OIL COMPANY'S PROPOSED PLATFORM A IN BLOCK 30, CHANDELEUR AREA, TO A SUBSEA TIE-IN WITH TEXAS EASTERN TRANSMISSION CORPORATION'S EXISTING 12-3/4 INCH PIPELINE (OCS-G 5227) IN BLOCK 89 MAIN PASS AREA.

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United States Department of the Interior

MINERALS MANAGEMENT SERVICE  
GULF OF MEXICO OCS REGION  
1201 ELMWOOD PARK BOULEVARD  
NEW ORLEANS, LOUISIANA 70123-2394

5N7981



In Reply Refer To: MS 5421  
OCS-G 8600

Instrument:

Filed : September 2, 1993  
Executed : August 31, 1993  
Approved : September 22, 1993  
Effective : April 1, 1993

Hall-Houston Oil Company  
Assignor

Apache Corporation  
Assignee

ACTION: ASSIGNMENT APPROVED

Right-of-way

The approval of this assignment is restricted to record title interest only, and by virtue of this approval, the Assignee is subject to, and shall fully comply with, all applicable regulations now or to be issued under the Outer Continental Shelf Lands Act, as amended.

Assignor assigned unto Assignee all of Assignor's right, title and interest.

Record title interest is now held as follows:

OCS-G 8600 Blocks 30 and 89, Main Pass Area

Apache Corporation

100%

*Chris C. Oynes*

Chris C. Oynes  
Acting Regional Director

cc: Assignor  
Assignee  
Case File

*on ref  
11/2/93  
18*

RECEIVED



2000 POST OAK BOULEVARD / SUITE 100 / HOUSTON, TEXAS 77056-3400  
SEP 2 1993

September 1, 1993

MINERALS MANAGEMENT SERVICE  
LEASING & ENVIRONMENT

[713] 296-6000

- Hand Delivered -

Minerals Management Service  
Adjudication Unit: LE-3-1  
1201 Elmwood Park Boulevard  
New Orleans, Louisiana 70123-2394

RE: OCS-G 8600, Block 30  
Chandeleur Area  
Offshore Louisiana  
Assignment of Right-of-Way

Gentlemen:


Enclosed please find three (3) fully executed originals of an assignment of all of Hall-Houston Oil Company's interest in the Federal Pipeline Right-of-Way bearing Serial Number OCS-G 8600, unto Apache Corporation.

Also enclosed is Apache's check in the amount of \$50.00 to cover the filing fee for this assignment.

Please refer to your New Orleans Miscellaneous File Number 846 for Hall-Houston Oil Company and Number 105 for Apache Corporation for documents qualifying said parties to hold leases and rights-of-way on the Outer Continental Shelf in the Gulf of Mexico.

We hereby request that this assignment be approved effective as of April 1, 1993, and that one approved copy be returned to the attention of Mr. Carl Comstock at the above address.

Sincerely,

  
C. J. Pavlich  
Attorney-in-Fact

CJP/vs

Enclosures

**RECEIVED**

SEP 2 1993

**ASSIGNMENT OF RIGHT-OF-WAY**

MINERALS MANAGEMENT SERVICE  
LEASING & ENVIRONMENT  
OCS-G 8600

UNITED STATES OF AMERICA           §  
OUTER CONTINENTAL SHELF           §     **KNOW ALL MEN BY THESE PRESENTS:**  
OFFSHORE LOUISIANA               §

THAT, WHEREAS, under date of December 18, 1986, the United States Department of the Interior, Minerals Management Service, approved an Application for a Right-of-Way submitted by Apache Oil and Gas Transmission, Inc. described as follows:

Right-of-way 200 feet (200') in width for the construction, operation and maintenance of a 6-5/8 inch natural gas pipeline, 1.12 miles in length as constructed, from Hall-Houston Oil Company's proposed Platform A in Block 30, Chandeleur Area, to a subsea tie-in with Texas Eastern Transmission Corporation's existing 12-3/4 inch pipeline (OCS-G 5227) in Block 89, Main Pass Area.

WHEREAS, **HALL-HOUSTON OIL COMPANY** is the present owner of one hundred percent (100%) interest in and to the Right-of-way; and

WHEREAS, **HALL-HOUSTON OIL COMPANY** (hereinafter referred to as "Assignor") desires to transfer all its right, title and interest in and to said Right-of-Way to **APACHE CORPORATION** (hereinafter referred to as "Assignee");

NOW THEREFORE, Assignor, for and in consideration of Fifty Dollars (\$50.00) cash in hand paid and other good and valuable considerations, the receipt and adequacy of which are hereby acknowledged, does hereby grant, bargain, sell, assign and convey unto Assignee, its successors and assigns, the Right-of-Way described above.

TO HAVE AND TO HOLD the Right-of-Way unto Assignee, its successors and assigns, forever, subject to the terms and provisions of the Right-of-Way and This Assignment and Assignor does hereby bind itself, its successors and assigns, to warrant and defend, all and singular, title to the Right-of-Way unto Assignee, its successors and assigns, against every person whomsoever lawfully claiming or to claim the same or any party thereof, by through or under Assignor, but not otherwise.

IT IS UNDERSTOOD AND AGREED that such transfer shall cause the Assignee to assume all costs, expenses and other obligations chargeable under the Right-of-Way to such interest and shall likewise operate to give and grant to the Assignee all benefits owing thereunder to the ownership of such interest.

This Assignment shall be effective for all purposes as of April 1, 1993, subject to the approval by the Minerals Management Service.

Executed in triplicate originals this 31st day of August, 1993.

WITNESSES:

Lorene C. Loy  
Jessie D. Moore

ASSIGNOR:

**HALL-HOUSTON OIL COMPANY**

By: Wayne P. Hall  
Wayne P. Hall  
President

APPROVED  
Chris C. Oynes  
Acting Regional Director

APR 1 1993  
Effective Date

ACCEPTANCE OF ASSIGNMENT

APACHE CORPORATION, Assignee herein, expressly assumes and agrees to discharge all duties and obligations arising out of or imposed by and under each and all of the terms and provisions of the Right-of-Way.

WITNESSES:

ASSIGNEE:

APACHE CORPORATION

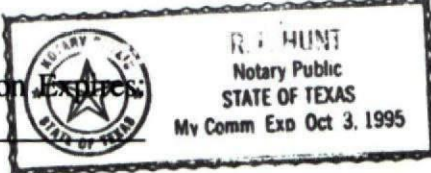
*[Handwritten signatures of witnesses]*

By: *[Signature]*  
G. Steven Farris  
Senior Vice President

THE STATE OF TEXAS §

COUNTY OF HARRIS §

On this 31<sup>st</sup> day of August, 1993, before me appeared WAYNE P. HALL, to me personally known, who, being by me duly sworn (or affirmed) did say that he is the President of HALL-HOUSTON OIL COMPANY and that the instrument was signed on behalf of the corporation and that Wayne P. Hall acknowledged the instrument to be the free act and deed of the corporation.

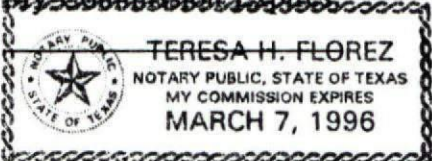
My Commission Expires: 

*[Signature]*  
NOTARY PUBLIC IN AND FOR  
THE STATE OF TEXAS

THE STATE OF TEXAS §

COUNTY OF HARRIS §

On this 31<sup>st</sup> day of August, 1993, before me appeared G. STEVEN FARRIS, to me personally known, who, being by me duly sworn (or affirmed) did say that he is the Senior Vice President of APACHE CORPORATION, and that the instrument was signed on behalf of the corporation and that G. Steven Farris acknowledged the instrument to be the free act and deed of the corporation.

My Commission Expires: 

*[Signature]*  
NOTARY PUBLIC IN AND FOR

\_\_\_\_\_  
PRINTED NAME OF NOTARY



UNITED STATES DEPARTMENT OF THE INTERIOR  
 MINERALS MANAGEMENT SERVICE  
 GULF OF MEXICO REGION, LEASING ADJUDICATION

**RECEIPT FOR 33 PIPELINE RIGHT-OF-WAY ASSIGNMENTS**

Apache Corporation  
 One Post Oak Central  
 Suite 100  
 Houston, TX 77056-4400

**DATE:** September 3, 1993

**FILING FEE EARNED:** \$1,650.00

OCS-G	AREA	BLOCK	OCS-G	AREA	BLOCK
-----	-----	-----	-----	-----	-----
6564	MP	265	13530	HI	A 127
<u>8600</u>	CA	30	13535	GA	321
9337	WC	379			
9339	MU	781			
9343	MU	752			
10399	HI	164			
10515	HI	176			
11138	HI	A 314			
11140	HI	A 314			
11148	MI	A 4			
11156	HI	196			
11157	WC	628			
11698	MI	687			
11715	MP	186			
11721	MP	227			
11734	ST	221			
12309	ST	143			
12321	EI	278			
12335	VR	284			
12336	VR	284			
12691	VK	27			
12700	VK	69			
12701	MO	945			
12702	MO	990			
12703	MO	947			
12705	EI	281			
12706	EI	281			
12723	VR	107			
12735	VK	22			
12739	GI	82			
12745	SS	316			

*Handwritten signature*

# HALL-HOUSTON OIL COMPANY

700 Louisiana, Suite 2610/Houston, Texas 77002

SN 7981

October 16, 1990

Telephone  
(713) 228-0711  
Fax  
(713) 225-7600

Mr. Daniel J. Bourgeois  
Regional Supervisor, Field Operations  
U.S. Department of the Interior  
Minerals Management Service  
1201 Elmwood Park Blvd.  
New Orleans, Louisiana 70123-2394



Attention: MS 5231

RE: Riser Guard Installation

Gentlemen:

Hall-Houston Oil Company has reviewed all pipeline risers installed before April 1, 1988. In order to avoid potential damage to any unprotected pipeline risers, Hall-Houston has installed riser guards throughout our fields. If risers were protected by boat landings, then a riser guard was not installed.

Enclosed, for your files, is the "as-built" riser guard drawing(s) for the following pipeline(s):

OCS-G 8600 - 6" from Chandeleur 30 Platform A to SSTI Main Pass 89

If further information is required, please advise.

Sincerely,

A handwritten signature in cursive script that reads "Kathy Camp/ba".

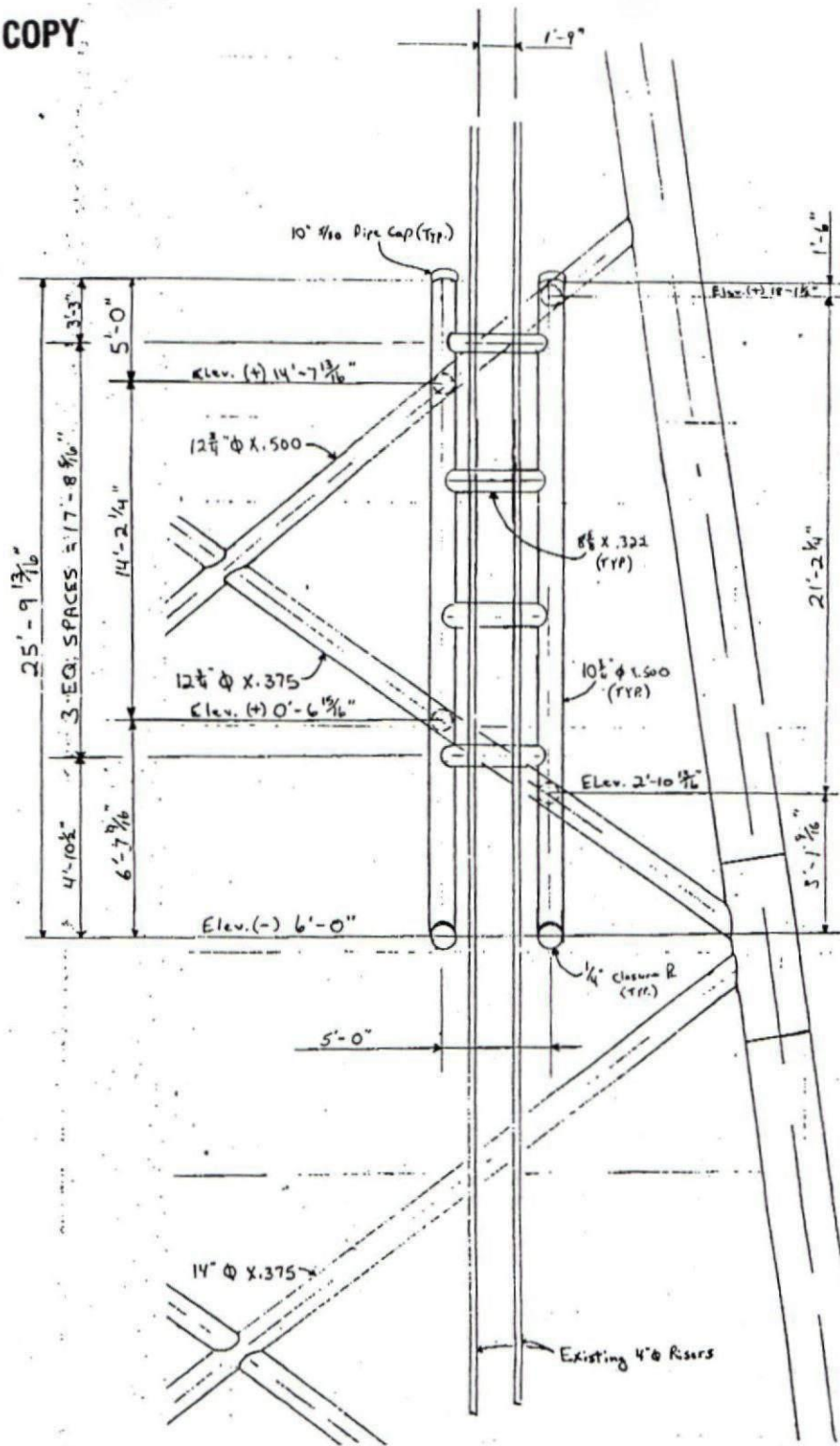
Kathy Camp  
Manager, Regulatory Affairs

