SN 8224



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

[713] 296-6000

DI

November 3, 1997

Mr. Donald C. Howard
Regional Supervisor, Field Operations
United States Department of the Interior
Minerals Management Service
Gulf of Mexico OCS Region
1201 Elmwood Park Boulevard, MS 5232
New Orleans, LA 70123-2394

Re:

Abandonment of Right of Way Pipeline

West Cameron Area Block 379 OCS-G 5016; Segment No. 8226 NOV 0 (1997

FIELD

OPERATIONS

OCS Region, New Charter

Row No. G-9337

Gentlemen:

Apache Corporation has completed the abandonment of the 6" gas and condensate pipeline from West Cameron 379 "A" platform to West Cameron 370 subsea tie-in.

The abandonment of the pipeline commenced on October 7, 1997 and was completed on October 22, 1997. Abandonment services were provided by Acadiana Divers of Lafayette, Louisiana. The pipeline ends were plugged and buried three (3) feet below the mudline as per the approved abandonment plan.

Should you have any questions or requests for additional information concerning this matter, please contact Sam Hodge or Jim Snyder at (713) 462-9990.

Very truly yours,

Apache Corporation

Fred Schaider

Sr. Staff Engineer

FS/JES Enclosures

m 8226

muss 11/4/97

903226

In Reply Refer To: MS 5232

MAY 0 5 1997

Mr. Alexander M. S. Nash Apache Corporation 2000 Post Oak Boulevard, Suite 100 Houston, Texas 77056-4400

Dear Mr. Nash:

Pursuant to 30 CFR 250.150(b), the relinquishment of the right-of-way grant associated with the following pipeline is hereby accepted effective April 2, 1997:

Pipeline	Size	Length			
Segment No	(inches)	(feet)	Service	From	To
8226 (Right-of-	6 5/8 Way OCS-G 9337	35,282	Gas/ Condensate	Platform A Block 379 West Cameron Area Lease OCS-G 5016	A 10-inch SSTI Block 370 West Cameron Area Lease OCS-G 4092
1					Segment No. 8227

Your letter dated March 17, 1997, requests approval to permanently abandon in place approximately 35,282 feet (6.68 miles) of 6 5/8-inch pipeline designated as Segment No. 8226, and to relinquish in its entirety, Right-of-Way Grant OCS-G 9337 associated therewith.

Pursuant to 30 CFR 250.4(b), approval is hereby granted to abandon this 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, Apache Corporation shall be required to remove it.

Apache Corporation shall cease transporting hydrocarbons through this pipeline immediately and complete the aforementioned abandonment operations within 60 days of the date of this letter. Additionally, Apache Corporation 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,

(Org. Sgd.) Warren Williamson

Donald C. Howard Regional Supervisor Field Operations

bcc: 1502-01 Segment No. 8226, ROW OCS-G 9337 (MS 5232) 1502-01 ROW OCS-G 9337 (Microfilm) (MS 5033) MS 5421

MS 5232 (Carto)

DIzon:amm:4/4/97:Apache.226

RECEIVED

APR 4 2 17 PM '97

UNITED STATES GOVERNMENT MEMORANDUM

MINERALS MONT. SERVICE 03-Apr-97 CULF OF MERICO COS RON ADJUDICATION UNIT

To:

Leasing Activities Section, Adjudication Unit (MS 5421)

From:

Petroleum Engineer, Pipeline Unit, Office of Field Operations, Gulf

of Mexico OCS Region (MS 5232)

Subject: Adjudication of Pipeline Right-of-Way Relinqhishment

Right-of-Way

Number:

OCS-G 9337

Applicant:

Apache Corporation

Right-of-Way Length:

6.68 Miles

The subject relinquishment is attached for your adjudication. Any questions should be addressed to the undersigned. The pipeline proposed for abandonment is described as follows:

This pipeline was used to transport gas/condensate from platform A in West Cameron Area, Block 379 to a 10-inch subsea tie-in in West Cameron Area, Block No. 370.

David Izon

Attachment

Application dated March 17, 1997 (received April 2, 1997) w/attachment

Please initial/date, and return if this application meets all necessary criteria.

Initial

Date





[713] 296-6000

March 17, 1997

Mr. Donald C. Howard
Regional Supervisor, Field Operations
United States Department of the Interior
Minerals Management Service
Gulf of Mexico OCS Region
1201 Elmwood Park Boulevard, MS 5232
New Orleans, LA 70123-2394

Re:

Application to Relinquish Pipeline Right-of-Way Grant OCS-G 5016; ROW No. G 9337 Application to Abandon Pipeline in Place West Cameron Area Block 379 OCS-G 5016; Segment No. 8226

Gentlemen:

Apache Corporation herein applies to the Regional Supervisor in triplicate for the relinquishment and abandonment in place of Right-of-Way Grant No. G 9337 (pipeline Segment No. 8226) in its entirety pursuant to the authority granted in The Outer Continental Shelf Lands Act, as amended (43 U.S.C. 1331 et seq.) and in compliance with the regulations contained in Title 30 CFR Chapter II Subchapter B Subpart J, Pipelines and Pipeline Right-of-Way.

Regarding the Right-of-Way Grant:

- The right-of-way grant is being relinquished in its entirety.
- The right-of-way grant is being relinquished because the reason for the grant no longer exists.

Regarding the pipeline abandonment in place:

- Abandonment of the pipeline is proposed because of reservoir depletion and abandonment of associated wells and production facilities.
- Abandonment of the pipeline will be in conjunction with decommissioning activities related to the salvage of the West Cameron 379 "A" platform scheduled to begin in April 1997.
- 35287' of 6" O.D. pipe is proposed to be abandoned in place.
- 35282' being abandoned represents the total length of Segment No. 8226.

In support of this application, Apache Corporation attaches the following:

- · As Built Pipeline Drawing
- · Abandonment In Place Procedure

Please refer to the Apache Corporation's miscellaneous file for previously filed and accepted pipeline right-of-way qualifications as well as other appropriate documents authorizing the signer below.



United States Department of the Interior Application to Relinquish ROW Grant No. G 9337 Application to Abandon Pipeline Segment No. 8226 March 17, 1997 Page 2

Stipulations:

- Apache Corporation 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.
- Additionally, Apache Corporation expressly agrees 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, such findings shall be reported immediately and
 every reasonable effort shall be made to preserve and protect the cultural resource from
 damage until said Regional Supervisor has given directions as to its preservation.
- Applicant agrees to be bound by the foregoing stipulations and further agrees to comply with the applicable regulations set forth by the Minerals Management Service.

Should you have any questions or requests for additional information concerning this matter, please contact Carl Langham, Jim Snyder or Doug Keathley at (713) 462-9990.

Very truly yours, Apache Corporation

Alexander M. S. Nash Attorney-in-Fact

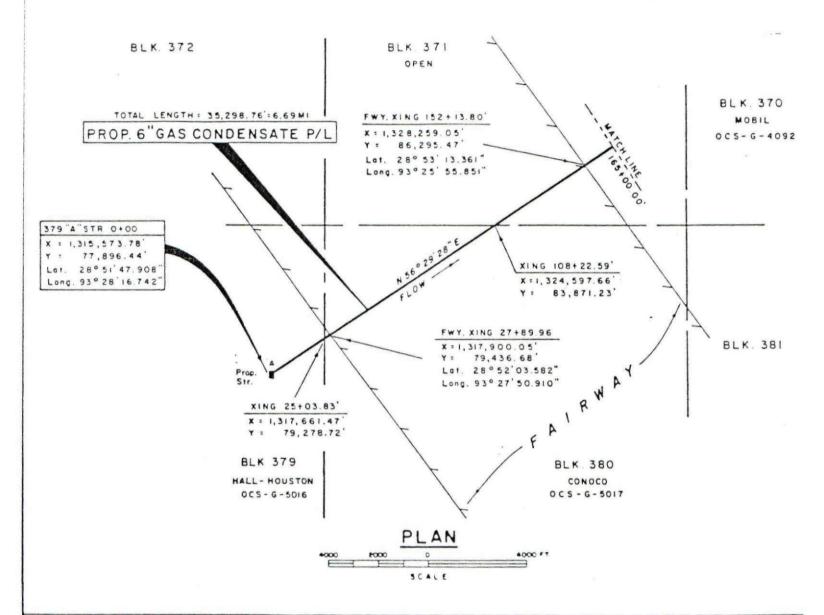
FS/JES Enclosures

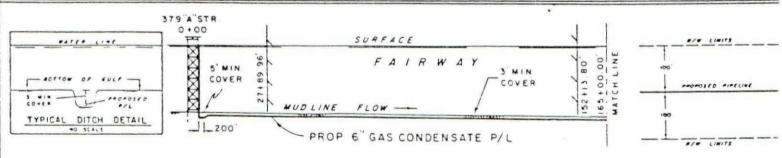
ABANDONMENT IN PLACE PROCEDURE

- The pipeline will be flushed and filled with inhibited seawater. The fluids will be caught in USCG approved transporter tanks and shipped to shore for disposal.
- The pipeline will be cut at both ends.
- At the subsea tie-in, the pipeline will be cut within ten (10) feet of the subsea assembly. The subsea assembly will be removed and the side tap will be blind flanged.
- At the platform, the pipeline will be cut within five (5) feet of the riser bend and the riser bend will be removed.
- Both ends of the pipeline will be plugged. A plumbers plug or similar device will be used at each end.
- Both ends of the pipeline will be buried a minimum of three (3) feet below natural bottom. Pneumo readings will be taken to verify the final burial depth.
- The complete pipeline will be abandoned in place. No portion of the pipeline segment will remain in service.

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APPROX 21,463 CU.YDS OF SPOIL TO BE DEPOSITED SO AS NOT TO REDUCE WATER DEPTH MORE THAN 0.5 FOOT

PROFILE NOR SCALE PROFILE VERT SCALE

APPLICATION BY

APACHE OIL & GAS TRANSMISSION, INC.