KC:ba

enclosure(s)

risergrd.txt

BEST AVAILABLE COPY

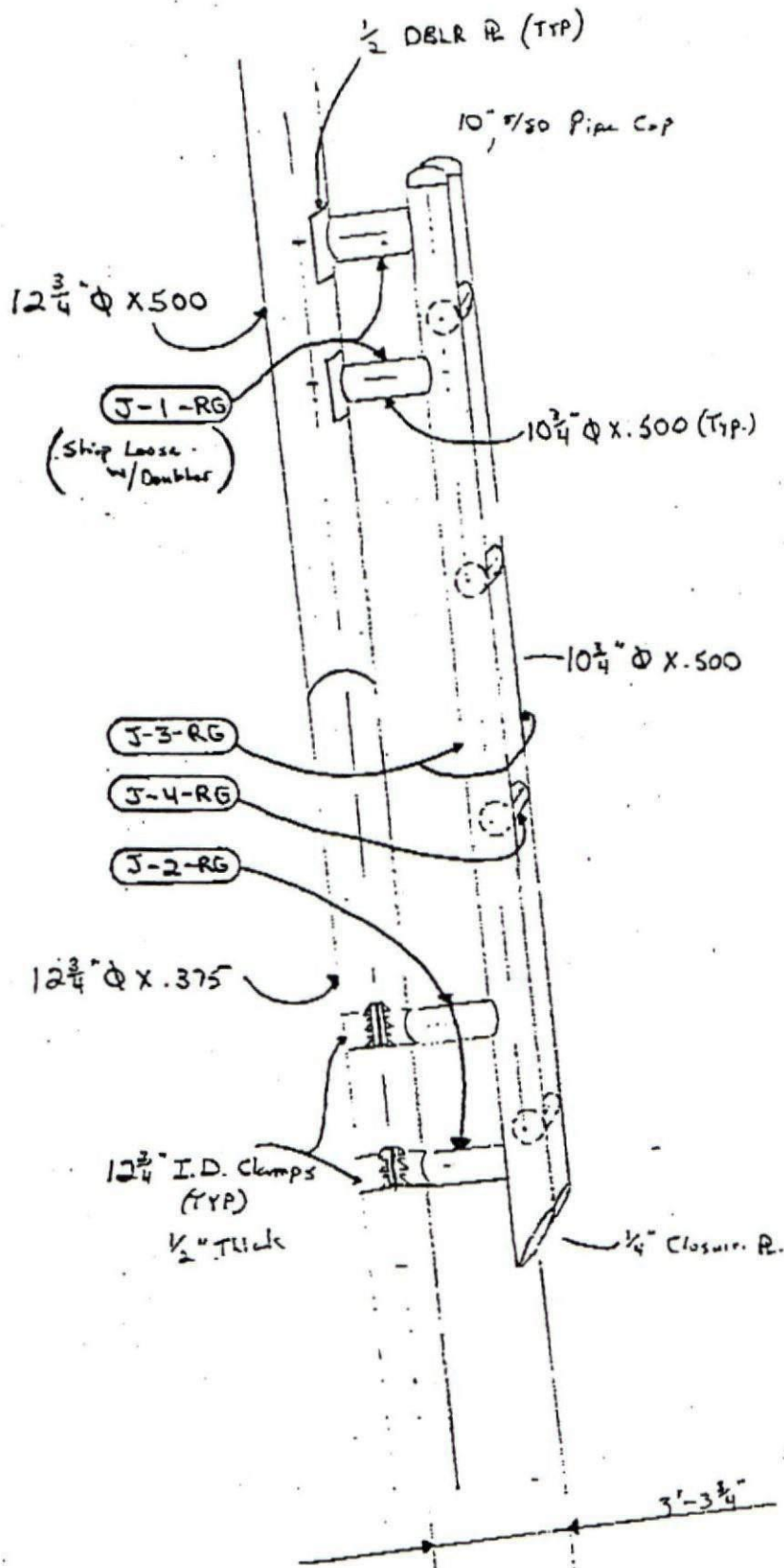


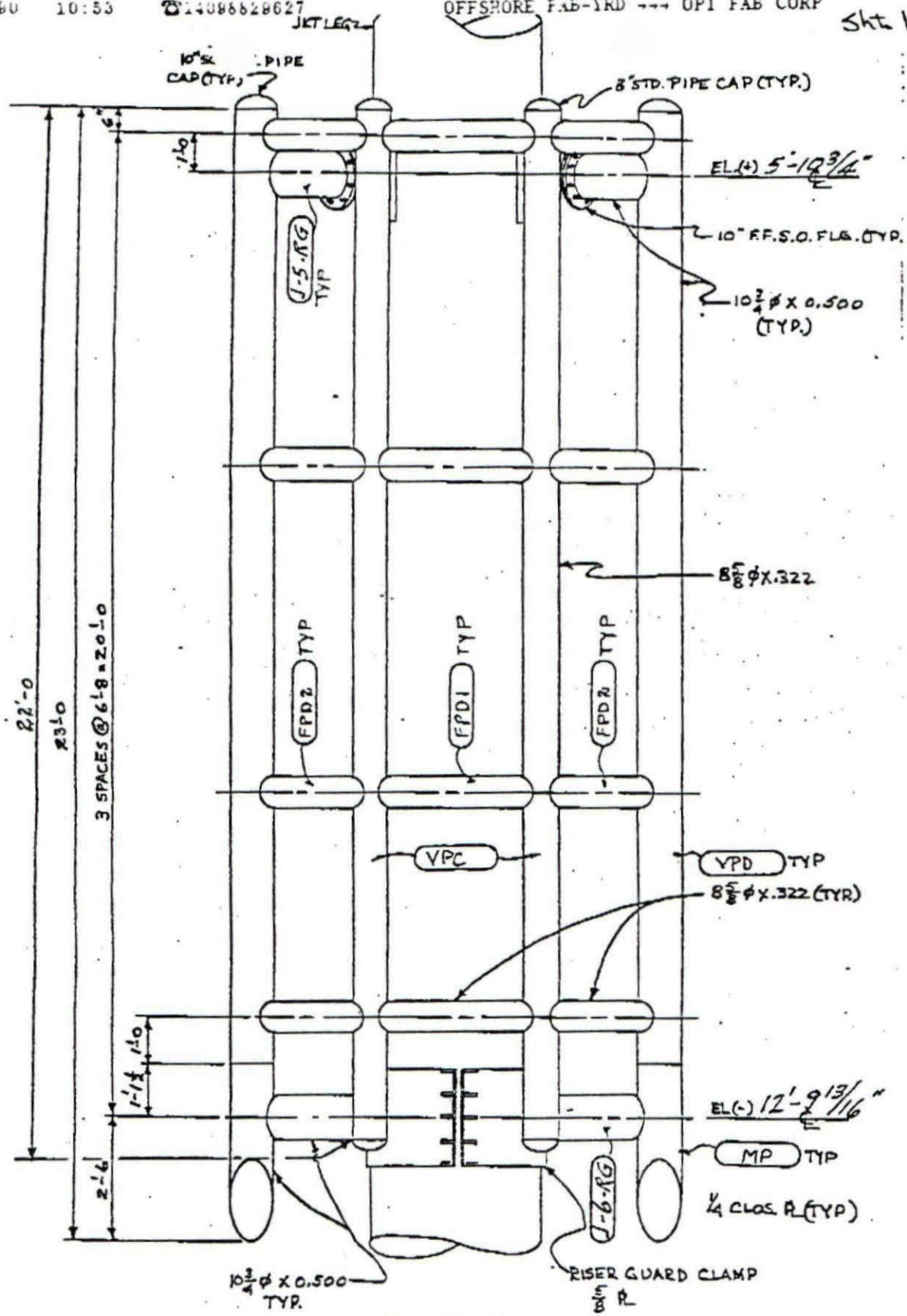
CA-30 #2(A) RISER Guard  
Q102-799-7990

Note Leg Not Shown For Clarity.

BEST AVAILABLE COPY

22-141 50 SHEETS  
22-142 100 SHEETS  
22-144 200 SHEETS  
AIPAC





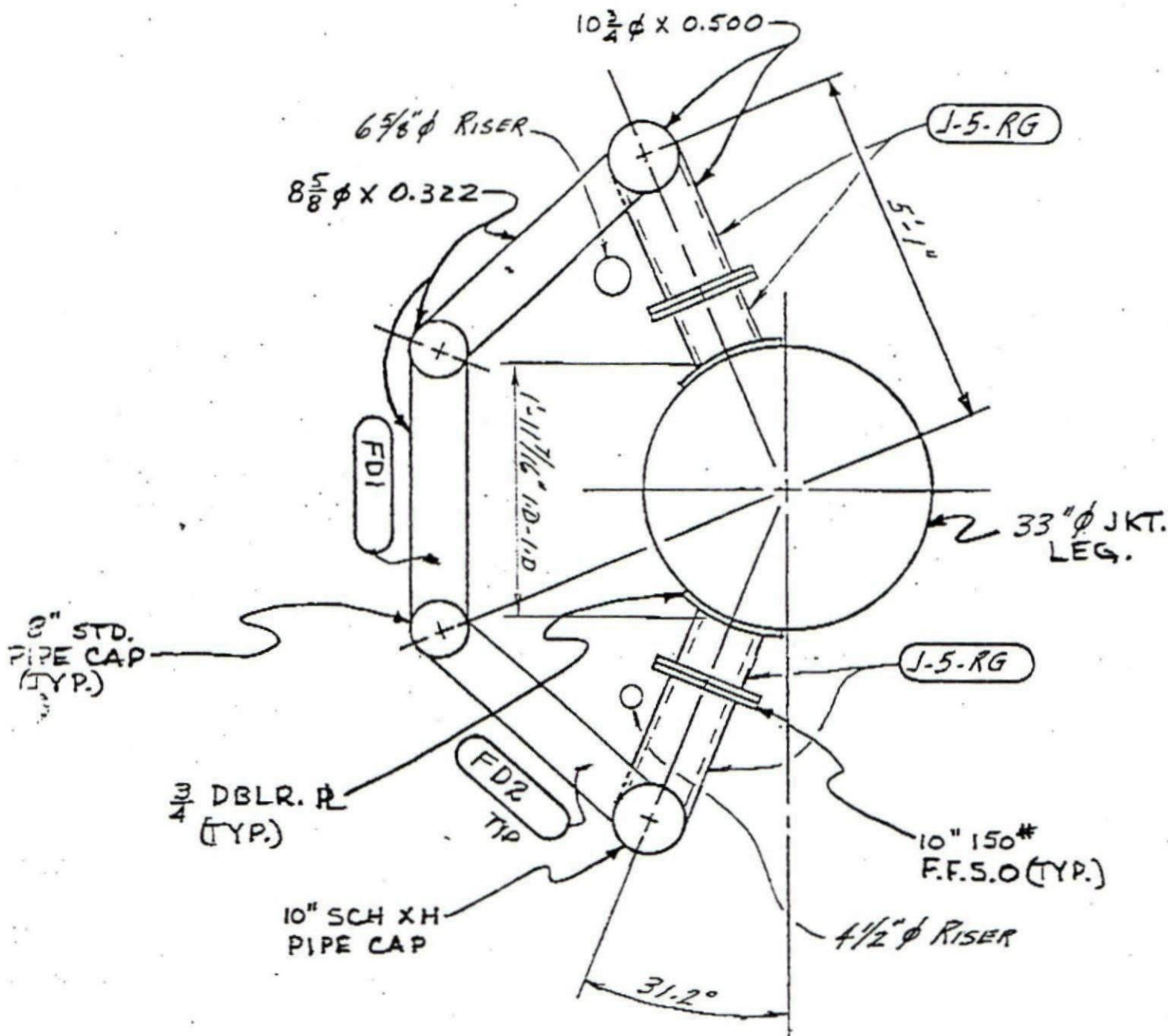
FRONT VIEW

RISER GUARD "B"

SCALE: 1/2" = 1'-0"

BEST AVAILABLE COPY

HALL-HOUSTON CA-30 #2 B
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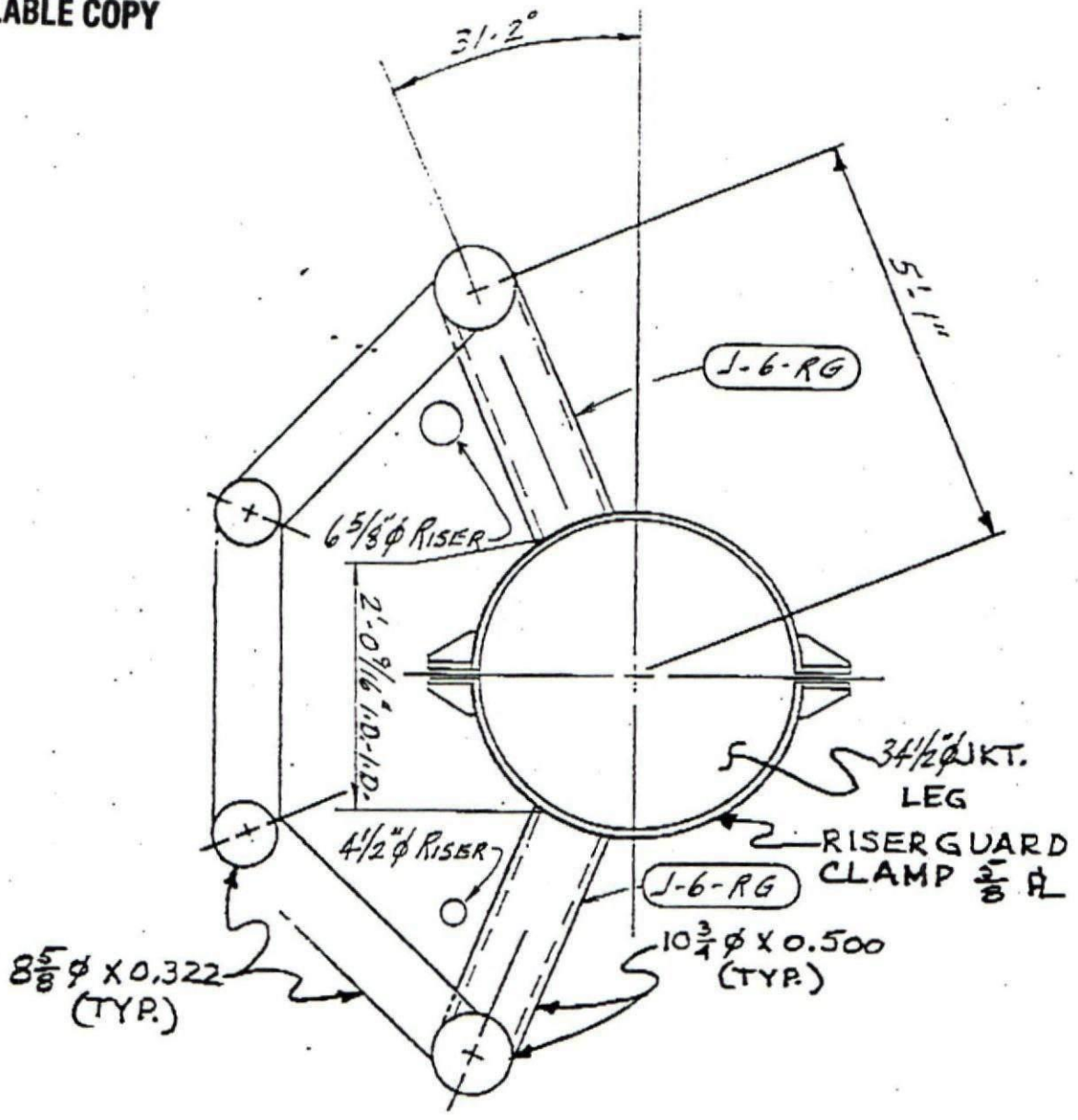
RISER GUARD "B"  
(UPPER)

SCALE:  $\frac{1}{2}$ " = 1'-0

BEST AVAILABLE COPY

HALL-HOUSTON CA-30 #2 R
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BEST AVAILABLE COPY

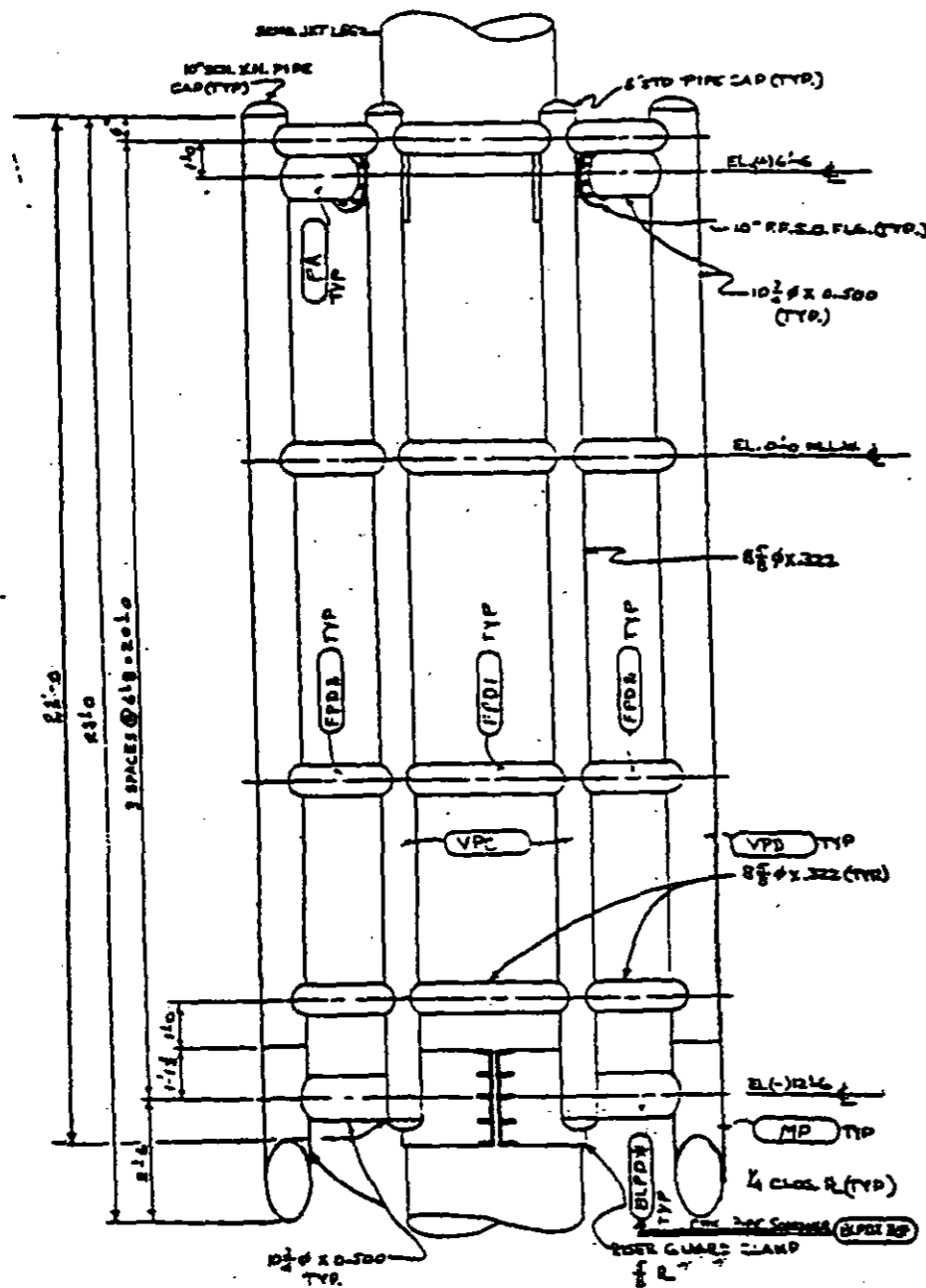


RISER GUARD "B"  
CLAMP  
(LOWER)

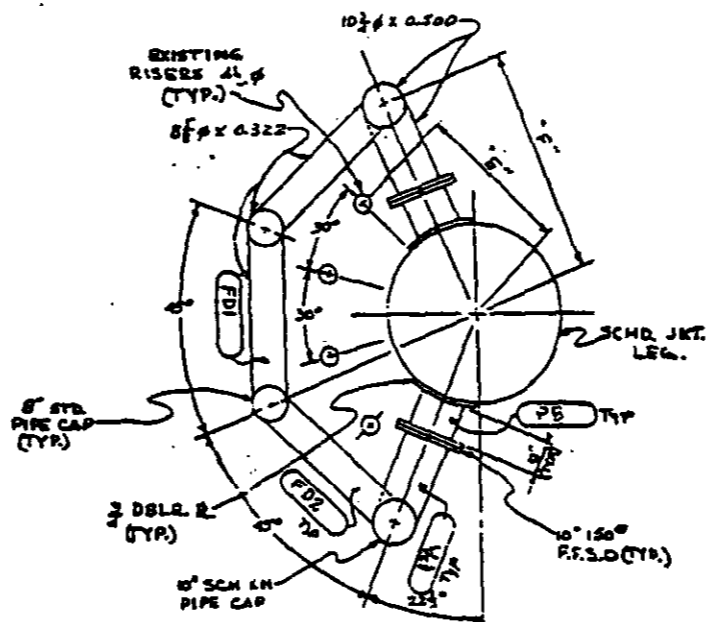
SCALE:  $\frac{1}{2}'' = 1'-0$

BEST AVAILABLE COPY

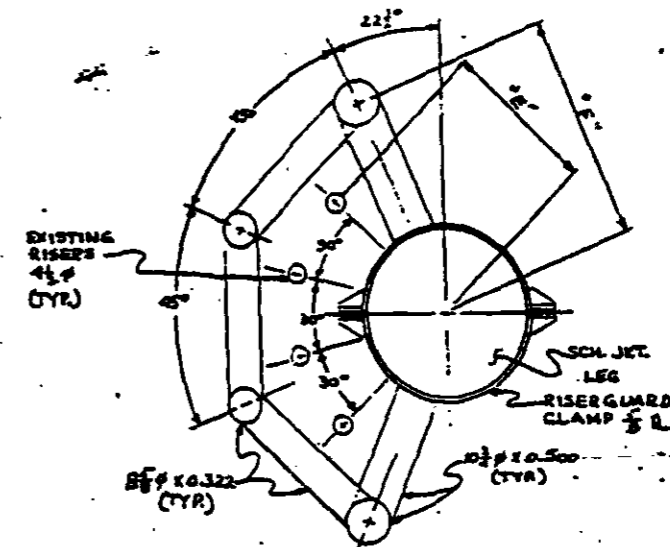
HHOC
CA-30#2 B



FRONT VIEW  
TYPE "C & D"  
RISER GUARD  
SCALE: 1/2" = 1'-0"



TYPE "C & D"  
RISER GUARD  
(UPPER)  
SCALE: 1/2" = 1'-0"



TYPE "C & D" RISER GUARD  
CLAMP  
(LOWER)  
SCALE: 1/2" = 1'-0"

BEST AVAILABLE COPY

NO.	BY	DATE	REVISION
1	BR	1-2-30	PRICE MARK
2	LC	1-2-30	ISSUED FOR CONSTRUCTION



OPI INC.

Office Address: 2000 W. 10th St., Tulsa, Okla. 74104  
Phone: (918) 436-1000  
Fax: (918) 436-1001

Plant Address: 1000 Industrial Rd., Houston, Tex. 77036  
Phone: (281) 436-1000  
Fax: (281) 436-1001

RISER GUARD  
C.A. 30A

SCALE	DATE	BY	CHECKED	DATE
1/2" = 1'-0"				

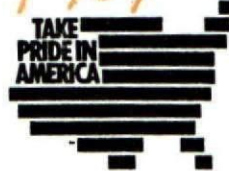
RISER GUARDS SPECIAL APPLICATION  
111





United States Department of the Interior

5N7981



MINERALS MANAGEMENT SERVICE  
GULF OF MEXICO OCS REGION  
1201 ELMWOOD PARK BOULEVARD  
NEW ORLEANS, LOUISIANA 70123-2394

In Reply Refer To: LE-3-1  
OCS-G 8600

Instrument:

Filed : December 1, 1988  
Executed : November 30, 1988  
Approved : December 12, 1988  
Effective : July 1, 1988

Apache Oil & Gas Transmission, Inc.  
Assignor

Hall-Houston Oil Company  
Assignee

ACTION: ASSIGNMENT APPROVED

Right-of-Way

The approval of this assignment is restricted to record title interest only, and by virtue of this approval, the Assignee is subject to, and shall fully comply with, all applicable regulations now or to be issued under the Outer Continental Shelf Lands Act, as amended.

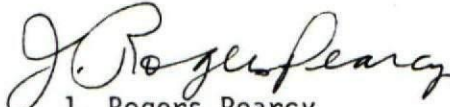
Assignor assigned unto Assignee all of Assignor's right, title and interest.

Record title interest is now held as follows:

OCS-G 8600 Block 30, Chandeleur Area; Block 89, Main Pass Area

Hall-Houston Oil Company

100%

  
J. Rogers Pearcy  
Regional Director

cc: Assignor  
Assignee  
✓ Case File

on map  
12/21/88  
ff

# HALL-HOUSTON OIL COMPANY

RepublicBank Center  
700 Louisiana, Suite 2390

Houston, Texas 77002  
(713) 228-0711  
Fax (713) 228-9908

November 30, 1988

Minerals Management Service  
Adjudication Unit, LE-3-1  
1201 Elmwood Park Boulevard  
New Orleans, Louisiana 70123-2394

RE: OCS-G 8600  
Offshore Louisiana

Gentlemen:

We have enclosed the below Assignment for filing with the Minerals Management Service:

Three fully executed copies of Assignment of Right-of-Way pertaining to Pipeline Right-of-Way OCS-G 8600, between Apache Oil and Gas Transmission, Inc., Assignor and Hall-Houston Oil Company, Assignee.

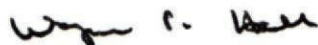
Our check number 2011 includes a \$50.00 filing fee for the above Assignments.

Please refer to New Orleans Misc. File No. 846 for Hall-Houston Oil Company for documents qualifying said party to hold rights-of-way on the Outer Continental Shelf of the Gulf of Mexico. Hall-Houston Oil Company agrees to comply with and to be bound by the terms and conditions of the right-of-way grant.

We hereby request that the above Assignments be approved effective July 1, 1988 and the approved copy be returned to Lorene C. Roy at the above address.

Very truly yours,

HALL-HOUSTON OIL COMPANY



Wayne P. Hall  
President

WPH/LCR/sbd  
Enclosures

SENT VIA FEDERAL EXPRESS  
-----

LETTER.539

RECEIVED

DEC 1 1988

Minerals Management Service  
Leasing & Environment

ASSIGNMENT OF RIGHT-OF-WAY

FO-2-2

OCS-G 8600

UNITED STATES OF AMERICA            )            KNOW ALL MEN BY  
OUTER CONTINENTAL SHELF LANDS    )            THESE PRESENTS, THAT  
OFFSHORE LOUISIANA                 )            

WHEREAS, under date of December 18, 1986, the United States Department of the Interior, Minerals Management Service, approved an Application for Right-of-Way submitted by Apache Oil & Gas Transmission, Inc. described as follows:

A right-of-way 200 feet in width for the construction, operation, and maintenance of a 6-5/8-inch natural gas pipeline, 1.11 miles in length, from Hall-Houston Oil Company's Platform A in Block 30, Chandeleur Area, to a subsea tie-in with Texas Eastern Transmission Corporation's existing 12-3/4-inch pipeline (OCS-G 5227) in Block 89, Main Pass Area, (the foregoing being hereinafter referred to as the "Right-of-Way".)

WHEREAS, Apache Oil & Gas Transmission, Inc., ("Assignor") desires to transfer said Right-of-Way to Hall-Houston Oil Company ("Assignee").

NOW, THEREFORE, Assignor, in consideration of the sum of Ten Dollars (\$10) cash in hand paid and other good and valuable considerations, the receipt and adequacy of which are hereby acknowledged, does hereby grant, bargain, sell, assign and convey unto Assignee, its successors and assigns, the Right-of-Way described above.

TO HAVE AND TO HOLD the Right-of-Way unto Assignee, its successors and assigns, forever, subject to the terms and provisions of the Right-of-Way and this Assignment and Assignor does hereby bind itself, its successors and assigns, to warrant and defend, all and singular, title to the Right-of-Way unto Assignee, its successors and assigns, against every person whomsoever lawfully claiming or to claim the same or any party thereof, by, through or under Assignor, but not otherwise.

IT IS UNDERSTOOD AND AGREED that such transfer shall cause the Assignee to assume all costs, expenses and other obligations chargeable under the Right-of-Way to such interest and shall likewise operate to give and grant to the Assignee all benefits owing thereunder to the ownership of such interest.

RECEIVED

DEC 1 1988

Minerals Management Service  
Leasing & Environment

APPROVED

*J. Roger Kearney*  
Regional Director  
Effective Date       JUL 1 1988

IN WITNESS WHEREOF, Assignor has executed this Assignment of Right-of-Way this 30<sup>th</sup> day of November, 1988, effective as of July 1, 1988, subject to the approval by the Minerals Management Service under the provisions of 30 CFR 256.97, et.seq.

ASSIGNOR

APACHE OIL & GAS  
TRANSMISSION, INC.

WITNESSES:

Viola Ambrosino  
Sheri Detweiler

By: Wayne P. Hall  
Wayne P. Hall  
Vice President

ACCEPTANCE OF ASSIGNMENT

Hall-Houston Oil Company, Assignee herein, expressly assumes and agrees to discharge all duties and obligations arising out of or imposed by and under each and all of the terms and provisions of the Right-of-Way.

ASSIGNEE

HALL-HOUSTON OIL COMPANY

WITNESSES:

Viola Ambrosino  
Sheri Detweiler

By: Wayne P. Hall  
Wayne P. Hall  
President

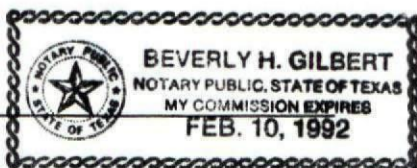
STATE OF TEXAS )

COUNTY OF HARRIS )

Before me, the undersigned Notary Public, on this day personally appeared Wayne P. Hall, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he, being fully authorized to do so, executed and delivered the same as Vice President for Apache Oil & Gas Transmission, Inc., a corporation, on the day and year therein mentioned as the act and deed of said corporation, for the purpose and consideration therein expressed.

Given under my hand and seal of office this 30<sup>th</sup> day of November, 1988.

My Commission Expires:



Beverly H. Gilbert

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
MINERALS MANAGEMENT SERVICE**

**BEST AVAILABLE COPY**

December 8, 1988 \_\_\_\_\_ DATE

OCS-G 8600, P/L Assignment \_\_\_\_\_ PARENT SERIAL NUMBER

Block 30, Chandeleur Area;  
Block 89, Main Pass Area

**APPLICANT:**

**REMITTER IF DIFFERENT THAN APPLICANT: SUBJECT**

[ Hall-Houston Oil Company  
RepublicBank Center  
700 Louisiana, Suite 2390  
Houston, Texas 77002 ]

PURPOSE	FUND SYMBOL	AMOUNT
FILING FEE EARNED	140850 (17)	\$50 00
ADVANCE FILING FEE AND/OR RENTAL	14X6800 (17)	
ONE-FIFTH BONUS	14X6875 (17)	
FIRST YEAR'S RENTAL		
FOUR-FIFTHS BONUS		
<b>TOTAL</b>		\$50 00

Check No. 2011, dated 11/30/88, Boston Safe Deposit and Trust Company, Boston,,MA

REMARKS \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

BY \_\_\_\_\_ DATE \_\_\_\_\_

**DO NOT ACCEPT THIS COPY AS A RECEIPT**

CASE FOLDER COPY

NOTIFICATION OF CONSTRUCTION

Date: 1-21-87

- 1. OCS number G8600
- 2. Name of company Apache Oil & Gas Transmission Inc.
- 3. Name of contractor Offshore Pipelines
- 4. Name or number of barge # 282
- 5. Size and length of pipeline 6 5/8-inch gas 1.11 miles in length
- 6. From where to where CA 30 "A" to MP 89 12" SSTF  
(area, block number, and platform)

7. Where construction begins CA 30 "A"  
(area and block number)

8. When barge will begin 1-27-87

9. Length of time barge will be on job 3 days

10. Nearest available heliport on Barge (Bell 206 size)

11. Does the pipeline cross or is it in close proximity to fairways or anchorage area?  
Yes \_\_\_\_\_ No ✓

Where \_\_\_\_\_

Initial and terminal points: Initial: X = \_\_\_\_\_ Y = \_\_\_\_\_

Terminal: X = \_\_\_\_\_ Y = \_\_\_\_\_

Name of Company Contact Kathy Camp <sup>J. Connor</sup> <sub>Consulting</sub>

Telephone Number (713) 558-0607

~~\_\_\_\_\_~~ cy to Alex Date 1-21-87

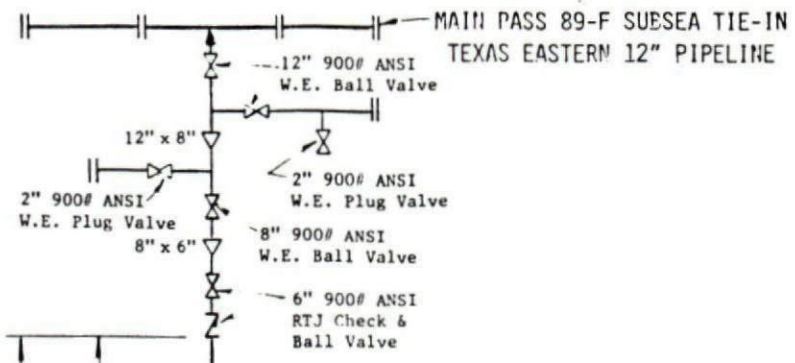
U.S. Coast Guard \_\_\_\_\_ Date \_\_\_\_\_

~~\_\_\_\_\_~~

Employer Antony J. Buita

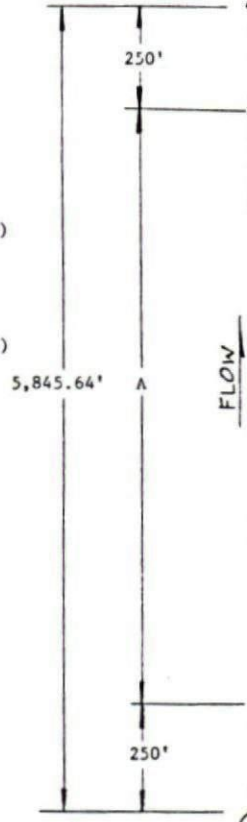
Barge not on location 1-27-87 9:30 AM  
 No heliport at platform. Had to make arrangements with Hall Houston  
 and met them at CA 35 "A" Terrace for boat to pick up. 5-26-87  
 Heliport installed over summer.