HOUSTON, TEXAS

OCTOBER 14, 1987

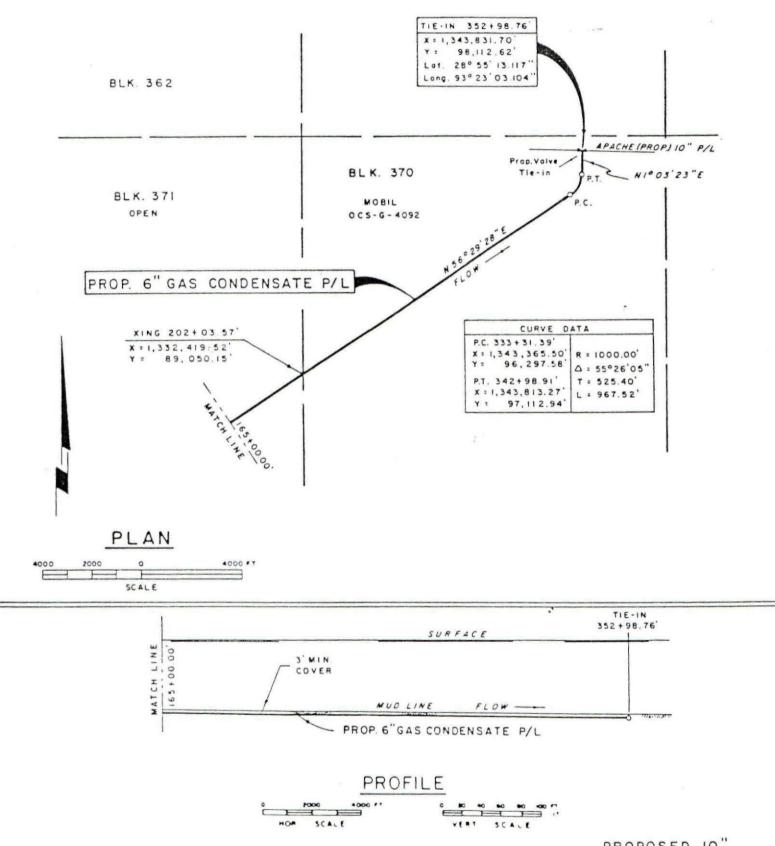
PROPOSED 6"

GAS CONDENSATE PIPELIN

WEST CAMERON AREA

GULF OF MEXICO

SHEET 2 OF 3



SHEET 3 OF 3

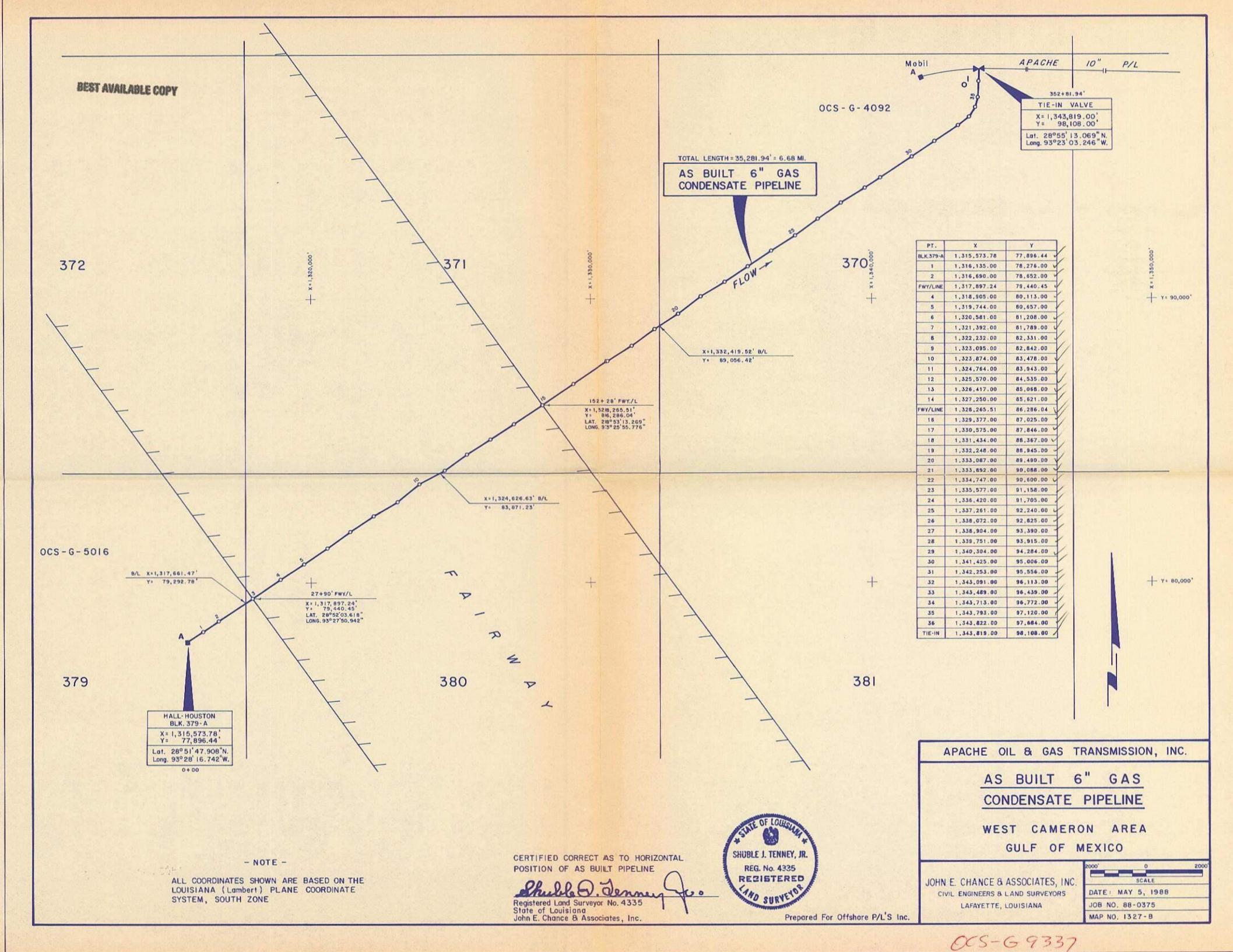
APPLICATION BY
APACHE OIL & GAS TRANSMISSION, INC.
HOUSTON, TEXAS
OCTOBER 14,1987

PROPOSED IO"

GAS CONDENSATE PIPELINE

WEST CAMERON AREA

GULF OF MEXICO





United States Department of the Interior



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 9337

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 9337 Blocks 379, 380, 371 and 370, West Cameron Area, West Addition

Apache Corporation

100%

Chris C. Oynes

Acting Regional Director

Chris C. Oyus

cc: Assignor

Assignee

Case File

2000 POST OAK BOULEVARD / SUITE 100 / HOUSTON,





(713) 296-6000

- Hand Delivered -

September 1, 1993

MINERALS MANAGEMENT SERVICE LEASING & ENVIRONMENT

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

RE:

OCS-G 9337, Block 379

West Cameron 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 9337, 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,

Attorney-in-Fact

CJP/vs

Enclosures



ASSIGNMENT OF RIGHT-OF-WAY

MINERALS MANAGEMENT SERVICE LEASING & ENVIRONMENT OCS-G 9337

UNITED STATES OF AMERICA §

OUTER CONTINENTAL SHELF §

KNOW ALL MEN BY THESE PRESENTS:

OFFSHORE LOUISIANA

THAT, WHEREAS, under date of March 17, 1988, the United States Department of the Interior, Minerals Management Service, approved an Application for Right-of-Way submitted by Apache Oil and Gas Transmission, Inc. described as follows:

Right-of-way two hundred feet (200') in width for construction, operation and maintenance of a 6-5/8 inch natural gas and condensate pipeline, 6.68 miles in length as constructed, from Hall-Houston Oil Company's proposed Platform A in Block 379, West Cameron Area, West Addition, across Blocks 380 and 371, West Cameron Area, West Addition, to a subsea connection with Apache Oil & Gas Transmission, Inc.'s proposed 10-3/4 inch pipeline (OCS-G 8619) in Block 370, West Cameron Area, West Addition, dated October 30, 1987, amended December 10, 1987, with its attachments.

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 3/st day of august 1993.

WITNESSES:

ASSIGNOR:

HALL-HOUSTON OIL COMPANY

By: 1- W

Wayne P. Hall President

APPROVED

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

By:

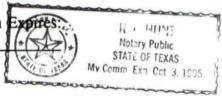
G. Steven Farris Senior Vice President

THE STATE OF TEXAS

COUNTY OF HARRIS

On this 315 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



NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS

THE STATE OF TEXAS

§

COUNTY OF HARRIS

8

On this day of <u>august</u>, 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:

NOTA DV DUDLIC IN A ND EOD

apache\ac-row.frm

TERESA H. FLOREZ
NOTARY PUBLIC, STATE OF TEXAS
MY COMMISSION EXPIRES
MARCH 7, 1996

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
8600	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			1
12700	VK	69			1 ~ 7
12701	MO	945			V Patr
12702	MO	990			10010
12703	MO	947			VX \
12705	EI	281			0
12706	EI	281			, , (y)
12723	VR	107			1000
12735	VK	22			$\chi \gamma$
12739	GI	82			/0 '
12745	SS	316			/
CONTRACTOR OF THE PERSON					

HALL-HOUSTON OIL COMPANY

700 Louisiana, Suite 2610/Houston, Texas 77002

October 16, 1990

Telephone (713) 228-0711

(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 9337 - 6-5/8" from Platform "A" in West Cameron 379 to SSTI in West Cameron 370

If further information is required, please advise.

Sincerely,

Kathy Camp

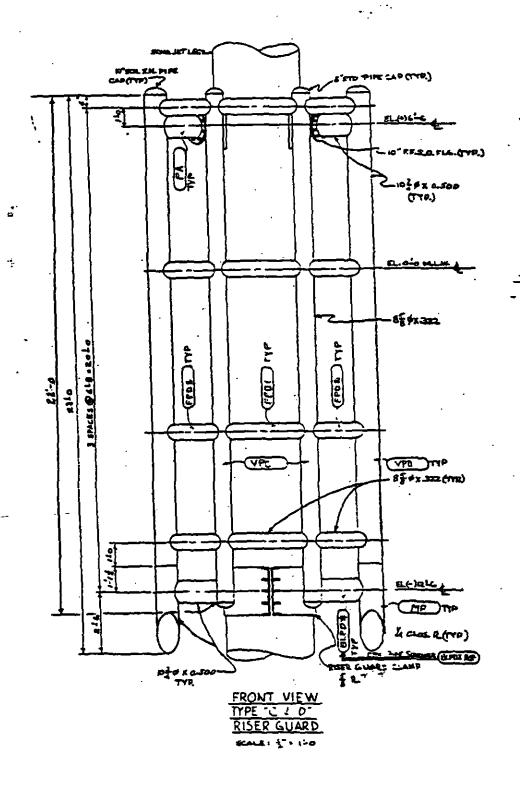
Manager, Regulatory Affairs

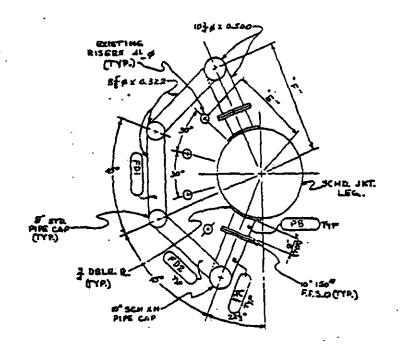
Keary Camp/ba

KC:ba

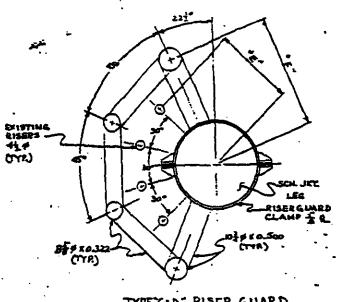
enclosure(s)

risergrd.txt





TYPE "C + D"
RISER GUARD
(UPPER)
SCALE: 1 1 1 1 1 1 1



TYPE'C: D" RISER GUARD

CLAMP

(LOWER)

SALE: 1": 100

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Button 9-30-88 Howard 9/30/88

In Reply Refer To: FO-2-2

OCT 3 1988

Hall-Houston Oil Company Attention: Ms. Kathy Camp 700 Louisiana, Suite 2390 Houston, Texas 77002

Gentlemen:

In accordance with 30 CFR 250.158(b), your letter dated May 25, 1988, transmitted a pipeline construction report for the following right-of-way pipeline:

Right-of-way Number	Size (inches)	Length (feet)	Service	From	To
OCS-G 9337	6 5/8	35,282	Gas and Condensate	Platform A Block 379	10-inch SSTI Block 370
6				West Cameron Area, West Addition	West Cameron Area, West Addition

The data which you provided indicates the following test information and establishes the assigned maximum allowable operating pressure (MAOP) for this pipeline:

Pipeline Right-of-way Number	Test Pressure (psig)	Duration (hours)	MAOP (psig)	MAOP Determination
OCS-G 9337	2,270	8	1,349	Connecting pipeline

The total length of the "as-built" pipeline right-of-way is 6.68 miles.