Galveston  
 Blk. A-127,  
 A-126  
 A-131



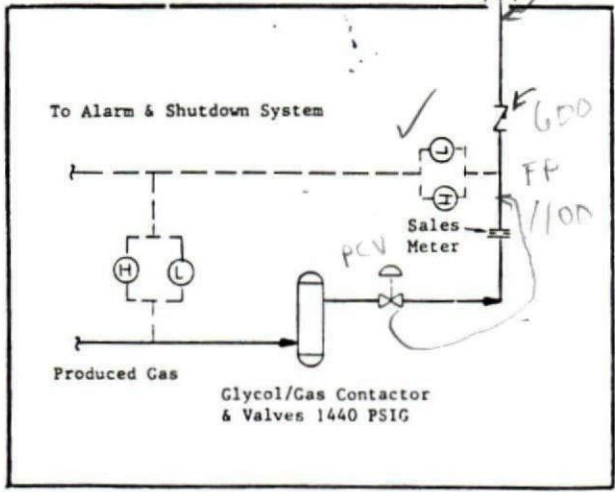
**Riser Pipe:**  
 6.625" O.D. x .432 W.T.  
 API 5L Grade B Seamless  
 (Bare Weight = 28.58 #/ft.)

**Line Pipe:**  
 6.625" O.D. x .432 W.T.  
 API 5L Grade B Seamless  
 (Bare Weight = 28.58 #/ft.)



**GENERAL NOTES**

1. APACHE OIL & GAS SALESLINE COMPLIES WITH DOT TITLE 49, PART 192, AND OCS ORDER #9.
  2. HALL-HOUSTON PLATFORM "A" FACILITIES COMPLY WITH UCS ORDER #5.
  3. HIGH PRESSURE SENSOR WILL BE SET AT 1320 PSIG.
  4. LOW PRESSURE SENSOR WILL BE SET AT 1080 PSIG.
  5. DESIGN PRESSURE OF THE PIPELINE IS 1440 PSIG.
- A = SACRIFICIAL ZINC ANODES, 66# EACH, SPACING TO BE A MAXIMUM OF 500 FEET.



HALL-HOUSTON  
 PROPOSED PRODUCTION PLATFORM "A"  
 CHANDELEUR 30-F

**BEST AVAILABLE COPY**

Application by  
 APACHE OIL & GAS TRANSMISSION, INC.



REV	DATE	DESCRIPTION
		SCHEMATIC FOR 6.625" O.D. NATURAL GAS SALESLINE CHANDELEUR BLOCK 30-F TO MAIN PASS BLOCK 89-F - GULF OF MEXICO
	JOB NO. NE1046	DATE: 10/30/86
	Dwg. NO: SKETCH #1	

PIPELINE INSPECTION CHECK LIST

Date of Inspection: 9-22-87  
Lessee/Operator: HALL-HOUSTON  
MMS Inspector: ALVARADO  
Segment No.: G-8600  
From: CA 30 A

Company Contact: UNMANNED  
Contractor: -  
Barge ID: \_\_\_\_\_  
Barge or Platform: CA 30 A  
Location: \_\_\_\_\_  
DOT/DOI: DOT  
To: MP 89 12" SSTI

General Description of Pipeline: Pipe Specification:

Type: GAS  
Size: 6 5/8  
Grade: \_\_\_\_\_  
Seamless: \_\_\_\_\_  
Coating: \_\_\_\_\_

Length: \_\_\_\_\_  
Wall Thickness: \_\_\_\_\_  
Anodes: \_\_\_\_\_  
Type: \_\_\_\_\_ Weight: \_\_\_\_\_  
No.: \_\_\_\_\_ Spacing: \_\_\_\_\_

HTP Data

(Medium) Water or Product  
Duration Time  
Pressure (PSI)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Rating of Valves, Flanges, Fittings and Location

Rating: 1440  
Location: FSV and BV

Flanges: 1440  
Fittings: \_\_\_\_\_

Flowing pressure = 1100 PSIG

Type of Downstream Component

High                      Low

Sensors: \_\_\_\_\_

Rating of Downstream Component: \_\_\_\_\_

Is low sensor installed where it could not be isolated? \_\_\_\_\_

Pipeline Crossing & Clearance: \_\_\_\_\_

Burial Depth: \_\_\_\_\_

Riser Protection

Valves/Taps Cover: \_\_\_\_\_

Coating: \_\_\_\_\_ Bumper Guard: \_\_\_\_\_ Splash Guard: \_\_\_\_\_

Water Depth: \_\_\_\_\_ Cover over valves: \_\_\_\_\_

Remarks: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_



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SN 7951

Williams  
3-9-87  
Kelly 3/8/87  
Stauffer 3/10/87  
CS

In Reply Refer To: FO-2-2  
OCS-G 8600

MAR 1 1 1987

**ACTION**

Apache Oil & Gas Transmission, Inc.	:	Pipe Line Right-of-Way
	:	
	:	Date of Permit: 12-18-86
	:	
	:	Proof of Construction
	:	Received: 3-5-87

Proof of Construction Accepted

The above-captioned grantee has submitted the evidence required by the law and Regulations 30 CFR 256.95(a). The proof of construction is hereby accepted and approved. Deviation from the original plat has been noted and new plat made a part of the record.

The total length of the "as-built" pipeline right-of-way is 1.12 miles.

**(Orig. Sgd.) J. Rogers Percy**

J. Rogers Percy  
Regional Director

bcc: P/L OCS-G 8600 (w/attach) (FO-2-2)  
P/L OCS-G 8600 (FO-2-2)  
ORD Reading File  
OPS-5 (w/copy of location plat)  
FO-3

CWilliams:mcs:3/9/87:LEXITYPE Disk 5

on map  
4/10/87  
KA

# APACHE

OIL & GAS TRANSMISSION, INC.

RepublicBank Center  
700 Louisiana, Suite 2390

Houston, Texas 77002  
(713) 225-4187  
(713) 225-6312



March 2, 1987

Mr. Daniel Bourgeois  
U.S. Department of the Interior  
Minerals Management Service  
1201 Elmwood Park Blvd.  
New Orleans, LA 70123-2394



Attention: Mr. Autry Britton (FO-2-2)  
Office of Field Operations

RE: As-Built Survey Plan and Hydrostatic Test Results  
for Pipeline Right-of-Way OCS-G 8600  
Chandeleur Area, Block 30

Gentlemen:

In accordance with OCS Order No. 9.2.3, Apache Oil & Gas Transmission, Inc. hereby submits the following information in support of the installation of one (1) 6" pipeline (OCS-G 8600) from OCS-G 7834, Platform "A" in Chandeleur Area Block 30 to a sub-sea tie-in, Main Pass Block 89.

Apache Oil & Gas Transmission, Inc. successfully performed a hydrostatic test on the subject line on February 2, 1987, as reflected on the enclosed test charts (submitted in duplicate).

Additionally, enclosed are three (3) certified "as-built" survey plats.

Should you have any questions concerning this matter, please contact the undersigned at your earliest convenience.

Sincerely,

A handwritten signature in cursive that reads "Kathy Camp".

Kathy Camp, Agent for  
Apache Oil & Gas Transmission, Inc.

KC:jd

enclosures



BEST AVAILABLE COPY

# DOUBLE "L" HYDROTEST, INC.

ROUTE 2, BOX 22

GONZALES, LOUISIANA 70737

TELEPHONE: (504) 644-3048

T.R. #16

## CALIBRATION CERTIFICATE

This is to certify that this gauge has been inspected and calibrated.

Serial No. of Gauge 11684 AT.3  
Size of Gauge 12"  
Mfg. of Gauge Standard Instrument  
Pressure of Range 0-150

TESTER READING	GAUGE READING
20	20
40	40
60	60
80	80
100	100
120	120
150	150

TYPE TESTER USED: Shomo Bath  
DATE TESTED: 12/3/80 BY: [Signature]



BEST AVAILABLE COPY

# DOUBLE "L" HYDROTEST, INC.

ROUTE 2, BOX 22

GONZALES, LOUISIANA 70737

TELEPHONE: (504)644-3048

P.R.# 6

## CALIBRATION CERTIFICATE

This is to certify that this gauge has been inspected and calibrated.

Serial No. of Gauge LL0012  
 Size of Gauge 12"  
 Mfg. of Gauge Standard Instrument  
 Pressure of Range 0-3000

TESTER READING	GAUGE READING
500	500
1000	1000
1500	1500
2000	2000
2500	2500
3000	3000

TYPE TESTER USED: \_\_\_\_\_

DATE TESTED: 12/5/86

BY: [Signature]



BEST AVAILABLE COPY

# DOUBLE "L" HYDROTEST, INC.

ROUTE 2, BOX 22

GONZALES, LOUISIANA 70737

TELEPHONE: (504) 644-3048

D.W. B

## CALIBRATION CERTIFICATE

This is to certify that this gauge has been inspected and calibrated.

Serial No. of Gauge 1702

Size of Gauge \_\_\_\_\_

Mfg. of Gauge Chandler Engineers

Pressure of Range 50-3000

TESTER READING	GAUGE READING
50	50
500	500
1000	1000
1500	1500
2000	2000
2500	2500
3000	3000

TYPE TESTER USED: \_\_\_\_\_

DATE TESTED: 12/10/86 BY: [Signature]

HYDROSTATIC TEST PRESSURE LOG

COMPANY: OPI  
 PROJECT: \_\_\_\_\_ TESTED BY: David L. HyProtect  
 TEST SECTION: \_\_\_\_\_  
 DEADWEIGHT GAUGE: MFG \_\_\_\_\_ SERIAL NO.: \_\_\_\_\_  
 DATE CALIBRATED: \_\_\_\_\_

DATE	TIME	PRESSURE (PSIG)	PIPE TEMP. (°F)	AMBIENT TEMP. °F	REMARKS
2/1/87	11:15 AM	2175	64°	60°	
	11:30	2175	64°	60°	
	12:00 <sup>PM</sup>	2172	64°	60°	
	12:30	2167	64°	60°	
	1:00	2164	63°	60°	
repr.	1:30	2160 - 2175	63°	59°	
	2:00	2175	62°	58°	
	2:30	2173	62°	58°	
	3:00	2170	62°	56°	
	3:30	2167	63°	56°	
	4:00	2166	63°	56°	
	4:30	2162	62°	55°	
repr.	5:00	2160 - 2175	60°	54°	
	5:30	2171	56°	53°	

REMARKS: \_\_\_\_\_

WITNESS: COMPANY Stephen Brigue DATE \_\_\_\_\_  
 CONTRACTOR the Super DATE 2-2-87

HYDROSTATIC TEST PRESSURE LOG

COMPANY: \_\_\_\_\_

PROJECT: \_\_\_\_\_ TESTED BY: \_\_\_\_\_

TEST SECTION: \_\_\_\_\_

DEADWEIGHT GAUGE: MFG \_\_\_\_\_ SERIAL NO.: \_\_\_\_\_

DATE CALIBRATED: \_\_\_\_\_

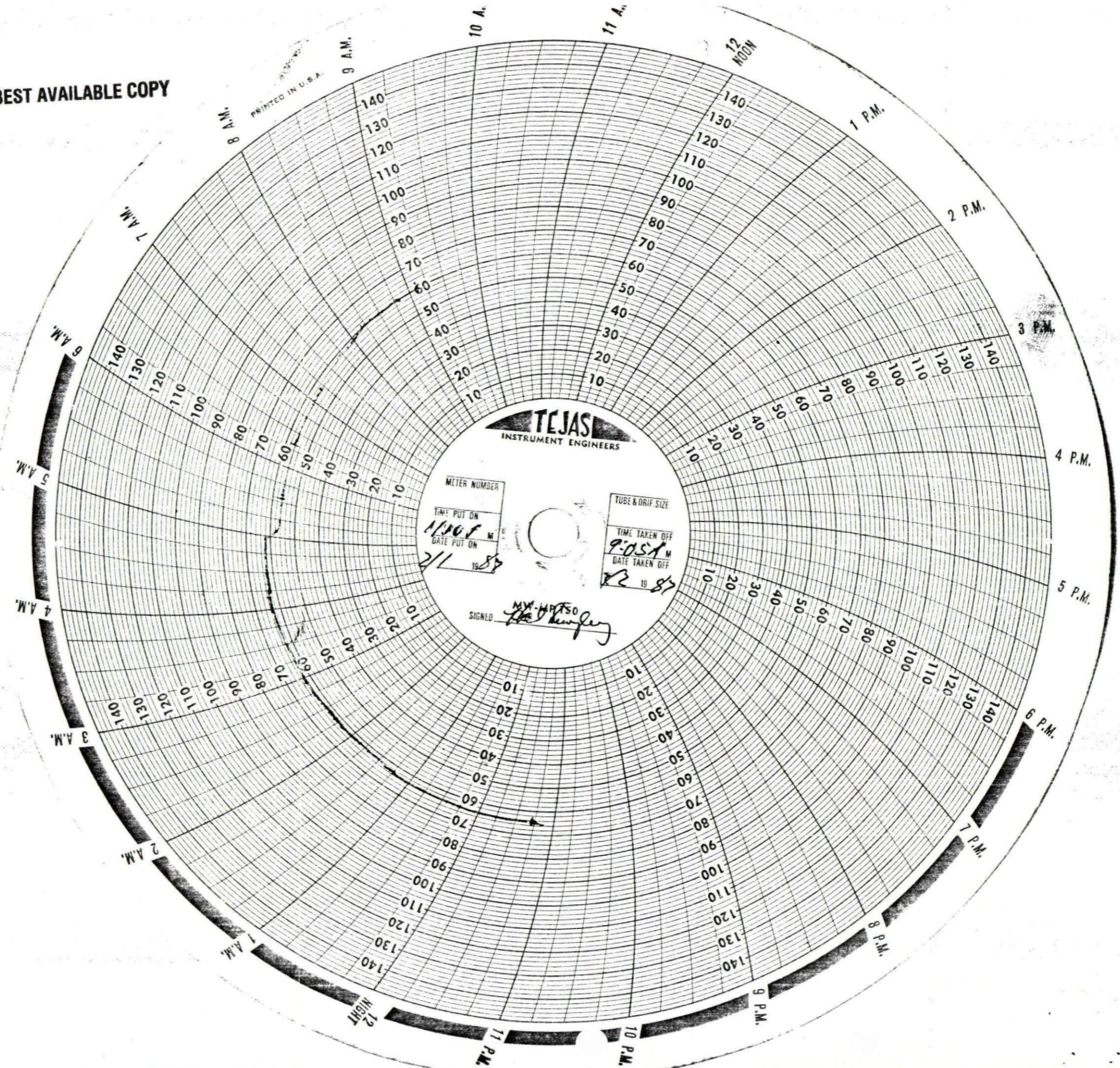
DATE	TIME	PRESSURE (PSIG)	PIPE TEMP. (°F)	AMBIENT TEMP. °F	REMARKS
	6:00 <sup>AM</sup>	21647	56°	53°	
	6:30	2162	56°	52°	
cont.	7:00	2160-2170		52°	
	7:30	2170		53°	
	8:00	2170		53°	
	8:30	2170		54°	
	9:00	2171		55°	

REMARKS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

WITNESS: COMPANY Darrin Brune DATE \_\_\_\_\_  
 CONTRACTOR Hal Sawyer DATE 2-7-88

BEST AVAILABLE COPY

PRINTED IN U.S.A.