In future correspondence, please refer to the above pipeline by its assigned right-of-way number.

Sincerely yours,

(Orig. Sgd.) William H. Martin

D. J. Bourgeois Regional Supervisor Field Operations or, 01418

bcc: 1502-01 (P/L OCS-G 9337) (w/attch) (F0-2-2) (K. Faust) T502-01 (P/L OCS-G 9337) (F0-2-2) F0-6 LE-3-1 OPS-6 (w/cy of plat)

ABritton: 1r:9/28/88:LEXITYPE Disk 4

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ID#: 005-69337

NOTIFICATION OF PIPELINE INSTALLATION/HTP

REPORT RECEIVED BY	REPORT GIVEN BY
Name: Autory Britton	Name: Kathy CAMP
Date: 3-31-88	Phone: (713)568-0607
	Company: Abole at Gastin.
PIPELINE INSTAL	LATION
Date of Installations: $4-2-88$	-0-
Contractor and Barge No: Off - Bonn	Heliport Location: On Boge
Size of Pipeline: 63/8	
Service: G/C	
From: StructureA	To: Structure/SSTI 10"SSTI
Block_379	Block 370
anow C	Red WC:
Where Construction begins: WC 370 (0"55 TI
Length of time barge will be on job: one w	
District Notified Date:	_
Time:	
Person Contacted:	<u>.</u>
Date of Inspection: Date	e Inspection Report Received:
DIRECTOR O	uxp.
PIPELINE I	HTP.
Date of Test:	
Location of Recorder:	-
Location of Heliport:	
District Notified Date:	
District Notified Date:	
Time:	
Person Contacted:	_
Date of Inspection: Dat	e Inspection Report Received:
Remarks:	
*	
	×

RepublicBank Center

OIL & GAS TRANSMISSION, INC.

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

FIELD Mexico OCS Region, New

OCS-69337

May 25, 1988

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

Attention: FO-2-2

RE: As-Built Survey Plan and Hydrostatic Test Results

for Pipeline Right-of-Way OCS-G 9337 West Cameron Area, Block 379



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) 6.625-inch pipeline (OCS-G 9337) from Hall-Houston Oil Company's "A" platform in West Cameron Area, Block 379 to a SSTI on Apache's 10-3/4" pipeline (OCS-G 8619) in West Cameron Area, Block 370.

Apache Oil & Gas Transmission, Inc. successfully performed a hydrostatic test on the subject line on April 27, 1988, as reflected in the enclosed hydrostatic test data (submitted in duplicate).

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

If you have any questions or comments concerning this matter please contact our designated regulatory agent, Ms. Kathy Camp of J. Connor Consulting at 713/558-0607.

Sincerely,

Gary L. Hall Chairman

Gary L. Hall/Ke

GLH: KC: bna

enclosures (asbuilt1)



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HYDROSTATIC TEST REPORT

COMPANT:	TALL HOUSTON			
PROJECT:	W/C 379 JOB#03-7031	TESTED BY: OFFSHORE	PIPELINE, IN	ic.
TEST SECT	TION:	LENGTH: 34	1,799 FEET.	
PIPE:	6.625 O.D. X .432 W.T., GRADE B	-SEAMLEMENUFACTURER:		
PRESSURE	RECORDER: MFG BARTON	SERIAL NO.: 8843	314	
	DATE CALIBRATED:	1-5-88		
DEAD WEIG	GHT GAUGE: MFG PPS	SERIAL NO.: 17535		
	DATE CALIBRATED:	3-9-88		
FILL PUMP	: MFG/TYPE: JET PUMP	LOCATION: BARGE BAR	RNACLE	
PRESSURE	PUMP: MFG/TYPE: PARTEK- L225	LOCATION: BARGE BAR	RNACLE	
PRESSURIZ	CATION STARTED: TIME/DATE: _0.330	COMPLETED: TIME,	/DATE: 0400-4	-27-88
	RTED: TIME/DATE: 0400- 4-27-88			PSIG
	AMBIENT TEMP.:	°F PIPE TEMP.:	76	۰F
TEST COMP	PLETED: TIME/DATE 1200- 4-2	7-88 PRESSURE	2250	PSIG
	AMBIENT TEMP.:	°F PIPE TEMP.:	87	°F
REMARKS:				
WITNESS:	COMPANY:	DATE:		
	CONTRACTOR: VENICE ESPONGE	DATE:	4-27-88	
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HYDROSTATIC TEST PRESSURE LOG								
		ALL HOUSTON						
PROJECT	PROJECT: W/C-379 JOB#03-7031 TESTED BY: OFFSHORE PIPELINE, INC.							
TEST SE	CTION:							
DEADWE	GHT GAU	GE: MFG PPS		SERIAL NO.: 175	35			
			D: 3-9-88	-				
DATE	TIME	PRESSURE (PSIG)	PIPE TEMP. (°F)	AMBIENT TEMP. °F	REMARKS			
-27-88	1100	2283	83 degrees					
-27-88	1130	2283	86 " " " "					
-27-88	1200	2283	87 " " " "					
		-	-					
			1					
REMARKS	:							
					-			

WITNESS: COMPANY ____ DATE

DATE 4-27-88

CONTRACTOR _VENICE ESPONGE

WITNESS: COMPANY

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		-379 JOB#03-7	7031 TESTER	BY. OFFS	SHORE PIPE	LINE, INC.
			163166			
		E: MFG PPS		SER14	L NO.: 17	535
			:D: <u>3-9-</u>			
DATE	TIME	PRESSURE (PSIG)	PIPE TEMP. (F) AMBIEN	T TEMP. °F	REMARKS
-27-88	0400	2270	76 degree	s		
-27-86	0430	2270	76 " " "	**		
27-88	0500	2270	76 " " "	"		
-27-88	0530	. 2270	76 " " "	"		
-27-88	0600	2271	77 " " "	"		
-27-88	0630	2271	77 " " "	"		
-27-88	0700	2270	76 " " "	11		
-27-88	0730	2270	76 " " "	"		
	0800	2270	76 " " "	"		
-27-88	0830	2270	76 " " "	"		
-27-88	0900	2271	78 " " "	11		
-27-88	0930	2274	80 " " "	"		
27-88	1000	2279	80 " " "	"		
27-88	1030	2283	81 " " "			*****
EMARKS:						

CONTRACTOR VENICE ESPONGE DATE 4-27-88

ATTN. DENNY SCHWARTZ

RESULTS OF 8 HOUR TEST ON 6" PIPELINE JOB 03-7031

TEMP.			CHART PRESSURE	DEAD	WEIGHT
0400-	76	DEGREES	2240	2270	
0430-	76	DEGREES	2240	2270	
0500-	76	DEGREES	2240	2270	
0530-	76	DEGREES	2240	2270	
0600-	77	DEGREES	2240	2271	
0630-	77	DEGREES	2240	2271	
0700-	76	DEGREES	2238	2270	
0730-	76	DEGREES	2238	2270	
-0080	76	DEGREES	2238	2270	
0830-	76	DEGREES	2238	2270	
0900-	78	DEGREES	2243	2271	
0930-	80	DEGREES	2247	2274	
1000-	80	DEGREES	2250	2279	
1030-	81	DEGREES	2250	2283	
1100-	83	DEGREES	2250	2283	
1130-	86	DEGREES	2250	2283	
1200-	87	DEGREES	2250	2283	





OFFSHORE PIPELINES, INC.

DAILY TIME SHEET

PHYSICAL ADDRESS:

14035 Industrial Road Houston, Texas 77015 Phone: 713/451-2900

P.O. Box 9789

MAILING ADDRESS:

Houston, Texas 77213-9789

Telefax No.: 713/451-1582

CUSTOMER: APACHE OIL AND GAS

DATE: 4-27-88

BARGE NO .: BARNACLE

WEATHER CONDITION:

CUSTOMER PURCHASE ORDER NO.:

JOB NO.: 03-7031

PE	RSON				E Q	QUANTITY		U/M	TOTAL
	QUANTITY	HOURS	U/M	TOTAL	DARCE DA DATE		HOURS	U/M	TOTAL
SUPERINTENDENT	1	10			BARGE BARNACLE	1			
CLERK	1		-	3 50	TUG DARLA K.	1			
COMPANY REPRESENTATIVE	0		4 1		CREW BOAT LIZ MCC.	ALL 1			
BARGE FOREMAN	2	3-13-0	11.00		MATERIAL BARGE	0			
LEADERMAN	2				AIR COMPRESSOR	2			
CRANE OPERATOR	2				WELDING MACHINE	0			
ANCHOR OPERATOR	2				PUMPS TEST (OPI)	1			
RIGGER	7				MISCELLANEOUS:	0			
CHIEF MECHANIC	1	100	10		OPEN FUEL:	9522			
MECHANIC	1	144	100		CONSUME:	322			
OILER	1				CLOSE FUEL:	9200			
COOK ENERGY	2								
GALLEY HAND	3	1 300	1 12 1	3.4	HOLIDAY DET.	2			
DIVER MARTECH	6								
TENDER	4			A C. S.	OPEN WATER:	47,500			
VISITOR INSPEC.	1 (1	OBIL	OIL)	Sa Sva	CONSUME:	800			
X-RAY	0	1.540	and the second	Total Pri	CLOSE WATER:	46,700			
11 A A	. 2			2 -					
	7	N. 7.		A TANK		0			