**TEJAS**  
INSTRUMENT ENGINEERS

METER NUMBER

TIME PUT ON  
11:00 P.M.  
DATE PUT ON  
2/1 1983

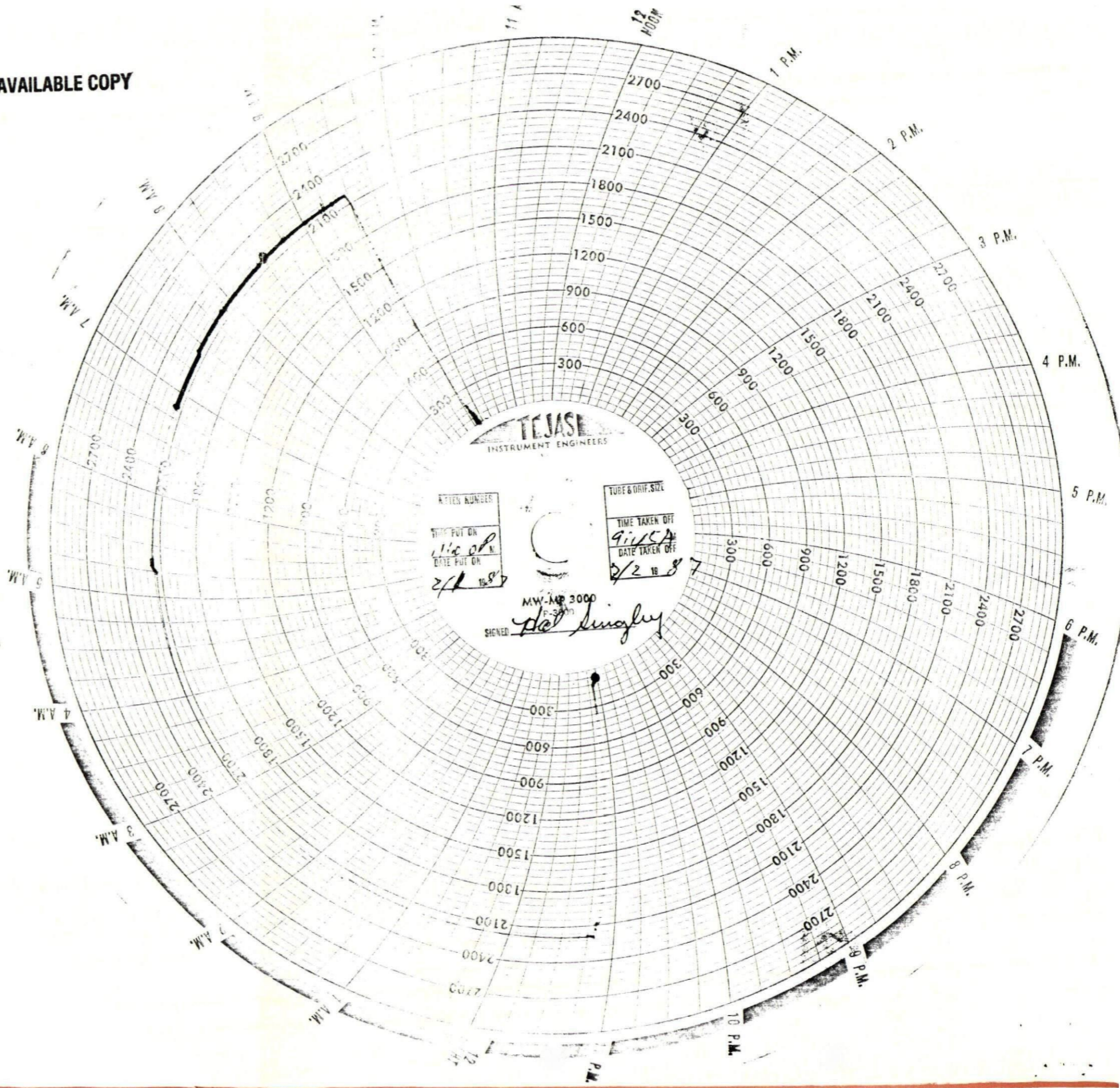
TUBE & DRIF. SIZE

TIME TAKEN OFF  
9:05 A.M.  
DATE TAKEN OFF  
2/2 1983

SIGNED  
M.V. WATSON  
*[Signature]*



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BEST AVAILABLE COPY

**PLATFORM RISER**  
 X = 2,815,866.1'  
 Y = 381,980.0'  
 LAT 29° 41' 30.946" N  
 LONG 88° 45' 48.924" W

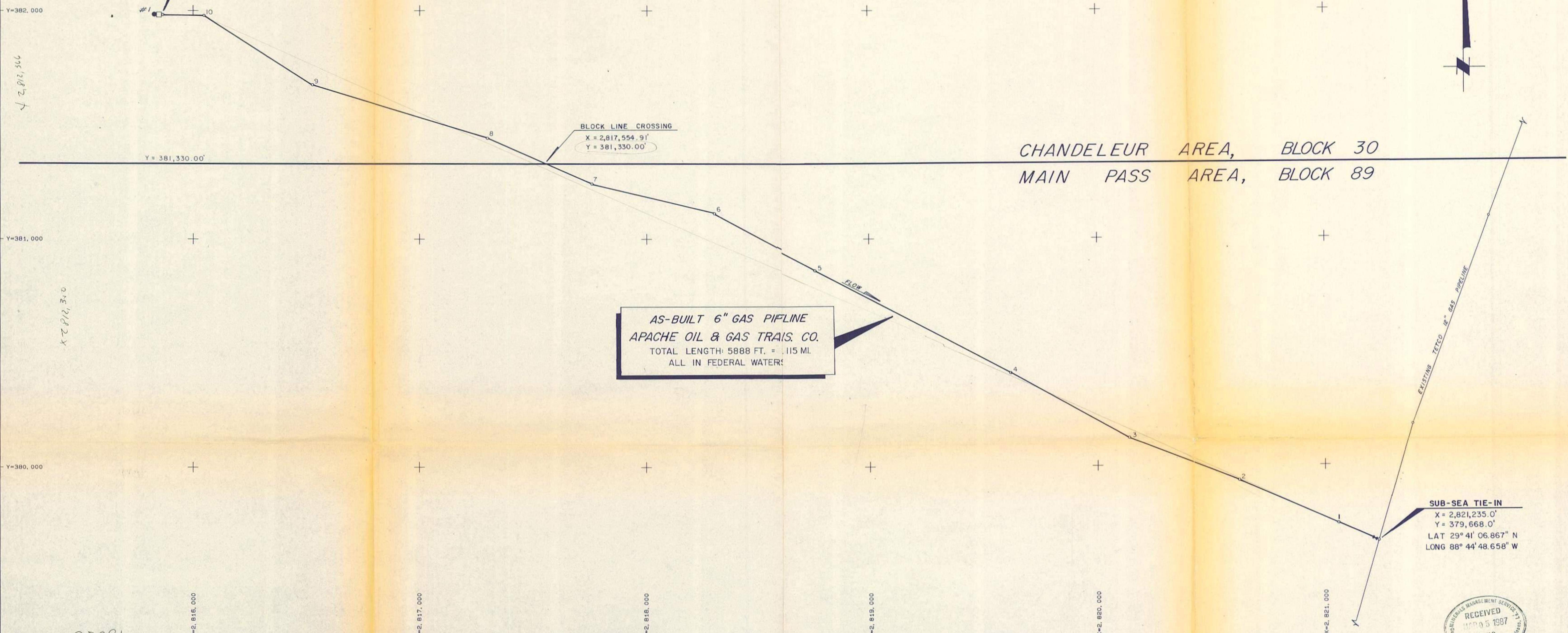
GULF OF MEXICO

CHANDELEUR AREA, BLOCK 30  
 MAIN PASS AREA, BLOCK 89

**BLOCK LINE CROSSING**  
 X = 2,817,554.91'  
 Y = 381,330.00'

**AS-BUILT 6" GAS PIPELINE**  
 APACHE OIL & GAS TRAIS. CO.  
 TOTAL LENGTH: 5888 FT. = 1.15 MI.  
 ALL IN FEDERAL WATERS

**SUB-SEA TIE-IN**  
 X = 2,821,235.0'  
 Y = 379,668.0'  
 LAT 29° 41' 06.867" N  
 LONG 88° 44' 48.658" W



57981



POINT	GRID COORDINATES		GEOGRAPHICAL COORDINATES	
	X (ft)	Y (ft)	LATITUDE N	LONGITUDE W
TIE-IN VALVE	2,821,235.0	379,668.0	29° 41' 06.867"	88° 44' 48.658"
1	2,821,059.3	379,738.6	29° 41' 07.605"	88° 44' 50.632"
2	2,820,623.0	379,934.7	29° 41' 09.643"	88° 44' 55.527"
3	2,820,139.4	380,122.5	29° 41' 11.610"	88° 45' 00.9599"
4	2,819,621.3	380,407.6	29° 41' 14.548"	88° 45' 06.760"
5	2,818,761.5	380,865.6	29° 41' 19.272"	88° 45' 16.388"
6	2,818,293.7	381,113.7	29° 41' 21.832"	88° 45' 21.627"
7	2,817,758.9	381,240.7	29° 41' 23.208"	88° 45' 27.657"
8	2,817,297.0	381,442.9	29° 41' 25.312"	88° 45' 32.841"
9	2,816,524.9	381,674.9	29° 41' 27.780"	88° 45' 41.534"
10	2,816,043.3	381,978.8	29° 41' 30.895"	88° 45' 46.915"
RISER	2,815,866.1	381,980.0	29° 41' 30.946"	88° 45' 48.924"

**NOTES**

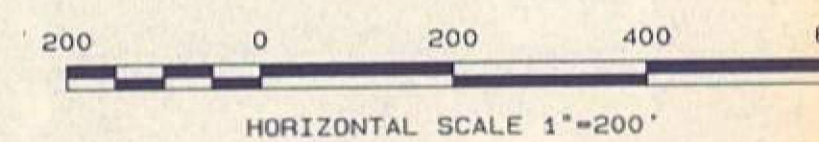
- COORDINATES OF SUB-SEA TIE-IN VALVE WERE TAKEN FROM TETCO AS-BUILT DRAWING AND CONFIRMED BY SYLEDIS.
- COORDINATES OF RISER WERE FURNISHED BY CLIENT.
- COORDINATES OF AS-BUILT POINTS ON PIPELINE WERE ACQUIRED BY SYLEDIS FIXES ON BUOYS SECURED TO LINE DURING CONSTRUCTION.

I, David E. West, a Registered Professional Engineer and Registered Land Surveyor in the State of Louisiana, do hereby certify that this drawing accurately represents the location of the pipeline, appurtenances, known foreign line crossings, turning points on the line (P.I.'s), and legal boundaries pertaining to the pipeline.

*David E. West*  
 David E. West  
 Reg. Prof. Engr. No. 1126  
 Reg. Land Surveyor No. 3894  
 2/12/87

**PROJECTION PARAMETERS**

PROJECTION: LAMBERT  
 ZONE: LOUISIANA SOUTH  
 SPHEROID: CLARKE 1866  
 CENTRAL PARALLEL: 30° N  
 X ORIGIN: 2,000,000' AT 91° 20' W  
 Y ORIGIN: 0' AT 28° 40' N



APACHE OIL & GAS  
 TRANSMISSION COMPANY

AS-BUILT 6" GAS PIPELINE  
 PLATFORM, CHANDELEUR 30  
 TO  
 SUB-SEA TIE-IN, MAIN PASS 89

WIMPOL INC HOUSTON, TEXAS TEL (713) 462-5499 TELEX: 203365 WING UR		SCALE: 1"=200'		
SURVEY DATE: 31 JAN. 1987		DRAWING NO.: 15980/ASBLT/1/1		
REV.	DATE	DESCRIPTION	DWN	APP'D
0	2/87	ORIGINAL	CVH III	DeW

AS-CON. RUCTED OCS-G-3600

NOTIFICATION OF CONSTRUCTION

Date: 1-21-87

- 1. DCS number G8600
- 2. Name of company Apache Oil & Gas Transmission Inc.
- 3. Name of contractor Offshore Pipelines
- 4. Name or number of barge # 282
- 5. Size and length of pipeline 6 5/8-inch gas 1.11 miles in length
- 6. From where to where CA 30 "A" to MP 89 12" SSTF  
(area, block number, and platform)

7. Where construction begins CA 30 "A"  
(area and block number)

8. When barge will begin 1-27-87

9. Length of time barge will be on job 3 days

10. Nearest available heliport on Barge (Bell 206 size)

11. Does the pipeline cross or is it in close proximity to fairways or anchorage area?

Yes \_\_\_\_\_ No ✓

Where \_\_\_\_\_

Initial and terminal points: Initial: X = \_\_\_\_\_ Y = \_\_\_\_\_

Terminal: X = \_\_\_\_\_ Y = \_\_\_\_\_

Name of Company Contact Kathy Camp <sup>J. Connor</sup> <sub>Consulting</sub>

Telephone Number (713) 558-0687

~~\_\_\_\_\_~~ cy to Alex Date 1-21-87

U.S. Coast Guard \_\_\_\_\_ Date \_\_\_\_\_

~~\_\_\_\_\_~~

Employer Antony J. Butta

LE-3-1

Britton 12-17-86  
Deely 12/17/86  
Stauffer 12/17/86  
12/18

**BEST AVAILABLE COPY**

DEC 18 1986

In Reply Refer To: FO-2-2  
OCS-G 8600

Chandeleur Area  
Main Pass Area

Apache Oil & Gas Transmission, Inc.

Right-of-Way

**ACTION: APPLICATION APPROVED**

Your application for a right-of-way 200 feet in width for the construction, operation, and maintenance of a 6 5/8-inch natural gas pipeline, 1.11 miles in length, from Hall-Houston Oil Company's proposed Platform A in Block 30, Chandeleur Area, to a subsea tie-in with Texas Eastern Transmission Corporation's existing 12 3/4-inch pipeline (OCS-G 5227) in Block 89, Main Pass Area, dated November 4, 1986, with its attachments, is hereby approved subject to the following:

1. The maximum allowable operating pressure (MAOP) for this pipeline will be 1,438 psig.
2. Prior to construction, buoy Texas Eastern Transmission Corporation's 12 3/4-inch pipeline in Block 89, Main Pass Area.

**(Orig. Sgd.) J. Rogers Pearcy**

J. Rogers Pearcy  
Regional Director

cc: Department of Transportation  
2320 La Branch, Room 2116  
Houston, Texas 77004 (w/enclosures)

bcc: P/L OCS-G 8600 (FO-2-2)  
K. Faust (FO-2-2)  
ORD Reading File  
LE-5  
LE-3-1  
FO-3

ABritton:mcs:12/17/86:LEXITYPE Disk 6



EDWIN W. EDWARDS  
GOVERNOR

DEPARTMENT OF NATURAL RESOURCES

B. JIM PORTER  
SECRETARY

Coastal Management Division

December 17, 1986

Mr. Autry J. Britton, General Engineer  
Minerals Management Service  
P. O. Box 7944  
Metairie, LA 70010



RE: C860376, Coastal Zone Consistency  
**Apache Oil & Gas Transmission, Inc.**  
Proposed 6.625-Inch O.D. Natural Gas Pipeline  
in and/or Through Chandeleur Area, Block 30 and  
Main Pass Area, Block 89, Gulf of Mexico, Federal Waters

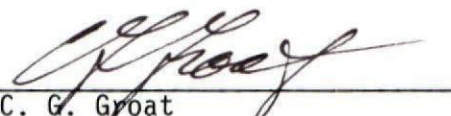
Dear Mr. Britton:

After a careful review of the pipeline application of the above captioned project, the Coastal Management Division of the La. Dept. of Natural Resources concurs with the consistency certification provided by Apache Oil & Gas Transmission, Inc. as required in Section 307(c)(3)(B) (Subpart E) of the Coastal Zone Management Act of 1972 as amended.

Sincerely,

B. JIM PORTER

BY:

  
C. G. Groat  
Assistant to the Secretary

BJP:CGG/SC/se

cc: ~~WV~~ Mr. Ron Ventola  
U.S. Army Corps of Engineers  
Apache Oil & Gas Transmission, Inc.  
Houston, TX

UNITED STATES GOVERNMENT  
MEMORANDUM

December 15, 1986

To: Regional Supervisor, Field Operations, GOM OCS Region (FO)  
From: Regional Supervisor, Leasing and Environment, GOM OCS Region (LE)  
Subject: National Environmental Policy Act (NEPA) Review for Pipeline  
Right-of-Way Application OCS-G 8600

Action Submitted: November 5, 1986

Action Commencement: December 1986

Apache Oil and Gas Transmission Inc.  
Pipeline Right-of-Way Application  
Chandeleur Block 30, Lease OCS-G 7834, to Main Pass Block 89, Lease  
OCS-G 5227

The operator proposes a 200-foot right-of-way to install a 6.625-inch O.D. natural gas pipeline from the proposed A platform on Chandeleur Block 30 to a 12-inch pipeline on Main Pass Block 89, a distance of 5,845.64 feet (1.11 miles).