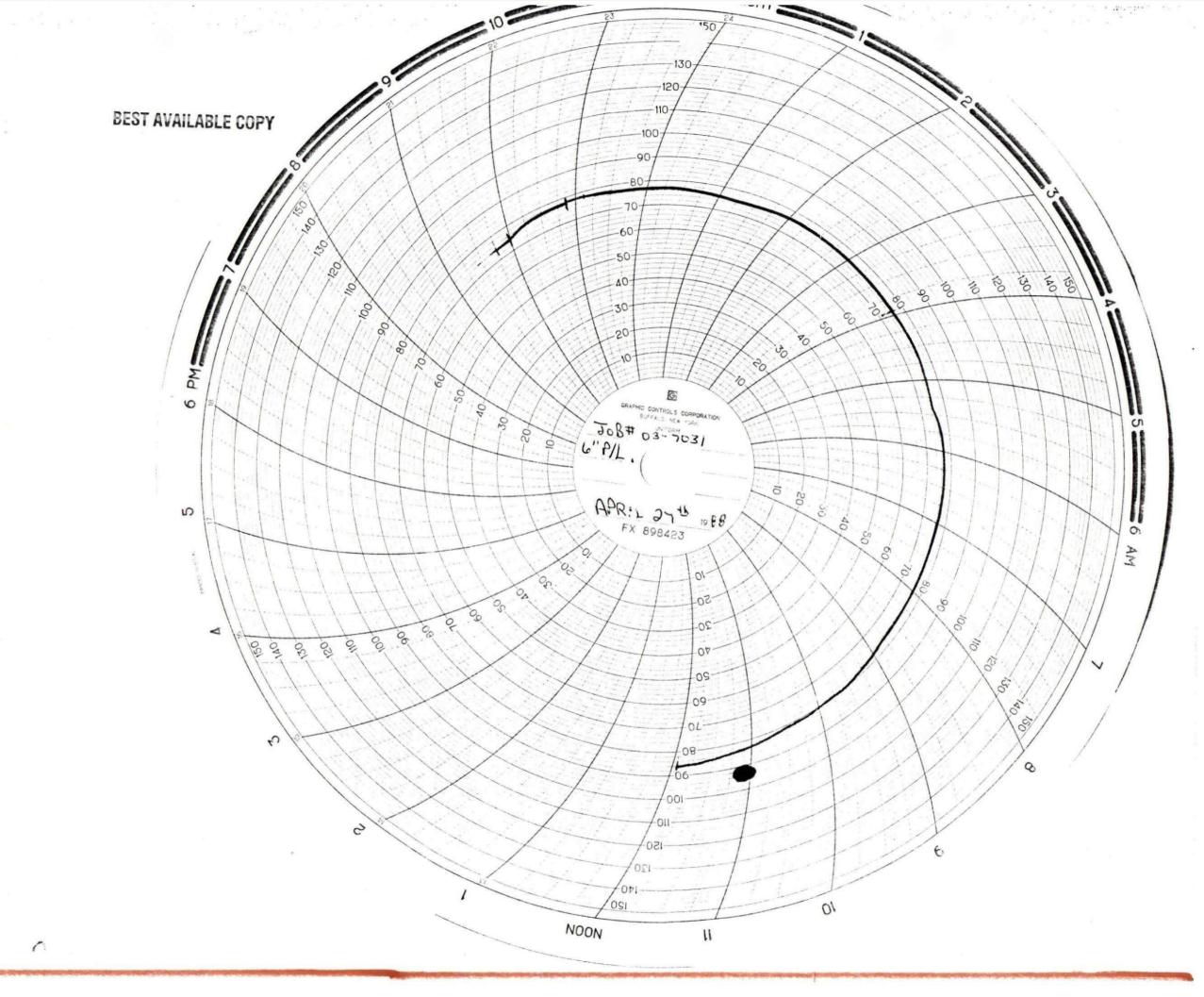
DAILY PROGRESS REPORT

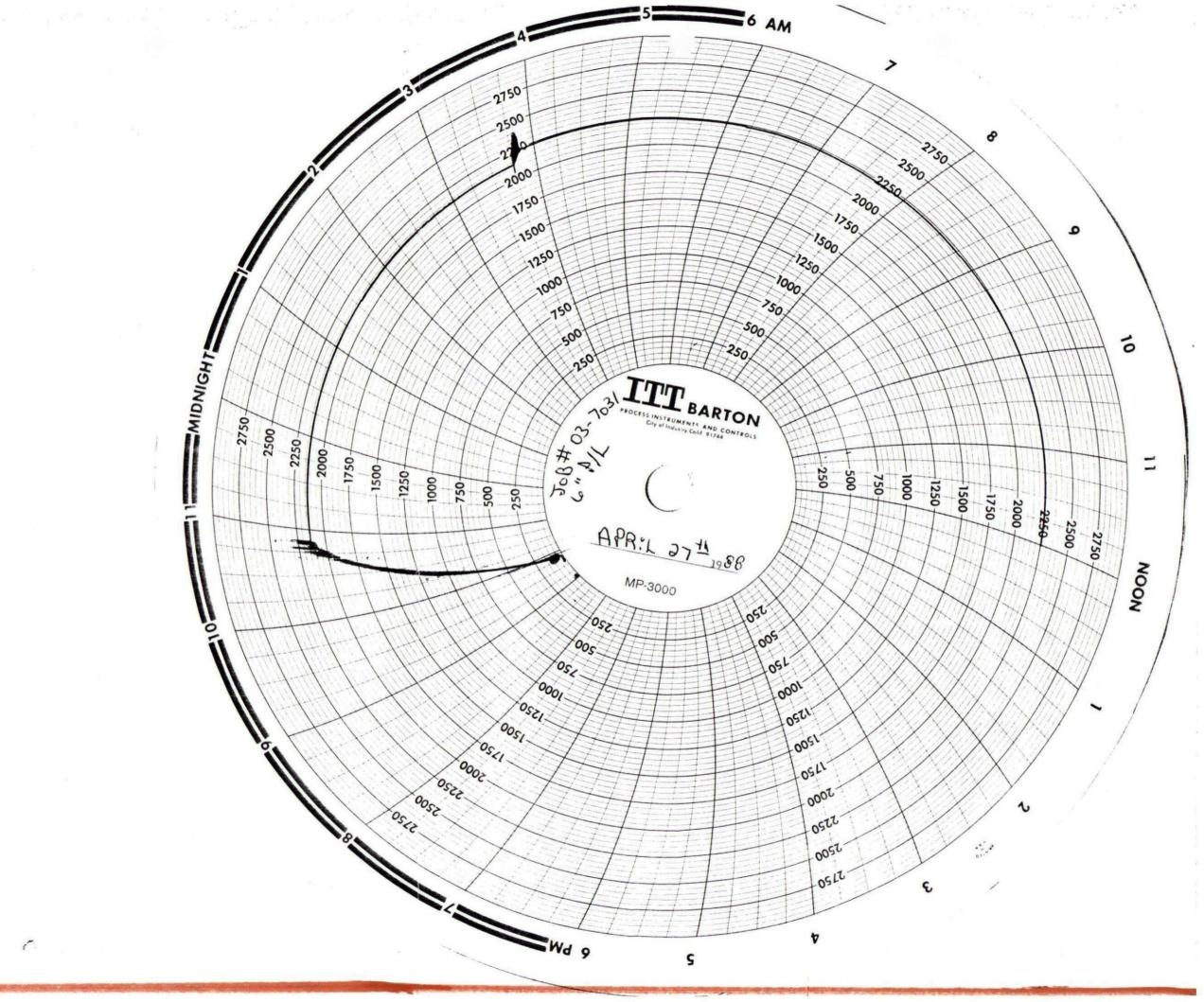
2330	ON	SHIFT,	TEST	STILL	HOLDING.

- 0330 PRESSURE STILL HOLDING, BUT CHART WAS READ WRONG. TRUE CHART PRESSURE WAS 2125 P.S.I. AND DEAD WEIGHT SHOWING 2180 P.S.I.
 - PREPARING TO BRING PRESSURE UP , OVER 2160 P.S.I. FOR TEST.
- 0400 TEST PRESSURE 2240 P.S.I., DEAD WEIGHT 2270 P.S.I.
- 0600 STILL ON TEST
- 0700 STILL ON TEST. PREPARING TOO DE-WATER AND RUN PIGS
 - AS SOON AS TEST IS COMPLETE.
- 0900 STILL ON TEST. GENERAL BARGE CLEAN UP AND MAINTANENCE.
- 1100 STILL ON TEST. MR. MERLE CARTER (MOBIL INSPEC.) CAME ON BOARD.
- 1130 SHIFT CHANGE.
- 1200 CAME OFF OF TEST.
- 1245 BLEEDING DOWN PRESSURE ON 6" PIPELINE. RIGGERS HEADING TO
 - PLATFORM TO REMOVE TEST HEAD AND INSTALL PIG CATCHER
- 1325 REMOVING TEST HEAD AND INSTALLING TWO 6" POLY PIGS.BOLTING
 - ON BLIND FLANGE WITH AIR CONNECTOR AND CONNECTING AIR HOSE.
- 1330 PUSHING TWO POLY PIGS AND DE WATERING 6" P/L.
- 1735 BLEEDING OFF PRESSURE ON 6" LINE.
- 1750 REMOVING BLIND FLANGE WITH AIR CONNECTOR OFF END OF P/L AND
 - CLOSING VALVE ON END OF SAME.
- 1800 HOOKING UP TO END OF PIPELINE, AND PLACING SAME ON BOTTOM WITH DIVER UNHOOKING CRANE AND AIR TUGGER LINES. DIVER UP.

Page 2 of 2

1825	DARLA K. COMING ALONG STARBOARD SIDE- TRANSFERRING
	RIGGERS BACK TO BARNACLE.
1835	PICKING UP ANCHORS.
1915	ON TOW TO LOCATION AT OVERBEND AREA ON 10 MOBIL OIL P/L W/C 368.
	DIVER DOWN LOCATING P/L AND MOVING BARNACLE OVER P/L. DIVER
	PLACING BOUY ON P/L AND HOOKING UP AIR TUGGER LINE TO P/L.
2145	PLACING JET HOSES OVERBOARD- PICKING UP JET SLED AND PLACING
2115	IN WATER.
2210	WORKING ON PLACING JET SLED ON 10" P/L- STRETCHING OUT
2210	HOSE AND PREPARING TO JET.
2330	SHIFT CHANGE.
2330	The second secon
	¥
	*
	AVIDE.
APPRO	OVED:









United States Department of the Interior

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

BEST AVAILABLE COPY

In Reply Refer To: LE-3-1

OCS-G 9337

AUGI 8 1988 FIELD OPERATIONS OPERATIONS OPERATIONS NEW OPERATIONS

Instrument:

Filed: August 2, 1988
Executed: July 20, 1988
Approved: August 15, 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 9337 Blocks 379, 380, 371 and 370, West Cameron Area, West Addition

Hall-Houston Oil Company

100%

H. P. Sieverding Regional Supervisor Leasing and Environment

cc: Assignor Assignee Case File

tr9/27/18

HALL-HOUSTON OIL COMPANY

Houston, Texas 77002 (713) 228-0711

July 20, 1988

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

AUG 2 1988

RE: OCS-G 9337

Offshore Louisiana

Minerals Management Service Leasing & Environment

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 9337, between Apache Oil and Gas Transmission, Inc., Assignor and Hall-Houston Oil Company, Assignee.

Our check number 11145 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

Yary L Hall

Gary L. Hall

Chairman

GLH/LCR/sbd

Enclosures

SENT VIA FEDERAL EXPRESS

AUG 2 1988

Minerals Management Service Leasing & Environment

ASSIGNMENT OF RIGHT-OF-WAY

FO-2-2

OCS-G 9337

UNITED STATES OF AMERICA) KNOW ALL MEN BY

OUTER CONTINENTAL SHELF LANDS) THESE PRESENTS, THAT

OFFSHORE LOUISIANA)

WHEREAS, under date of March 17, 1988, 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 and condensate pipeline, 6.69 miles in length, from Hall-Houston Oil Company's proposed Platform A in Block 379, West Cameron Area, West Addition, across Blocks 380 and 371, West Cameron Area, West Addition, to a subsea connection with Apache Oil & Gas Transmission, Inc.'s proposed 10 3/4-inch pipeline (OCS-G 8619) in Block 370, West Cameron Area, West Addition (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.