Our NEPA review of the subject action is complete. The following environmental protective measures intended to avoid or mitigate potential impacts associated with the action are provided for inclusion in the plan/application approval letter:

Precautions as outlined in Section IV.B.1 of NTL 83-3 are required due to the proximity of existing pipeline(s) to the proposed activities.



H. P. Sieverding

cc: Pipeline File OCS-G 8600 (LE-5)

BSmith:gcw



BEST AVAILABLE COPY

Date: 11-13-86

To: Right-of-Way Pipeline File OCS-G 8600 <sup>FO</sup><sub>(LE)</sub>

Through: Supervisor, Platform/Pipeline Unit, Plans, Platform and Pipeline Section, Field Operations, Gulf of Mexico OCS Region (FO-2-2)

From: Petroleum Engineer, Platform/Pipeline Unit, Plans, Platform and Pipeline Section, Field Operations, Gulf of Mexico OCS Region (FO-2-2)

Subject: Pipeline Right-of-Way Application, Technical Review, Apache  
OIL & GAS TRANSMISSION, INC. OCS-G 8600

Size (inches)	Length (feet)	Service	From	To
<u>6 7/8</u>	<u>5846</u>	<u>GAS</u>	<u>Platform A</u> <u>Block 30</u> <u>Chandeleur AREA</u>	<u>a 12-inch SSIF</u> <u>Block 89</u> <u>Main Pass Area</u>

Recommendations:

- ✓ 1. The technical aspects of the proposed pipeline are acceptable in accordance with appropriate Regulations and Standards.
2. Advise applicant of Notice to Lessees and Operators No. 83-3.
3. Valve protection cover shall not protrude above the level of the mud line.
4. Subsea valves and taps associated with this pipeline shall be provided with a minimum of three feet of cover, either through burial, with sandbags, or other acceptable method.
- ✓ 5. MAP for this pipeline will be  
1438 P519

A. Britton  
A. Britton

cc: 1502-01 OCS-G 8600 (w/orig appln) (Seg. 7981) (FO-2-2)

OPS-5 (w/cy of plat) ✓

ABritton:jj:LEXITYPE Disk 6

*on map*  
*11/26/86*  
*K7*

# APACHE

OIL & GAS TRANSMISSION, INC.

RepublicBank Center  
700 Louisiana, Suite 2390

Houston, Texas 77002  
(713) 225-4187  
(713) 225-6312

OCS-G 8600

November 4, 1986

Mr. Daniel Bourgeois  
Regional Supervisor  
Office of Field Operations  
U. S. Department of the Interior  
Minerals Management Service  
Gulf of Mexico OCS Region  
1201 Wholesalers Parkway  
New Orleans, Louisiana 70123-2394

Attention: Mr. Autry Britton  
FO-2-2



RE: Application for a Pipeline Right-of-Way for  
Apache Oil & Gas Transmission Inc.'s Proposed  
6.625-Inch O.D. Natural Gas Pipeline In and/or  
Through Chandeleur Block 30 and Main Pass  
Block 89, Gulf of Mexico, Federal Waters

Gentlemen:

Pursuant to the authority granted in Section 5(e) of the Outer Continental Shelf Lands Act (67 Stat. 462) (43 U.S.C. 1331), as amended (92 Sta. 629), and in compliance with the regulations contained in Title 30 CFR, Part 256, Subpart N, Apache Oil & Gas Transmission, Inc. is filing this application in triplicate for a right-of-way two hundred feet (200') in width for the construction, maintenance and operation of a 6.625-inch O.D. natural gas pipeline in the Chandeleur Area and Main Pass Area, Gulf of Mexico. Apache Oil & Gas Transmission Inc. agrees that said right-of-way, if approved, will be subject to the terms and conditions of said regulations.

In support of our application and for your review and use, the following maps, drawings and documents have been enclosed herewith and made a part hereof:

1. Index or vicinity map, Sheet 1 of 2 (six copies enclosed),
2. Route Map, Sheet 2 of 2 (six copies enclosed),
3. Engineering and hazard survey - see John E. Chance & Associates, Inc.'s report booklet (two copies enclosed),
4. Attachment I - Profile Map (six copies enclosed),
5. Attachment II - Schematic, Sketch #1 (six copies enclosed),



Mr. Daniel Bourgeois  
Minerals Management Service  
November 4, 1986

Page Two

6. Attachment III - Pipe Specifications and General Information and Calculations, (six copies enclosed).

This 6.625-inch O.D. pipeline will be used to transport natural gas from Hall-Houston Oil Company's proposed "A" Platform, OCS-G 7834, in Chandeleur Area Block 30 to an existing underwater tap on Texas Eastern's 12-inch pipeline (OCS-G 5227) located in Main Pass Area, Block 89. The pipeline will depart Hall-Houston's "A" Platform in Chandeleur Block 30 in a south-southeasterly direction and go approximately 5,845.64 feet (1.11 miles) to the existing underwater tap on the Texas Eastern's 12-inch pipeline in Main Pass Block 89, all being in the Gulf of Mexico, federal waters, offshore, Louisiana. The proposed construction commencement date is December 15, 1986, with the time required to lay the pipe being estimated at 15 days with an overall completion of project time being estimated at one month.

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 applicable regulations, we have delivered a copy of the application and attachments thereto by certified mail, return receipt requested, to each lessee or right-of-way or easement holder whose lease, right-of-way or easement is so affected. A list of such lessees or right-of-way or easement holders is attached (see Attachment "A") and copies of the return receipts showing date and signature as evidence of service upon such lessees or right-of-way or easement holders will be forwarded to your office

Mr. Daniel Bourgeois  
Minerals Management Service  
November 4, 1986

Page Three

when received. In order to expedite the permit process, we have requested a letter from the lessee, right-of-way or easement holder expressing no objection to the proposed project. When obtained these letters will be forwarded to your office. The proposed route of the right-of-way does not adjoin or subsequently cross state submerged lands.

Applicant agrees to be bound by the foregoing regulations, and further agrees to comply with the applicable stipulations as set forth in the OCS Pipeline Procedures Guidebook dated March, 1984, revised September, 1984.

Additional design criteria data is as follows:

1. The water depth along the proposed pipeline route and in relationship to the natural bottom is set forth on Attachment I (Profile Map). Water depth is (-)48' MSL at Platform A, Chandeleur Area, Block 30, and (-)51' MSL at Texas Eastern's 12" pipeline, Main Pass Area, Block 89.
2. The description of the pipe and coating is as follows:
  - a. Line Pipe  
6.625" O.D. x 0.432" W.T., API 5L Gr.B seamless; bare weight = 28.58#/ft. Coated with 14 mils of Scotchkote 205 fusion bonded epoxy. Specific gravity in seawater (empty) = 1.88. Welded joints will be protected with heat shrinkable pipe sleeves.
  - b. Riser Pipe  
6.625" O.D. x 0.432" W.T. API 5L Gr.B seamless; Bare weight = 28.58#/ft. Coated with 14 mils of Scotchkote 205 fusion bonded epoxy. Welded joints will be protected with heat shrinkable pipe sleeves.
  - c. Internal Coating  
The analysis of the transported products will be monitored and preventive measures such as pigging and/or inhibiting will be employed as necessary.
3. Valves and Flanges
  - a. Below water valves and flanges at the tie-in point will be ANSI 900 Series with a rated working pressure of 2160 psi.

Mr. Daniel Bourgeois  
Minerals Management Service  
November 4, 1986

Page Four

- b. Above water valves and flanges on Platform A will be ANSI 600 Series with a rated working pressure of 1440 psi.
4. The specific gravity of the product being transported is anticipated to be .60 (Air = 1.0), T = 60 F.
5. The cathodic protection system will use zinc tapered segmented bracelet anodes with spacing not to exceed 500 feet between anodes. The life expectancy of the proposed pipeline is indefinite. The sacrificial anodes are designed for 20-year life and are to be replaced as necessary to extend life of pipeline.
6. The design of the proposed pipeline is in accordance with the "Minimum Federal Safety Standards (Department of Transportation) Title 49 CFR Part 192", API RP 14E and OCS Order No. 9.
7. Maximum Allowable Operating Pressure (MAOP) = 1440 PSI  
Maximum Capacity: Design Capacity = 40 MMCF/D  
Maximum Operating Pressure: High-Sensor Setting = 1320 PSI  
Minimum Operating Pressure: Low Sensor Setting = 1080 PSI  
a. Calculations: See enclosed "Attachment III".
8. The producer's facilities are rated for 1,440 PSIG working pressure.
9. The existing 12-inch Texas Eastern pipeline (OCS-G 5227) that the proposed line will tie into has an assigned MAOP of 1440 PSI.
10. Originally signed copy of Nondiscrimination in Employment Stipulation is attached to each copy of the application.
11. Company contact on technical points or other information:  
Ms. Kathy Saunders  
Regulatory Agent  
J. Connor Consulting  
P. O. Box 218753  
Houston, Texas 77218  
Telephone (713) 558-0607
12. Draft/Check No. 292 in the amount of \$130.00 of which \$100.00 covers the application fee and \$30.00 covers the first year's rental on 1.11 miles of right-of-way is also enclosed.

Mr. Daniel Bourgeois  
Minerals Management Service  
November 4, 1986

Page Five

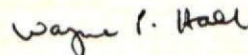
"Apache Oil & Gas Transmission, Inc. hereby certifies that the proposed activity described in this application complies with and will be conducted in a manner that is consistent with the Coastal Zone Management Program of the State of Louisiana, and the Bureau of Mineral Resources for the State of Mississippi."

Further, "Apache Oil & Gas Transmission, Inc. hereby agrees to keep open at all reasonable times for inspection by the Minerals Management Service, 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."

Please refer to your New Orleans Miscellaneous File No. 904 for a copy of a resolution approved by the Board of Directors authorizing the undersigned to sign for and on behalf of Apache Oil & Gas Transmission, Inc.

If the above information meets with your approval, we would appreciate your issuing the necessary decision for the right-of-way at your earliest convenience. Inquiries concerning this application should be directed to the regulatory agent at P. O. Box 218753, Houston, Texas 77218, Attention: Ms. Kathy Saunders, (713) 558-0607.

Sincerely,



Wayne P. Hall  
Vice-President

WPH:KS:jd  
Attachments and Enclosures

Mr. Daniel Bourgeois  
Minerals Management Service  
November 4, 1986

Page Six

cc: Lessees and Right-of-Way Holders as indicated on Attachment "A", all with copy of Attachments and Enclosures.

SHELL OFFSHORE INC.  
Attention: Division Land Manager  
P.O. Box 61933  
New Orleans, LA 70161  
(Certified Mail No. P 174 390 953)

TEXAS EASTERN TRANSMISSION CORP.  
Attention: Mr. James G. Malven, Mgr.  
Rights-of-Way and Land Department  
P.O. Box 2521  
Houston, TX 77001  
(Certified Mail No. P 174 390 954)

TEXACO PRODUCING INC.  
Attention: Mr. O.F. Pena  
P.O. Box 60252  
New Orleans, LA 70160  
(Certified Mail No. P 174 390 955)

Agency from whom Consistency Certification is required:

STATE OF LOUISIANA  
Coastal Management Division  
Attention: Mr. Steve Chustz  
P.O. Box 44487  
Baton Rouge, LA 70804-4487  
(Certified Mail No. P 174 390 956)

STATE OF MISSISSIPPI  
Bureau of Marine Resources  
Attention: Mr. Richard Leard  
Department of Wildlife Conservation  
P.O. Drawer 959  
Long Beach, MS 39560  
(Certified Mail No. P 174 390 957)

ATTACHMENT "A"

The following Lessees and Rights-of-Way holders on even date with this application were furnished a copy of this application by Certified Mail, Return Receipt Requested (Note: The status of blocks listed below was current as of October 15, 1986, per Mary Holmes, MMS, in telephone conversation with Kathy Saunders, J. Connor Consulting).

Chandeleur Area

Block 30

Shell Offshore Inc.	OCS-G 7834	Oil & Gas Lease
Texas Eastern Transmission Corp.	OCS-G 5227	Pipeline R-O-W

Main Pass Area

Block 89

Texaco Producing Inc.	OCS-G 6804	Oil & Gas Lease
Texas Eastern Transmission Corp.	OCS-G 5227	Pipeline R-O-W

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
MINERALS MANAGEMENT SERVICE

NONDISCRIMINATION IN EMPLOYMENT

As a condition precedent to the approval of the granting of the subject pipeline right-of-way, the grantee, Apache Oil & Gas Transmission, Inc., 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.

Wayne P. Hall  
-----  
Signature of Grantee

11-4-86  
-----  
Date

GENERAL INFORMATION & CALCULATIONS

6.625" O.D. GAS SALESLINE

CHANDELEUR BLOCK 30-F TO MAIN PASS BLOCK 89-F

1. The water depth along the proposed pipeline route and in relationship to the natural bottom is set forth on the attached PLAT. Water depth is (-) 48' MSL at Platform "A" Chandeleur Block 30-F and (-) 51' MSL at Texas Eastern 12" pipeline, Main Pass Block 89-F.
2. The description of the salesline and coating is as follows:
  - a. Line Pipe. 6.625" O.D. x .432" W.T., API 5L Grade B seamless; bare weight = 28.58# per foot. Coated with 14 mils of Scotchkote 205 fusion bonded epoxy. Specific gravity in seawater (empty) = 1.88. Welded joints will be protected with heat shrinkable pipe sleeves.
  - b. Riser Pipe. 6.625" O.D. x .432" W.T. API 5L Grade B seamless. Bare weight = 28.58# per foot. Coated with 14 mils of Scotchkote 205 fusion bonded epoxy. Welded joints will be protected with heat shrinkable pipe sleeves.
  - c. Internal Coating. The analysis of transported products will be monitored.
  - d. Subsea tie-in valves and flanges will be 900# ANSI.
3. The proposed salesline is approximately 5,845.64 feet long. This does not include the +/- 68' of riser piping at the platform. The line will transport natural gas.
4. Valves and flanges on platform "A" will be 600# ANSI.
5. The design of the proposed flowlines and risers is in accordance with DOT Title 49, Part 192, API RP 14E and OCS Order #9.
6. The cathodic protection system for the pipeline will use zinc tapered segmented bracelet anodes. Calculations are as follows:
  - a. Anticipated life line is 20 years.
  - b. Assumed maximum of 2% bare pipe.
  - c. Current 5 MA/sq. ft.
  - d. 26 #/amp year





e. Anode spacing calculations:

$$\text{Area/mile} = 5280 \text{ ft./mi.} \times 3.14 \times (6.625)/12 \text{ ft.}$$

$$= 9153.1 \text{ sq. ft./mi.}$$

$$\text{Amps} = 9153.1 \text{ sq. ft./mi.} \times .02 \times .005 \text{ A/sq. ft.}$$

$$= .92 \text{ amps/mi.}$$

$$\text{Line life} = .92 \text{ A/mi.} \times 20 = 18.4 \text{ amp yr./mi.}$$

$$\text{\#/mile} = 18.4 \text{ amp yr./mi.} \times 26 \text{ \#/amp yr.}$$

$$= 478.4 \text{ \#/mile}$$

$$\text{Anode spacing} = (478.4 \text{ \#/mi.})/66\# = 7.25/\text{mi.}, 728 \text{ ft.}$$

Use one (1) 66# every 500 feet.

7. The design pressure for the line pipe and riser:

a. Riser:

$$t = PD/2S$$

$$= 1440 \times 6.625/2 \times 17,500$$

$$= .273 + 1/16" \text{ C.A.}$$

$$= .335$$

P = internal design  
pressure = 1440 psig

t = wall thickness, inches

S = SMYS  $\times$  .5 = 17,500

D = nominal outside  
diameter = 6.625"

Use 6.625" O.D.  $\times$  .432" W.T. API 5L Grade B seamless.