Regional Supervisor
JUL 1 1988
Effective Date

IN WITNESS WHEREOF, Assignor has executed this Assignment of Right-of-Way this 20th day of July, 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

WITNESSES:

APACHE OIL & GAS TRANSMISSION, INC.

Shere Deterible nina ambioseno

Wayne P. Hall By: 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

WITNESSES:

HALL-HOUSTON OIL COMPANY

Shere Detwicke nina anlerosino

Wayne P. Hall By:

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 20th day of cly, 1988.

My Commission Expires:

BEVERLY H. GILBERT
NOTARY PUBLIC, STATE OF TEXAS
MY COMMISSION EXPIRES
FER 10 1992 FEB. 10, 1992 CONTRACTOR CONTRACTOR

Devery W. Gilbert



RECEIVED

NOV 35 1987

FIELD

OF MENT SERVICE

OF RECEIVED

OF REGION, NEW OF REG

EDWIN W. EDWARDS GOVERNOR

DEPARTMENT OF NATURAL RESOURCES

B. JIM PORTER SECRETARY

Coastal Management Division

November 23, 1987

Mr. Autry J. Britton, General Engineer Minerals Management Service 1201 Elmwood Park Blvd. New Orleans, LA 70123

RE: C870493, Coastal Zone Consistency
Apache Oil and Gas Transmission, Inc.
Proposed 6.625-inch O.D. Natural Gas Pipeline
In and/or Through West Cameron Area, Blocks 370,
371, 379 & 380, Gulf of Mexico, Federal Waters,
Offshore, LA

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/BB/se

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

SN8226

Butt 3-14-88 Houard 3/15/88

Sauffer 3/16/88

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MAR 17 1988

In Reply Refer To: FO-2-2

OCS-G 9337

West Cameron Area West Addition

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 and condensate pipeline, 6.69 miles in length. from Hall-Houston Oil Company's proposed Platform A in Block 379, West Cameron Area, West Addition, across Blocks 380 and 371, West Cameron Area. West Addition, to a subsea connection with Apache Oil & Gas Transmission. Inc.'s proposed 10 3/4-inch pipeline (OCS-G 8619) in Block 370. West Cameron Area, West Addition, dated October 30, 1987, amended December 10, 1987. with its attachments is hereby approved subject to the following:

- 1. The maximum allowable operating pressure (MAOP) for this pipeline will be 1,349 psig due to the MAOP of the receiving pipeline.
- Our review indicates that the unidentified magnetic anomalies listed below may represent a hazard to your proposed activities. Therefore, precautions as outlined in Notice to Lessees and Operators No. 83-3. Section IV.B.1. shall be taken prior to conducting operations.

Block	Line No.	Shot Point	Intensity (gammas)
371	6	36.18	4
371	6	46.85	18
371	6	46.24	51
371	6	47.86	11
380	6	57.51	10
380	6	63.23	6
380	6	64.14	6
380	6	66.81	5
379	6	71.44	9
379	6	72.00	41

(Orig. Sgd.) J. Rogers Pearcy

J. Rogers Pearcy Regional Director

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

1123 --

Pro Care

BEST AVAILABLE COPY

bcc: (P/L OCS-G 9337 (FO-2-2) (K. Faust)
P/L OCS-G 9337 (FO-2-2)
ORD Reading File
LE-5
LE-3-1
FO-6

ABritton:1r:3/14/88:LEXITYPE Disk 6

UNITED STATES GOVERNMENT MEMORANDUM



December 1, 1987

To:

Regional Supervisor, Field Operations, GOM OCS Region (FO)

From:

Regional Supervisor, Leasing and Environment, GOM OCS Region (LE)

Subject:

National Environmental Policy Act Review for Pipeline

Right-of-Way Application OCS-G 9337

Action Submitted: November 3, 1987

Action Commencement: December 1, 1987

Apache Oil & Gas Transmission, Inc. Pipeline Right-of-Way Application

Leases OCS-G 5016 and 4092, West Cameron Area, West Addition,

Blocks 379 to 370

The operator proposes to install and operate one 6 5/8-inch natural gas pipeline from Hall-Houston's proposed Platform "A" (Block 379) through Blocks 380 and 371 (both unleased) to a subsea tie-in on Apache's proposed 10-inch Right-of-Way pipeline (Block 370).

Our National Environmental Policy Act (NEPA) review of the subject action is complete. The following environmental protective measure intended to avoid or mitigate potential impacts associated with the action is provided for inclusion in the Right-of-Way approval letter:

Our analyses identified the following as potential hazards to your proposed activities. Therefore, precautions in accordance with Sectin IV.B. of NTL No. 83-3 shall be taken prior to conducting operations.

Magnetic Anomalies and/or Side-Scan Sonar Contacts

Blocks	Line No.	Shot Point	Remarks or Amplitude (gammas)
371	6	36.18	4
371	6	46.85	18
371	6	46.24	51
371	6	47.86	11
380	6	57.51	10

Blocks	Line No.	Shot Point	Remarks or Amplitude (gammas)
380	6	63.23	6
380	6	64.14	6
380	6	66.81	5
379	6	71.44	9
379	6	72.00	41

H. P. Sieverding

cc: Pipeline File OCS-G 9337 (LE-5)

RBennett:jlb:ocsg9337.row

To:

From:

Size

BEST AVAILABLE COPY

Date: 12-14-87 Right-of-Way Pipeline File OCS-G 9337Supervisor, Platform/Pipeline Unit, Plans, Platform and Pipeline Section, Field Operations, Gulf of Mexico OCS Region (FO-2-2) Petroleum Engineer, Platform/Pipeline Unit, Plans, Platform and Pipeline Section, Field Operations, Gulf of Mexico OCS Region (FO-2-2) Pipeline Right-of-Way Application, Technical Review, Apache Subject: OIL & GAS Tronsmission, he, OCS-G Length (inches) (feet) Service Recommendations: The technical aspects of the proposed pipeline are acceptable in accordance with appropriate Regulations and Standards. Advise applicant of Notice to Lessees and Operators No. 83-3. Valve protection cover shall not protrude above the level of the 3. 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. A. Britton 1502-01 OCS-G 9337 (w/orig appln) (Seg. 8296) (F0-2-2)

ABritton:jj:LEXITYPE Disk 6

OPS- (w/cy of plat)

PIPELINE RIGHT-OF-WAY APPLICATION "ENGINEERING CHECKLIST" MINERALS MANAGEMENT SERVICE

GOM REGIONAL OFFICE Date: 11-5-87 ocsc 9337 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 Fg-rich Natural gas and Condersate Pypeline
35, 289 feet or 6.68 miles in length, from Hall-Houston ail Company's
Proposed platform A in Brock 379 to a subseative in with Apoche ait from Trus
missin, one's proposed 10-men Pipeline (ocs-69338) in Brock 370, all in west Canuma B. Safety Flow Schematic - Verify that the information shows 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) GLy Cal Contactor b. design working pressure 1440 PSIG c. high-low pressure sensor settings High # 1,349 PS 49 2. "ANSI" ratings of all valves, flanges, and fittings between the source and the connecting pipeline are shown. 3. Pressure relief valves, where applicable, are shown with the setting set no higher than the maximum working pressure (MWP) of the vessel. 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. 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. 8. The pipeline crossing the platform which does not deliver production to the platform is form, 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	n/pipeline is equipp	ed with a chec	k valve.
10.	The pipeline leaving the platform is	equipped with a chec	k valve.	
	The high-low pressure sensors on the check valve.	be departing pipeline	is located upst	tream of
N/A12	Where applicable, high-low sensors a regulator.	are located downstre	am of the back	pressure
13.	If there is liquid injection into the li (Yes or No)	ine, are pumps associ	ated with the in	jection?
14.	Direction of flow indicated.			
15.	Pipe specifications (i.e., size, grade,	weight, and wall thick	cness).	
	Total length of proposed pipeline (fe			`
17.	MAOP of connecting pipeline.	349 PS15	(OCS-G	9338)
/	Statement that design meets or exceable, and/or applicable OCS ord number, date, and signature.	eeds DOT Regulation	ns 192 or 195,	as appli-
19.	Area and block number of proposed	pipeline/platform.		
	Cathodic protection specifications.			
and/or on	ormation - Verify that the pipeline the data sheet is complete and correc	t:		
1.	Product to be transported:	tural Gos t	Condensate	
	Pipeline, riser, and subsea valve asser	nbly specifications:	,	
	(1) Size 662 Wall Thickness.	1432 Grade _R	_Weight <u>28.5</u>	7 lbs/ft.
	(2) Size Wall Thickness .	Grade	_ Weight	lbs/ft.
	(3) Size Wall Thickness .	Grade	_Weight	lbs/ft.
	b. Riser:			
	(1) Size 6.605 Wall Thickness	435 Grade B	_Weight 28.5	Zibs/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 6	lepth: Maximum75 Minimum68
4. Type of	corrosion protection:
a. Impre	ssed current system
b. Sacrif	icial anode system
(1) T ;	ype of anode Zinc 600
(2) S _i	pacing intervalft.
(3) W	eight of unit anode given by applicant Bs. ea.
c. If pla	form anodes are used, are they considered adequate?
	No
d. If pip	eline anodes are used: uls: Lep/1 = 3.82 x 10 ⁴ x W ⁰ /DIR = 38200 + 55/6.625 + 600 x 26 = 200
Form	als: Lep/1 = 3.82 x 104 x WO/DIR = 38200 + 55/6.625 + 600 A
W D I R A	e: O = Weight of Anode unit (lbs) = Dia. of pipe (inches) = Separation between anodes (ft.) = the following lbs/amp/year (Rate of Consumption) luminum or Galvalum = 7.6 inc = 26 agnesium = 17.5
Does	the calculated life expectancy equal or exceed 20 years?
Yes_	No
5. Descript	ion of protective coating:
a. Pipeli	ne - 14 mile of Scotchkote 205 epsky
b. Riser	- 11 // 11
/	a valve assembly
N/A 6. Descript	ion of weighted coating:
a. Preco	ncrete coating
b. Densi	ty of concretePCF
c. Thick	ness of concrete
d. Thick	ness of asphalt
7. Calculate	e the specific gravity (one of the following formulae may be used)

9 0/5 × 28.57/4	12.09 - 1.8
a. For epoxy coating: SG = 2.865W/D ² = 9.865 x 38.57/4	2,01 - 10
b. Density comparison with fluid material: \$G = \frac{W+P}{A}	
c. Lines with a specific thickness of concrete:	
$SG = \frac{RC + K_2}{R} \frac{(W+P - RC)}{(T-K_1)^2} \frac{(W+P - RC)}{K_3}$	
d. Lines having two coatings of enamel and a felt wrap, or only asphalts coating:	mastic
SG = W+P K ₃	
Where: SG = specific gravity RC = density of concrete (lb/cu. ft.) K ₁ , K ₂ , K ₃ = 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/ D = diameter of pipe (inches) A = cross-sectional area	cu. ft.
8. Given specific gravity a. 187 b c	
9. Gravity or density of product(s)	
10. Design capacity of pipeline 25 MMSCF 2270	
11. Given Hydrostatic Test Pressure: Line Pipe Hold Time	_ hrs.
Preinstallation Test Riser Hold Time hrs.	
Recommended maximum hydrostatic body test for ANSI valves, flange fittings are as follows:	s, and
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	

No	ote: M	inimum hold tir	nes:				2
G	u =	Line Pipe = 8 i Riser = 4 hrs. (or DOT 192.5	(pretest)	Liquid =		5% of MOP E 110% if leak i visable durin	
	Maxi	mum Allowable	Operating P	ressure (MA	OP) of line pip	xe: .	
		P=2stxFxE			te: F = .72;E	5.	a Cl. Dsig
	a. M.	AOP = 2 ×	35,000	X,432	X.	72 = 3	286 Psig
		AOP =					*
	c. M	AOP =					
13.	MAC	P of riser pipe.					
	Note Note	: F = .50 for ris	ers on natur ers on liquid	al gas transm pipelines.	ission lines.	2	82 P518
	a. M.	AOP = 2 X	35,000	X.432	. X. 50	= +,0	82 P518
	b . M .	AOP =	6.6	20			*
	MAC	P of flanges, fit	tings, and va	lves:	1/1/1/1	2	
		P of flanges, fit	ting = 2	4 × 600	= 1,940	Pole	
15.	MAC 195	P of proposed por 192, as applications	pipeline as desable, is	etermined in	accordance w _ psig.	rith Title 49 CF	R Part
16.		s 12, 13, and 14 ing pressure (M.			more than the	e maximum all	owable
17.	Verif	y: 1:25 maxi 0) = .95 (smalle	- IP & CMYC	of items 12	or 13 shove)		ressure
		1800	₹	2160	_ = 4	336	
		: The recomm	iended lunit	of test as	percentage	of internal pres	sure (4
		IP & SMYS =	2xsxt=	= 450	5		
18.	Verif	y MAOP does n	ot exceed th	e lowest of	the following:	De 5 18	16 P4 4
	a. Su	omerged compo	onents: HTP	7/1.25= /	728-	400 40	16 Pq 4
	b. Ri	ser: HTP/1.5 =	1440	Page	1,5/3	Psig	

_	N/A 19.	Valve guards used: Yes No
D.	Installation	n 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 Ams 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 Cr	
_	N/A1.	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) alope 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.
_	MA 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.	Constructi	on Information:
_	<u>/</u> 1.	Proposed construction commencement date $12-1-87$
_		Method of construction
_	_ 3.	Method of burial
_	4.	Time required to lay pipe 15day Time required to complete project 30 days
_	<u> </u>	Time required to complete project - 30 days
G.	Applicant	complies with current OCS pipeline guidelines:
	Yes	No

OCS-G9337

APACHE

OIL & GAS TRANSMISSION, INC.

RepublicBank Center 700 Louisiana, Suite 2390

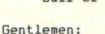
> Houston, Texas 77002 (713) 225-4187 (713) 225-6312

October 30, 1987

Mr. J. Rogers Pearcy
Regional Director
U. S. Department of the Interior
Minerals Management Service
Gulf of Mexico OCS Region
1201 Elmwood Park Boulevard
New Orleans, Louisiana 70123-2394

Attention: 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 West Cameron Area, Blocks 370, 371, 379 & 380 Gulf of Mexico, Federal Waters, Offshore Louisiana



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 quadruplicate (original and three copies) 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 West Cameron 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.

* This 6.625-inch O.D. pipeline will be used to transport natural gas and condensate from Hall-Houston Oil Company's proposed Platform "A", OCS-G 5016, in West Cameron Area Block 379 to a SSTI on Apache's proposed 10" R-O-W pipeline in West Cameron Block 370. The pipeline will depart Hall-Houston Oil Company's Platform "A" in West Cameron 379 in a northeasterly direction approximately 35,299 feet (6.69 miles) to a SSTI on Apache's proposed 10" R-O-W pipeline, all being in the Gulf of Mexico, Federal waters, offshore, Louisiana. The proposed construction commencement date is December 1, 1987, with the time required to lay the pipe being estimated at 15 days with an overall completion of project time being estimated at 30 days.

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 Commis-

* NOTE: Due to extenuating circumstances, the actual route has not been confirmed.

An alternate route is being filed for simultaneously with this application.

ONLY ONE ROUTE WILL BE CHOSEN.

Page two

sion 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 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 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.

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 3 (four copies enclosed),
- 2. Route & Profile Map, Sheets 2 thru 3 (four copies enclosed),
- Engineering and hazard survey see J. Chance & Associates report booklet (two copies enclosed),
- 4. Attachment I Schematic (four copies enclosed),
- Attachment II Pipe Specifications and General Information and Calculations, (four copies enclosed).

Page three

- 6. Originally signed copy of Nondisorimination in Employment Stipulation is attached to each copy of the application.
- 7. Draft/Check No. 657 in the amount of \$205.00 of which \$100.00 covers the application fee and \$105.00 covers the first year's rental on 6.69 miles of right-of-way.

Company contact on technical points or other information:

Ms. Kathy Camp J. Connor Consulting P. O. Box 218753 Houston, Texas 77218 Telephone: 713/558-0607

"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."

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, main-tenance, 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 our regulatory agent at J. Connor Consulting, Attention: Ms. Kathy Camp (713) 558-0607.

Sincerely,

Lauy L. Hall
Gary L. Hall
Chairman

GLH:KC:bna Attachment and enclosures

Page four

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

MOBIL OIL EXPLORATION & PRODUCING SOUTHEAST, INC. Attn: Mr. Gary Sargent 1250 Poydras Building New Orleans, LA 70113 (Certified Mail No.P-500 089 595)

SONAT EXPLORATION COMPANY Attn: Drilling & Production Dept. P. O. Box 1513 Houston, TX 77251 (Certified Mail No.P-500 089 596)

ENTEX ENERGY OPERATING, LTD.
Attn: Mr. John W. Hagens
P. O. Box 2628
Houston, TX 77252
(Certified Mail No.P-500 089 597)

Page five

Agency from whom Consistency Certification is required:

STATE OF LOUISIANA
Coastal Management Division
Attention: Barbara Benson
P. O. Box 44487
Baton Rouge, LA 70804-4487
(Certified Mail No.P-500 089 598)

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, 1987, per research of, MMS records by J. Connor Consulting.)

WEST CAMERON AREA

BLOCK 370

Mobil Oil Expl. & Producing OCS-G 4092 Oil & Gas Lease Southeast Inc.
Sonat Exploration Co.
Entex Energy Operating, Ltd.