Hydrostatic test pressure:

In accordance with API 14E

$$\text{HTP} = 1.5 \times \text{MAOP}$$

$$= 1.5 \times 1440 = 2160 \text{ PSIG}$$

b. Line Pipe:

$$t = PD/2S$$

$$= 1440 \times 6.625/2 \times 25,200$$

$$= .189 + 1/16" \text{ C.A.}$$

$$= .252$$

P = internal design  
pressure = 1440 psig

t = wall thickness, inches

S = SMYS  $\times$  .72 = 25,200

D = nominal outside  
diameter = 6.625"

Use 6.625" O.D.  $\times$  .432" W.T. API 5L Grade B seamless.

Hydrostatic test pressure:

In accordance with DOT Title 49, Part 192

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

$$= 1.25 \times 1440 + 51 \times (1.02)/2.31$$

$$= 1800 \text{ PSIG (use 2160 PSIG - same as riser)}$$

8. The hydrostatic test will be conducted in accordance with applicable regulations. Test duration will be eight hours. The test medium will be inhibited seawater. The test pressure is less than 90% of the hoop stress using the steel's SMYS.

9. The specific gravity of the line pipe was calculated as follows:

The line pipe weighs 28.58 lbs/LF

$$\begin{aligned} \text{The pipe displaces } & \pi D^2 / 4 \times 12 / 1728 \times 62.4 \times 1.02 \\ & = 15.23 \text{ lbs water/ft} \end{aligned}$$

$$\text{Specific gravity flowline} = 28.58 / 15.23 = 1.88$$

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

10. The design capacity of the flowline is approximately 40 MMSCFD.
11. The proposed flowline will tie-in at the 12" Texas Eastern Pipeline Main Pass 89-F.
12. Overpressuring of the salesline shall be prevented by two methods. First, the platform shall have relief valves installed on their pressure sources which are set at a maximum of 10% above the maximum rated pipeline pressure. Second, the pipeline shall have both high and low limits. High limits shall be set no higher than 10% above operating pressure and in no case above the maximum rated pipeline pressure. The low pressure shut-in shall activate no lower than 10% below the operating pressure. The effect of any pressure exceeding either limit will be the automatic and orderly shutdown of all pressure sources on the platform.

PIPELINE SUMMARY

1. Line Pipe Specifications:

<u>O.D.</u>	<u>W.T.</u>	<u>Grade</u>	<u>Length</u>	<u>MAOP</u>
6.625"	.432"	API 5L B	5,845.64'	1440 PSI

2. Riser Pipe Specifications:

<u>O.D.</u>	<u>W.T.</u>	<u>Grade</u>	<u>Length</u>	<u>MAOP</u>
6.625"	.432"	API 5L B	68'	1440 PSI

3. Line Pipe Coating:

Thin film epoxy.

4. Existing Texas Eastern Pipeline:

<u>O.D.</u>	<u>W.T.</u>	<u>Grade</u>	<u>MAOP</u>	<u>MOP</u>
12.75"	.375	X 42	1440 PSIG	1100 PSIG

5. Name of Product:

Natural gas.

6. Class Location:

Class I.

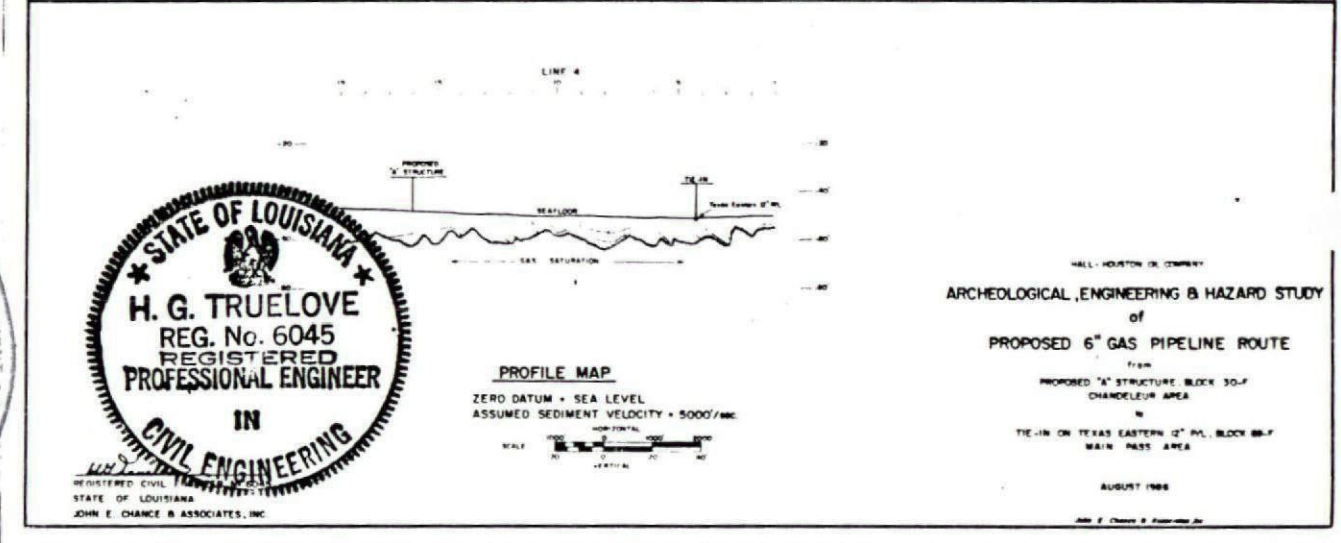
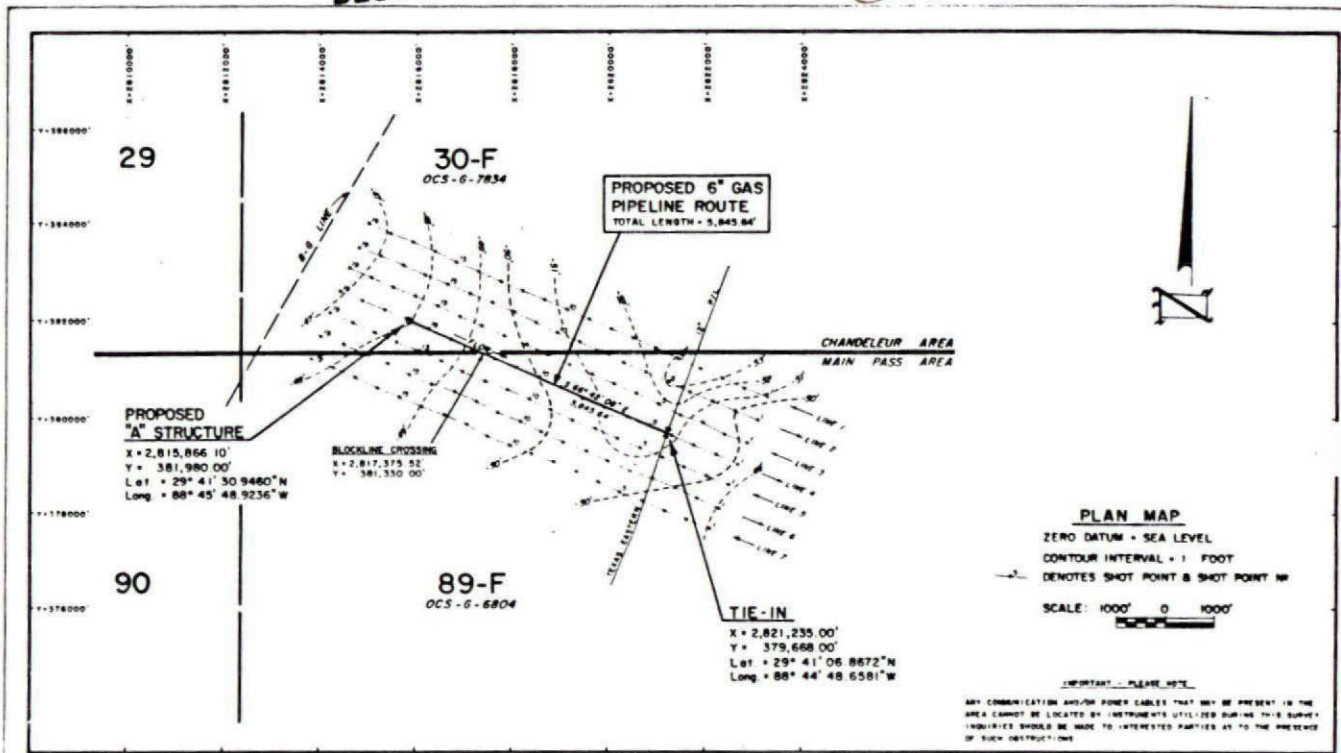
7. Governing Code:

OCS Order #9; DOT Title 49, Part 192; API RP 14E

REV	DATE	DESCRIPTION	BY

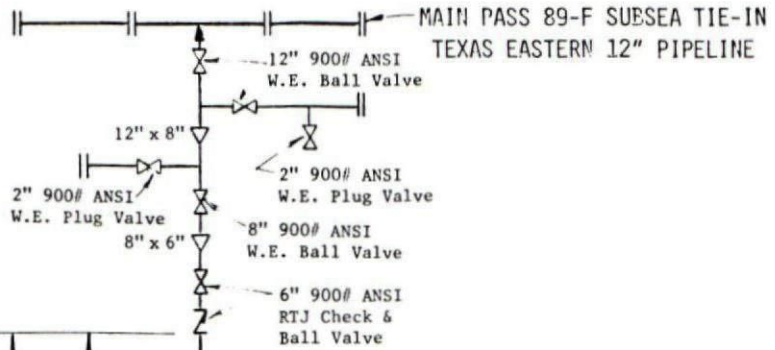
Application by  
Apache Oil & Gas  
Transmission

6.625" O.D. Natural Gas  
Salesline  
Chandeleur 30-F/Main Pass 89-F  
Gulf of Mexico



MS-G 8600

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**Riser Pipe:**

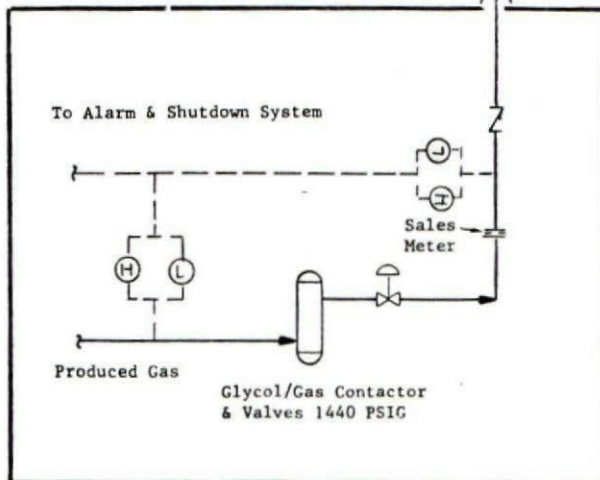
6.625" O.D. x .432 W.T.  
API 5L Grade B Seamless  
(Bare Weight = 28.58 #/ft.)

**Line Pipe:**

6.625" O.D. x .432 W.T.  
API 5L Grade B Seamless  
(Bare Weight = 28.58 #/ft.)

**GENERAL NOTES**

1. APACHE OIL & GAS SALESLINE COMPLIES WITH DOT TITLE 49, PART 192, AND OCS ORDER #9.
  2. HALL-HOUSTON PLATFORM "A" FACILITIES COMPLY WITH OCS ORDER #5.
  3. HIGH PRESSURE SENSOR WILL BE SET AT 1320 PSIG.
  4. LOW PRESSURE SENSOR WILL BE SET AT 1080 PSIG.
  5. DESIGN PRESSURE OF THE PIPELINE IS 1440 PSIG.
- A = SACRIFICIAL ZINC ANODES, 66# EACH, SPACING TO BE A MAXIMUM OF 500 FEET.



HALL-HOUSTON  
PROPOSED PRODUCTION PLATFORM "A"  
CHANDELEUR 30-F

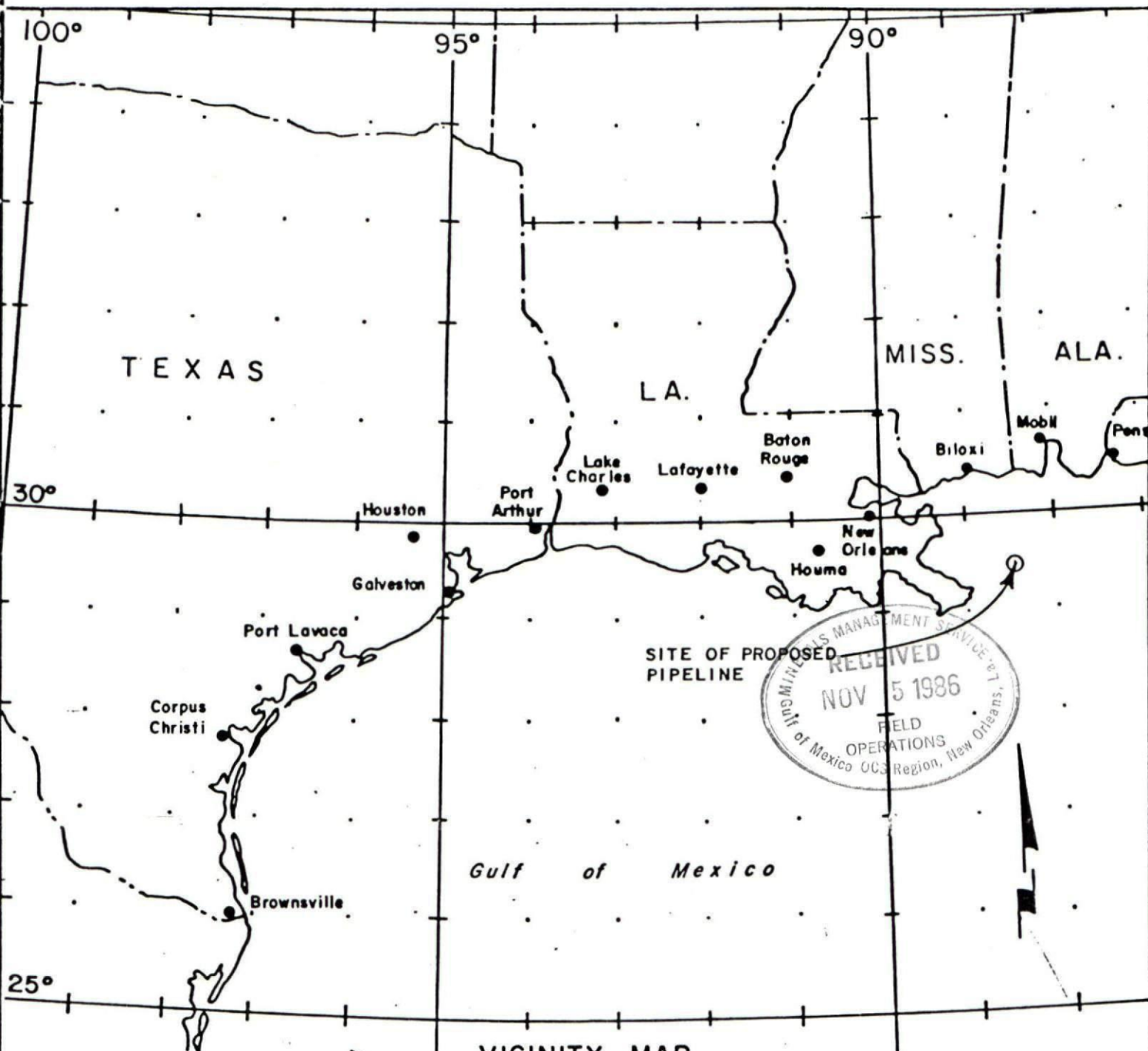
Application by  
APACHE OIL & GAS TRANSMISSION, INC.