BLOCK 371

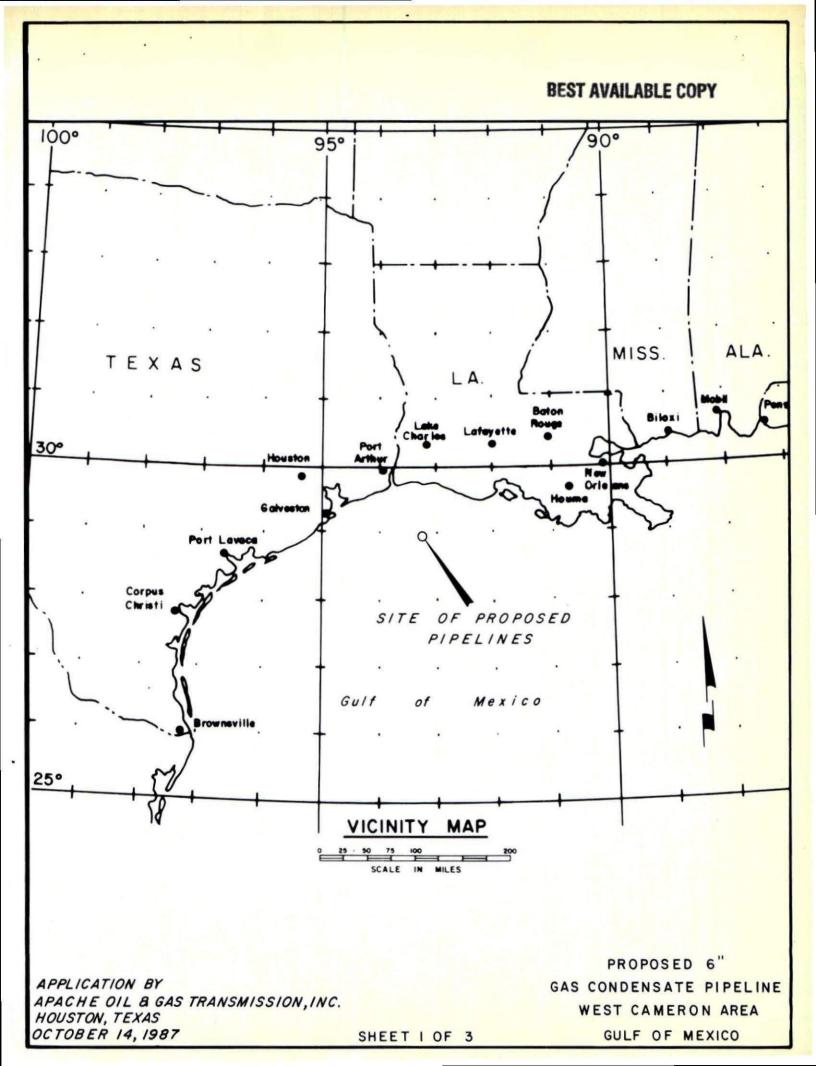
Open Oil & Gas Lease

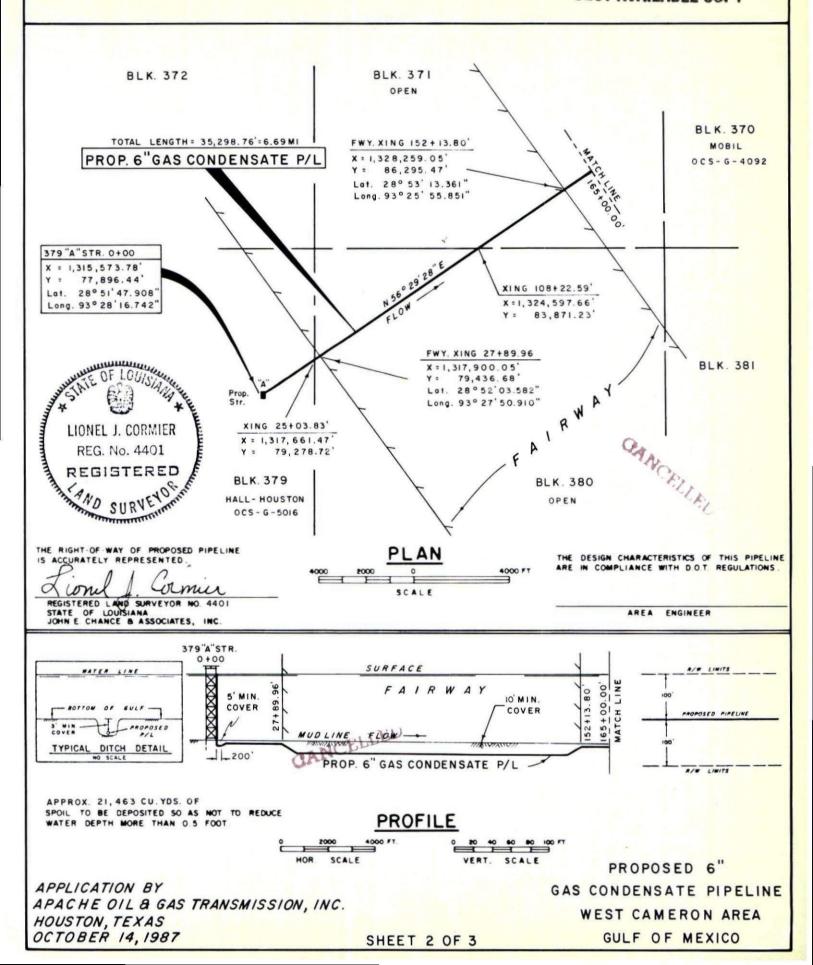
BLOCK 379

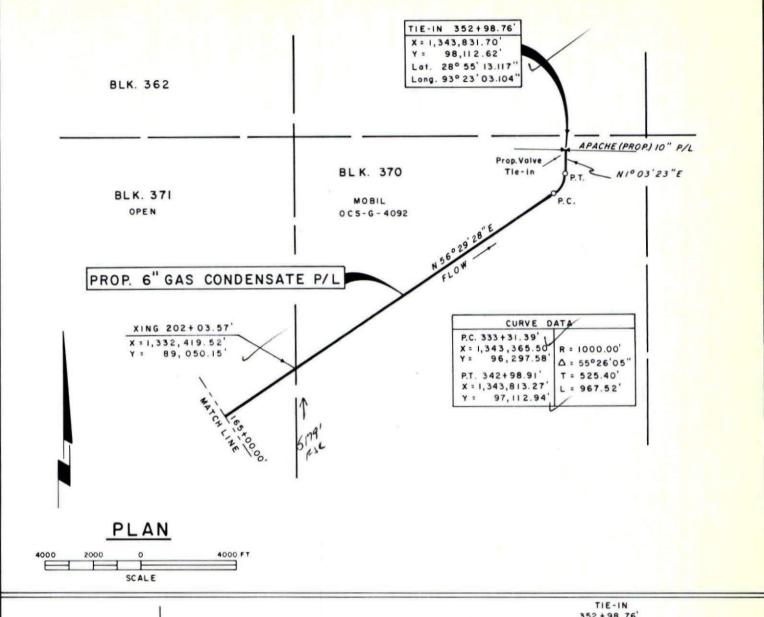
Mobil Oil Expl. & Producing OCS-G 5016 Oil & Gas Lease Southeast, Inc.

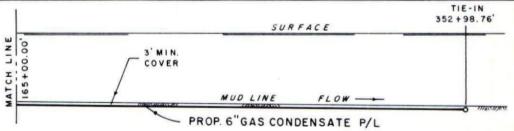
BLOCK 380

Open Oil & Gas Lease











APPLICATION BY
APACHE OIL & GAS TRANSMISSION, INC.
HOUSTON, TEXAS
OCTOBER 14,1987

PROPOSED 6"

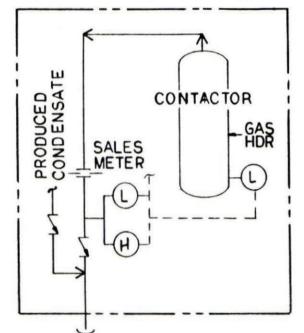
GAS CONDENSATE PIPELINE

WEST CAMERON AREA

GULF OF MEXICO

SHEET 3 OF 3

PRODUCTION PL. FORM WEST CAMER N BLOCK 379A



BEST AVAILABLE COPY

CANCELLED

APACHE'S PIPELINE WEST CAMERON BLOCK 370 RISER (A) 6.625" O.D. × .432" W.T. GRADE B PIPELINE (B) 6.625" O.D. × 432" W.T. GRADE B

NOTES

- I. APACHE OIL & GAS TRANSMISSION CO. SALES
 GAS PIPELINE COMPLIES W/DEPT. OF TRANSPORTATION REGULATION 49CFR CHAPTER I
 PART 192
- 2. CODES & SPECIFICATIONS

VALVES & FITTINGS PIPELINES

ANSI B 16.5 API RP IIII ANSI B 31.8

Renald Marcomb, Jr.
REG. Ho. 19594

PROFESSIONAL ENGINEER

OCT 28 1987

APPLICATION BY
APACHE OIL & GAS TRANSMISSION CO.
HOUSTON, TEXAS
OCT. 26, 1987

ATTACHMENT I

PROPOSED 6"
NATURAL GAS PIPELINE
WEST CAMERON BLOCK 379
GULF OF MEXICO

OPTION 2

EXHIBIT "B"

GENERAL INFORMATION & CALCULATIONS

6.625" O.D. NATURAL GAS PIPELINE

WEST CAMERON BLOCK 379 "A" PLATFORM

- The water depth [(-) 72 MSL] along the proposed pipeline route and in relationship to the natural bottom is set forth on the attached Pipeline Prelay Survey Drawing.
- 2. The description of the pipe and coating is as follows:
 - a. Line Pipe: 6.625" 0.D. x .432" W.T. ASTM A-106 Grade B or API 5L Grade B seamless; bare weight = 28.57#/ft. Specific gravity in seawater (empty) = 1.875. Pipe will be coated with Scotchkote 205 fusion bonded epoxy 14 mils. Pipe joints will be protected with heat shrinkable wraparound pipe sleeves.
 - b. Riser Pipe: 6.625" O.D. x .432" W.T. ASTM A-106 Grade B or API 5L Grade B seamless; bare weight = 28.57#/ft.; coated with 14 mils of Scotchkote 205 fusion bonded epoxy. Welded joints will be protected with heat shrinkable wraparound pipe sleeves.
 - c. Subsea side tap valve assembly: Block valve and check valve ANSI 600 rating.
 - d. Internal Coating: The analysis of transported products will be monitored and preventative measures will be employed as necessary.
- 3. The proposed pipeline is approximately 35,298.7 feet in horizontal length. This does not include the approximate 100° of vertical riser on the platform. The line will transport natural gas and condensate.
- 4. Valves and Flanges: The departing pipeline valves and flanges will be ANSI 600 with rated working pressure of 1440 PSIG.
- 5. The design of the proposed pipeline is in accordance with the and ANSI B31.8 and OCS Order #9. Each was applied within the scope of the intended code or regulation.

- 6. The cathodic protection system for the pipeline will use zinc tapered semi-cylindrical 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. Zinc 26#/amp year
 - e. Anode spacing calculations:

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

= $9,153.1 \text{ sq.ft./mi.}$

Line Life =
$$.9153$$
 amps/mi. x 20 = 18.31 amp yr./mi.

$$\#/\text{mile}$$
 = 18.31 amp yr/mi. x 26 $\#/\text{amp}$ yr.
= 475.96 $\#/\text{mile}$

Anode quantity =
$$(475.96 \#/mi.)/55 \# = 8.654 /mi.$$

Anode spacing =
$$(5280 \text{ ft/mi.})/8.654/\text{mi.} = 610.1 \text{ ft.}$$

Use one 55#(net) zinc anode every 600 feet.

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

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

$$S = SMYS(35,000) \times .5 = 17,500[per ANSI B31.8]$$

D = nominal outside diameter = 6.625"

Use 6.625" O.D. x .432" W.T. Grade B seamless.

Hydrostatic test pressure:

In accordance with API RP 14E

$$HTP = 1.5 \times MAOP$$

 $^{= 1.5 \}times 1440$

^{= 2160} PSIG

b. Line Pipe:

t = PD/2S P = internal design pressure = 1440 PSIG = 1440(6.625)/2(25,200)

= .1893 + 0.05 C.A. t = nominal wall thickness, inches

= .2393" $S = SMYS (35,000) \times .72$ = 25,200 [per ANSIB31.8]

> D = nominal outside diameter = 6.625"

Use 6.625" O.D. x .432" W.T. Grade B seamless.

Hydrostatic test pressure:

In accordance with API RP 1111 and OCS Order #9

HTP = 1.25 x MAOP + external pressure = 1.25 x 1440 + 72(1.02)/2.31 = 1832 PSIG

Test to 2160 PSIG, same as riser.

8. The hydrostatic test will be conducted in accordance with applicable regulations. Test duration will be eight (8) hours. The test medium will be inhibited seawater. The test pressure is not greater than 90% of the hoop stress pressure using 100% of the steel's SMYS.

P = 2tS/D P = max. hoop pressure t = nominal wall thickness = 2(.432)(35,000)/6.625 = 4564.5 psig D = nominal outside diameter

90% of P = 4108 psig>2160 psig

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

The line pipe weighs 28.57 lbs/LF

The pipe displaces AREA(sq.in.)/144 x 62.4 x 1.02 = 15.24# water/ft

Specific gravity flowline = 28.57/15.24 = 1.875

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

- 10. The design capacity of the pipeline is approximately 25 MMSCFD
- 11. The proposed pipeline will tie-in Hall-Houston's West Cameron 379 "A" Platform with the Apache pipeline located in West Cameron Block 370.
- 12. The departing pipeline shall be protected by the following: One (1) high pressure monitoring device set at 10% above the maximum operating pressure but in no case above the design working pressure of the 1440 psig; and one (1) low pressure monitoring device set at 10% below the operating pressure.

The incoming pipeline shall be protected by the following: One (1) high pressure monitoring device set 10% above the maximum operating pressure but in no case above the design working pressure of 1440 psig; and one (1) low pressure monitoring device set 10% below the operating pressure.

The effect of any pressure variance above or below the set limits will cause the automatic and orderly shutdown of the facility.

QINCE!

PIPELINE SUMMARY

1. Line Pipe Secifications:

O.D.	W.T.	Material Spec.	Length	MAOP
6.625"	•432"	ASTM A-106 GR. B OR	35,098.7	1440 PSI

2. Riser Pipe Specifications:

0.D.	W.T.	Material Spec.	Length	MAOP
6.625"	•432"	ASTM A-106 GR. B OR API 5L GR B	300	1440 PSI

3. Line Pipe Coating:

Scotchkote 205 thin film fusion bonded epoxy - 14 mils

4. Name of Product:

Natural gas and condensate.

5. Class Location:

Class I.

6. Governing Code: (where applicable)

API RP 1111, API RP 14E, OCS Order #9, and ANSI B31.8.

BANCELLED

Application by Apache Oil & Gas Transmission Co. 6.625" O.D. Natural Gas Pipeline West Cameron Block 379"A" Gulf Of Mexico

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.

Signature of Grantee

Apache Oil & Gas Transmission, Inc.

October 30, 1987

Date

OCS-G-9337

APACHE

OIL & GAS TRANSMISSION, INC.