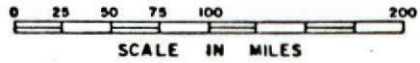
REV	DATE	DESCRIPTION	BY
		SCHEMATIC FOR 6.625" O.D. NATURAL GAS SALESLINE CHANDELEUR BLOCK 30-F TO MAIN PASS BLOCK 89-F - GULF OF MEXICO	
		JOB NO. NE1046	DATE: 10/30/86
		DWG. NO: SKETCH #1	

25-G 8600

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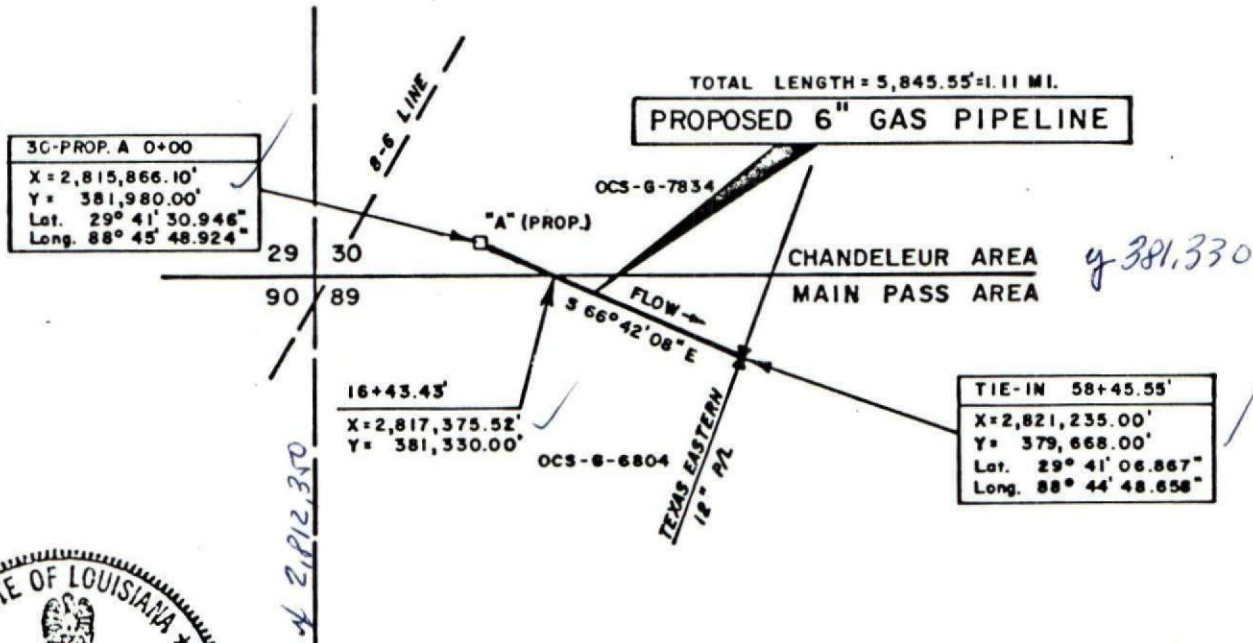
VICINITY MAP



APPLICATION BY  
 HALL HOUSTON OIL COMPANY  
 HOUSTON, TEXAS  
 SEPTEMBER 8, 1986

SHEET 1 OF 2

PROPOSED 6" GAS PIPELINE  
 CHANDELEUR AREA  
 MAIN PASS AREA  
 GULF OF MEXICO



THE RIGHT-OF-WAY OF PROPOSED PIPELINE IS ACCURATELY REPRESENTED.

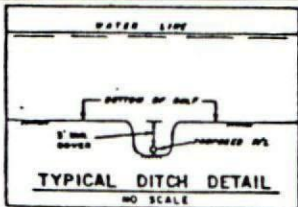
*Lionel J. Cormier*  
 REGISTERED LAND SURVEYOR NO. 4401  
 STATE OF LOUISIANA  
 JOHN E. CHANCE & ASSOCIATES, INC.

**PLAN**

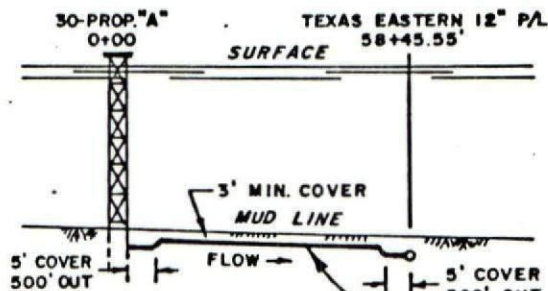


THE DESIGN CHARACTERISTICS OF THIS PIPELINE ARE IN COMPLIANCE WITH D.O.T. REGULATIONS.

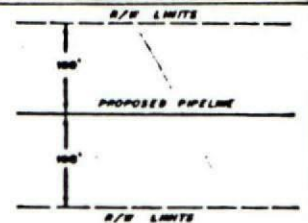
*Conrad Blanchard*  
 AREA ENGINEER



APPROX. 2171 CUBIC YARDS OF SPOIL  
 SPOIL TO BE DEPOSITED SO AS NOT TO REDUCE  
 WATER DEPTH MORE THAN 0.5 FOOT.



**PROFILE**



APPLICATION BY  
 HALL HOUSTON OIL COMPANY  
 HOUSTON, TEXAS  
 SEPTEMBER 8, 1986

**PROPOSED 6" GAS PIPELINE**  
 CHANDELEUR AREA  
 MAIN PASS AREA  
 GULF OF MEXICO

PIPELINE RIGHT-OF-WAY APPLICATION "ENGINEERING CHECKLIST"

MINERALS MANAGEMENT SERVICE  
GOM REGIONAL OFFICE

*As Built*  
*5,888'*  
*or 1.12 mi*

Date: *11/13/86*

OCS-G *8600*

- A. Description of pipeline and location of proposed route (i.e., size of pipe, product to be transported, from where to where, platform number, name, block number, area, and distance in feet and miles):** *for a 6 3/8-inch Natural gas Pipeline, 5846 feet or 1.11 miles in length, from Hall-Houston Oil Company's Proposed Platform A in Block 30, Chandeleur Area, to a subsea tie-in with Texas Eastern Transmission Corporation's existing 18 1/4-inch Pipeline (OCS-G 5227) in Block 89, Main Pass Area*
- B. Safety Flow Schematic - Verify that the information shown on the safety flow schematic diagram contains the following:**

- ✓ 1. Pressure source is drawn into the schematic with the following:
- a. source (i.e., name) *Glycol Contactor*
  - b. design working pressure *1440 PSIG*
  - c. high-low pressure sensor settings *1320 PSIG high; 1080 PSIG low*
- ✓ 2. "ANSI" ratings of all valves, flanges, and fittings between the source and the connecting pipeline are shown.
- N/A* 3. Pressure relief valves, where applicable, are shown with the setting set no higher than the maximum working pressure (MWP) of the vessel.
- N/A* 4. If the maximum input source pressure is greater than the maximum allowable operating pressure (MAOP) of the pipeline, redundant safety equipment is required.
- ✓ 5. MAOP of proposed pipeline does not exceed MAOP of connecting pipeline.
- ✓ 6. The pipeline leaving the platform receiving production from the platform is equipped with high-low pressure sensors to directly or indirectly shut-in the well or wells on the platform.
- N/A* 7. The pipeline delivering production to the production facilities on the platform is equipped with an automatic fail-close valve tied into the automatic and remote shut-in system.
- N/A* 8. The pipeline crossing the platform which does not deliver production to the platform, but which may or may not receive production from the platform, is equipped with high-low pressure sensors connected to an automatic fail-close valve located in the upstream portion of the pipeline at the platform. In addition, the sensors are tied into either the platform's automatic and remote shut-in system or an independent remote shut-in system.



✓ 9. The pipeline boarding the platform/pipeline is equipped with a check valve.

✓ 10. The pipeline leaving the platform is equipped with a check valve.

✓ 11. The high-low pressure sensors on the departing pipeline is located upstream of the check valve.

N/A 12. Where applicable, high-low sensors are located downstream of the back pressure regulator.

N/A 13. If there is liquid injection into the line, are pumps associated with the injection? (Yes or No) \_\_\_\_\_

✓ 14. Direction of flow indicated.

✓ 15. Pipe specifications (i.e., size, grade, weight, and wall thickness).

✓ 16. Total length of proposed pipeline (feet and miles).

✓ 17. MAOP of connecting pipeline. 1,438 Psig (OCS-G5227)

✓ 18. Statement that design meets or exceeds DOT Regulations 192 or 195, as applicable, and/or applicable OCS orders, registered engineer's seal, registration number, date, and signature.

✓ 19. Area and block number of proposed pipeline/platform.

✓ 20. Cathodic protection specifications.

C. Design Information - Verify that the pipeline design information given in the application and/or on the data sheet is complete and correct:

✓ 1. Product to be transported: Natural Gas

✓ 2. Pipeline, riser, and subsea valve assembly specifications:

(1) Size 6.625" Wall Thickness .432" Grade B Weight 28.58 lbs/ft.

(2) Size \_\_\_\_\_ Wall Thickness \_\_\_\_\_ Grade \_\_\_\_\_ Weight \_\_\_\_\_ lbs/ft.

(3) Size \_\_\_\_\_ Wall Thickness \_\_\_\_\_ Grade \_\_\_\_\_ Weight \_\_\_\_\_ lbs/ft.

b. Riser:

(1) Size 6.625" Wall Thickness .432" Grade B Weight 28.58 lbs/ft.

(2) Size \_\_\_\_\_ Wall Thickness \_\_\_\_\_ Grade \_\_\_\_\_ Weight \_\_\_\_\_ lbs/ft.

(3) Size \_\_\_\_\_ Wall Thickness \_\_\_\_\_ Grade \_\_\_\_\_ Weight \_\_\_\_\_ lbs/ft.

c. Subsea valve assembly:

(1) Size \_\_\_\_\_ Wall Thickness \_\_\_\_\_ Grade \_\_\_\_\_ Weight \_\_\_\_\_ lbs/ft.

(2) Size \_\_\_\_\_ Wall Thickness \_\_\_\_\_ Grade \_\_\_\_\_ Weight \_\_\_\_\_ lbs/ft.

3. Water depth: Maximum -51' Minimum -48'

4. Type of corrosion protection:

a. Impressed current system

b. Sacrificial anode system

(1) Type of anode ZINC

(2) Spacing interval 500 ft.

(3) Weight of unit anode given by applicant 66 lbs. ea.

c. If platform anodes are used, are they considered adequate?

Yes \_\_\_\_\_ No \_\_\_\_\_

d. If pipeline anodes are used:

Formula:  $L_{p/1} = 3.82 \times 10^4 \times W^0 / DIR = 38200 \times 66 / 6.625 \times 500 \times 26 = 29 \frac{1}{2}$

Where:

- W<sup>0</sup> = Weight of Anode unit (lbs)
- D = Dia. of pipe (inches)
- I = Separation between anodes (ft.)
- R = the following lbs/amp/year (Rate of Consumption)
- Aluminum or Galvalum = 7.6
- Zinc = 26
- Magnesium = 17.5

Does the calculated life expectancy equal or exceed 20 years?

Yes  No \_\_\_\_\_

5. Description of protective coating:

a. Pipeline 14 mils of Scotchkot e. 205 epoxy

b. Riser 11 11 11 11 11 11

c. Subsea valve assembly

N/A 6. Description of weighted coating:

a. Preconcrete coating \_\_\_\_\_

b. Density of concrete \_\_\_\_\_ PCF

c. Thickness of concrete \_\_\_\_\_

d. Thickness of asphalt \_\_\_\_\_

7. Calculate the specific gravity (one of the following formulae may be used)

✓ a. For epoxy coating:  $SG = 2.865W/D^2 = 2.865 \times 28.58 / 43.89 = 1.88$

\_\_\_\_\_ b. Density comparison with fluid material:  $SG = \frac{W+P}{\frac{A}{R}}$

\_\_\_\_\_ c. Lines with a specific thickness of concrete:

$$SG = \frac{RC + K_2 \frac{W+P - RC}{R (T-K_1)^2 K_3}}{R}$$

\_\_\_\_\_ d. Lines having two coatings of enamel and a felt wrap, or only asphaltmastic coating:

$$SG = \frac{W+P}{K_3}$$

Where:

- SG = specific gravity
- RC = density of concrete (lb/cu. ft.)
- K<sub>1</sub>, K<sub>2</sub>, K<sub>3</sub> = coefficients
- T = thickness of concrete coating (inches)
- W = weight of bare pipe (lb/ft)
- P = weight of coating
- R = density of fluid material (lb/cu. ft.); i.e., sea water = 64 lbs/cu. ft.
- D = diameter of pipe (inches)
- A = cross-sectional area

✓ 8. Given specific gravity  
a. 1.88 b. \_\_\_\_\_ c. \_\_\_\_\_

✓ 9. Gravity or density of product(s) 160

✓ 10. Design capacity of pipeline 40MMCFD

✓ 11. Given Hydrostatic Test Pressure: Line Pipe 2160 psig Hold Time 8 hrs. 2-2-87  
Preinstallation Test \_\_\_\_\_ Riser 2160 psig Hold Time 8 hrs.

Recommended maximum hydrostatic body test for ANSI valves, flanges, and fittings are as follows:

- ANSI 300 - 1,100 psig
- ANSI 400 - 1,450 psig
- ANSI 600 - 2,175 psig
- ANSI 900 - 3,250 psig
- ANSI 1,500 - 5,400 psig

Note: Minimum hold times:

Gas = Line Pipe = 8 hrs.  
 Riser = 4 hrs. (pretest) or DOT 192.507(c)  
 Liquid = 4 hrs. @ 125% of MOP  
 Plus 4 hrs. @ 110% if leak inspection is not visible during test

12. Maximum Allowable Operating Pressure (MAOP) of line pipe:

MAOP =  $\frac{2st}{D} \times F \times E \times T$  Note: F = .72; E = 1; T = 1

a. MAOP =  $\frac{2 \times 35,000 \times .432}{6.625} \times .72 = 3,286 \text{ psig}$

b. MAOP =

c. MAOP =

13. MAOP of riser pipe.

Note: F = .50 for risers on natural gas transmission lines.

Note: F = .60 for risers on liquid pipelines.

a. MAOP =  $\frac{2 \times 35,000 \times .432}{6.625} \times .50 = 2,282 \text{ psig}$

b. MAOP =

14. MAOP of flanges, fittings, and valves:

2.4 x ANSI rating =  $2.4 \times 600 = 1,440 \text{ psig}$

15. MAOP of proposed pipeline as determined in accordance with Title 49 CFR Part 195 or 192, as applicable, is 1,438 psig.

16. Items 12, 13, and 14 above are equal to or more than the maximum allowable working pressure (MAWP) of source.

17. Verify: 1:25 maximum source pressure (MSP)  $\leq$  hydrostatic test pressure (HTP)  $\leq$  .95 (smaller IP @ SMYS of items 12 or 13 above)

$1,800 \leq 2,160 \leq 4,336$

Note: The recommended limit of test as a percentage of internal pressure @ specified minimum yield strength is equal to 95%:

IP @ SMYS =  $\frac{2 \times s \times t}{D} = 4,565$

18. Verify MAOP does not exceed the lowest of the following:

a. Submerged components: HTP/1.25 =  $1,728 \text{ psig}$

b. Riser: HTP/1.5 =  $1,440 \text{ psig}$

N/A 19. Valve guards used: Yes \_\_\_\_\_ No \_\_\_\_\_

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**D. Installation Requirements:**

1. All pipelines will be installed or laid to a minimum of three feet below the level of the mudline out to and including the 200 foot water depth, except at pipeline crossings. Any deviation must be justified at the time of application.
2. All valves and taps must be provided with a minimum of three feet of actual cover either with soil or sandbags or jetted to a minimum of three feet below the mudline. If *MMS* approved valve protection covers are used, the valves and taps are NOT required to have a minimum of three feet of actual cover or jetted three feet below the mudline. However, the top of the valve protection cover shall not protrude above the level of the mudline. Any deviation must be justified at the time of application.

**E. Pipeline Crossings:**

- N/A 1. All pipeline crossings in water depths up to and including 200 feet shall be cement-bagged with a minimum of 18 inches between the lines with the uppermost line having a minimum of 3 feet of cover in the form of cement bags installed so as to provide a three foot horizontal to a one foot vertical (3:1) slope with a crown width that is one and one-half (1½) times the pipe diameter. Any deviation must be justified at the time of application.
- N/A 2. All pipeline crossings in water depths greater than 200 feet shall be cement bagged with a minimum of 18 inches between the lines and installed so as to provide a three foot horizontal to a one foot vertical (3:1) slope. Any deviation must be justified at the time of application.

**F. Construction Information:**

1. Proposed construction commencement date — 12-15-86
- \_\_\_\_\_ 2. Method of construction
- \_\_\_\_\_ 3. Method of burial
4. Time required to lay pipe — 15 days
5. Time required to complete project — one month

**G. Applicant complies with current OCS pipeline guidelines:**

Yes  No \_\_\_\_\_