Amendment #1

RepublicBank Center 700 Louisiana, Suite 2390

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

December 10, 1987



Mr. J. Rogers Pearcy
Regional Director
U. S. Department of the Interior
Minerals Management Service
Gulf of Mexico OCS Region
1201 Elmwood Park Boulevard
New Orleans, Louisiana 70123-2394

Attention: FO-2-2

RE: Pipeline Right-of-Way Application OCS-G 9337
Apache Oil & Gas Transmission, Inc.'s,
Proposed 6.625-inch O.D. Natural Gas Pipeline
In the West Cameron Area

Gentlemen:

This letter is in reference to the proposed 6.625-inch O.D. pipeline application (OCS-G 9337) dated October 30, 1987, to transfer natural gas and condensate from Hall-Houston Oil Company's proposed Platform "A" in West Cameron 379 to a SSTI on Apache's proposed 10" R-O-W in West Cameron 370. Please note the following revisions:

- 1. The Route and Profile Map (Sheet 2 of 3) has been revised to show the 3' to 10' slope to be outside of the fairway (See Profile Section).
- 2. Attachment I Schematic
 - a) Changed to indicate the high/low pressure devices will shut in the platform.
 - b) Source pressure on the contactor is 1440 psi.
- Attachment II General Information and Calculations
 - a) The anode spacing calculations were corrected on pg. B791-2
 - b) The design working pressure of the proposed pipeline was amended on pg B-791-4 to be no greater than the approved MAOP of Stingray's pipeline in West Cameron 269. Stingray will be receiving the product from Apache's proposed 10" pipeline.

In support of these revisions, four (4) copies each of the Route and Profile Map, Attachment I and Attachment II are enclosed. All items revised on Attachments I and II are highlighted with this symbol:

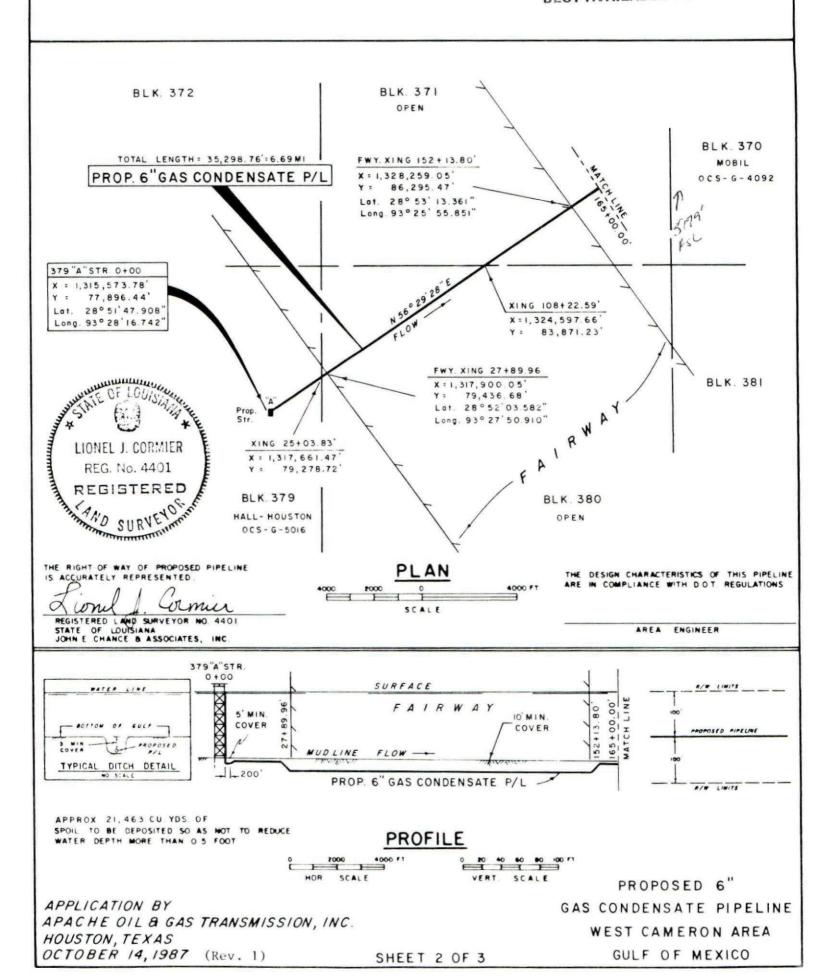
Page two

If further information is necessary, please contact our regulatory agent, Ms. Kathy Camp at 713/558-0607.

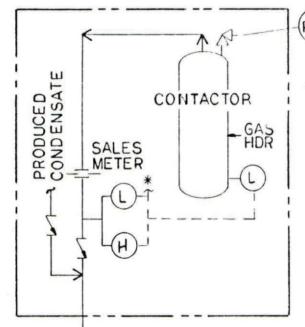
Sincerely,

Sary L. Hall
Chairman

GLH:KC:bna Attachments (amdrow1)



. PRODUCTION PLATFORM WEST CAMERON BLOCK 379A



PSV SET AT 1440#

* HIGH/LOW PRESSURE DEVICES ARE CONNECTED TO PLATFORM SHUTDOWN SAFETY SYSTEM

REST AVAILABLE COPY

RISER (A) 6.625" O.D. × .432" W.T. GRADE B PIPELINE (B) 6.625" O.D. × 432" W.T. GRADE B

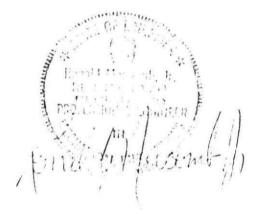
NOTES

- I. APACHE OIL & GAS TRANSMISSION CO. SALES GAS PIPELINE COMPLIES W/DEPT. OF TRANS-PORTATION REGULATION 49CFR CHAPTER I PART 192
- 2. CODES & SPECIFICATIONS

VALVES & FITTINGS PIPELINES ANSI B 16.5 API RP IIII ANSI B 31.8

APACHE PIPELINE
WEST CAMERON BLOCK 370

TAP



NOV 181987

APPLICATION BY
APACHE OIL & GAS TRANSMISSION CO.
HOUSTON, TEXAS
OCT. 26, 1987 AT

PROPOSED 6"
NATURAL GAS PIPELINE
WEST CAMERON BLOCK 379
GULF OF L'EXICO

ATTACHMENT 1

OPTION 2

ATTACHMENT II

GENERAL INFORMATION & CALCULATIONS

6.625" O.D. NATURAL GAS PIPELINE

WEST CAMERON BLOCK 379 "A" PLATFORM

- 1. The water depth [(-) 72° MSL] along the proposed pipeline route and in relationship to the natural bottom is set forth on the attached Pipeline Prelay Survey Drawing.
- 2. The description of the pipe and coating is as follows:
 - a. Line Pipe: 6.625" O.D. x .432" W.T. ASTM A-106 Grade B or API 5L Grade B seamless; bare weight = 28.57#/ft. Specific gravity in seawater (empty) = 1.875. Pipe will be coated with Scotchkote 205 fusion bonded epoxy 14 mils. Pipe joints will be protected with heat shrinkable wraparound pipe sleeves.
 - b. Riser Pipe: 6.625" O.D. x .432" W.T. ASTM A-106 Grade B or API 5L Grade B seamless; bare weight = 28.57#/ft.; coated with 14 mils of Scotchkote 205 fusion bonded epoxy. Welded joints will be protected with heat shrinkable wraparound pipe sleeves.
 - c. Subsea side tap valve assembly: Block valve and check valve ANSI 600 rating.
 - d. Internal Coating: The analysis of transported products will be monitored and preventative measures will be employed as necessary.
- 3. The proposed pipeline is approximately 35,298.7 feet in horizontal length. This does not include the approximate 100° of vertical riser on the platform. The line will transport natural gas and condensate.
- 4. Valves and Flanges: The departing pipeline valves and flanges will be ANSI 600 with rated working pressure of 1440 PSIG.

- 5. The design of the proposed pipeline is in accordance with the and ANSI B31.8 and OCS Order #9. Each was applied within the scope of the intended code or regulation.
- 6. The cathodic protection system for the pipeline will use zinc tapered semi-cylindrical 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. Zinc 26#/amp year
 - e. Anode spacing calculations:
 - Area/mile = 5280 ft./mi. x 3.14 x (6.625/12)ft. = 9,157.7 sq. ft./mi.
 - Amps = 9,153.1 sq.ft./mi. x .02 x .005 amps/sq.ft. = .9157 amps/mi.

Line Life = .9153 amps/mi. x 20 = 18.31 amp yr./mi.

#/mile = 18.31 amp yr/mi. x 26#/amp yr.= 476.1#/mile

 Λ

Anode quantity = (475.96 #/mi.)/55 # = 8.656/mi.

Anode spacing = (5280 ft/mi.)/8.654/mi. = 609.98 ft.

Use one 55#(net) zinc anode every 600 feet.

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

b = nominal outside diameter = 6.625"

Use 6.625" O.D. x .432" W.T. Grade B seamless.

Hydrostatic test pressure:

In accordance with API RP 14E

 $HTP = 1.5 \times MAOP$

 $= 1.5 \times 1440$

= 2160 PSIG

b. Line Pipe:

t = PD/2S

P = internal design pressure = 1440 PSIG

= 1440(6.625)/2(25,200)

= .1893 + 0.05 C.A.

t = nominal wall thickness,

inches

= .2393"

 $S = SMYS (35,000) \times .72$ = 25,200 [per ANSIB31.8]

D = nominal outside diameter = 6.625"

Use 6.625" O.D. x .432" W.T. Grade B seamless.

Hydrostatic test pressure:

In accordance with API RP 1111 and OCS Order #9

 $HTP = 1.25 \times MAOP + external pressure$

 $= 1.25 \times 1440 + 72(1.02)/2.31$

= 1832 PSIG

Test to 2160 PSIG, same as riser.

8. The hydrostatic test will be conducted in accordance with applicable regulations. Test duration will be eight (8) hours. The test medium will be inhibited seawater. The test pressure is not greater than 90% of the hoop stress pressure using 100% of the steel's SMYS.

P = 2tS/D

P = max. hoop pressure

t = nominal wall thickness

= 2(.432)(35,000)/6.625

S = SMYS 35,000)

= 4564.5 psig

D = nominal outside diameter

90% of P = 4108 psig>2160 psig

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

The line pipe weighs 28.57 lbs/LF



Pipe area (sq. in.) = 34.47

The pipe displaces AREA(sq.in.)/144 x 62.4 x 1.02 = 15.24# water/ft

Specific gravity flowline = 28.57/15.24 = 1.875

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

- 10. The design capacity of the pipeline is approximately 25 MMSCFD
- 11. The proposed pipeline will tie-in Hall-Houston's West Cameron 379 "A" Platform with the 10" Apache pipeline located in West Cameron Block 370.



12. The departing pipeline shall be protected by the following: One (1) high pressure monitoring device set at 10% above the maximum operating pressure but in no case above the design working pressure of the 1349 psig; and one (1) low pressure monitoring device set at 10% below the operating pressure.

The effect of any pressure variance above or below the set limits will cause the automatic and orderly shutdown of the facility.

PIPELINE SUMMARY

1. Line Pipe Secifications:

O.D.	$W \cdot T \cdot$	Material Spec.	Length	MAOP
6.625"	•432"	ASTM A-106 GR. B OR	35,098.7	1440 PSI

2. Riser Pipe Specifications:

O.D.	W.T.	Material Spec.	Length	MAOP
6.625"	•432"	ASTM A-106 GR. B OR	300*	1440 PSI

3. Line Pipe Coating:

Scotchkote 205 thin film fusion bonded epoxy - 14 mils

4. Name of Product:

Natural gas and condensate.

5. Class Location:

Class I.

6. Governing Code: (where applicable)

API RP 1111, API RP 14E, OCS Order #9, and ANSI B31.8.

Application by Apache Oil & Gas Transmission Co. 6.625" O.D. Natural Gas
Pipeline
West Cameron Block 379"A"
Gulf Of Mexico