



United States Department of the Interior  
BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT  
Gulf of Mexico OCS Region  
1201 Elmwood Park Boulevard  
New Orleans, LA 70123-2394

In Reply Refer To: GE 1035A

May 7, 2018

Mr. John Davis  
Apache Deepwater, LLC  
2000 Post Oak Boulevard, Suite 100  
Houston, Texas 77056

Dear Mr. Davis:

Reference is made to Apache Deepwater, LLC's (Apache) Right-of-way (ROW) decommissioning application dated April 12, 2018, and received by this office on April 13, 2018, for Pipeline Segment Number (PSN) 12621 and 12622, ROW No. OCS-G21894.

Specifically, Apache requests to decommission PSN 12621 and 12622 in-place. Additionally, Apache requests to relinquish the pipeline ROW OCS-G21894. PSN 12621 and 12622 has been out-of-service since April 12, 2018 and will be flushed and filled during decommissioning.

The table below describes the Pipeline Segment pertaining to the aforementioned application:

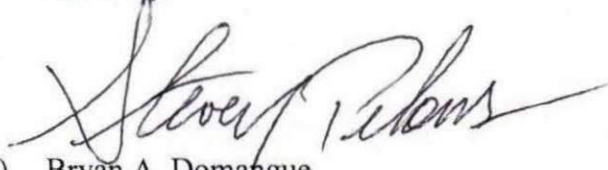
PSN	Size (NPS)	Length (feet)	Service	Origin	Termination
12621	10	16,228	Bulk Oil	Subsea Well No. 1 Ewing Bank Block 966	Platform A Ewing Bank Block 921
12622	5	16,468	Umbilical	Platform A Ewing Bank Block 921	Subsea Well No. 1 Ewing Bank Block 966

Pursuant to 30 CFR 250.1751, your request to decommission PSN 12621 and 12622 in-place is hereby approved. As a reminder, pursuant to 30 CFR 250.1754, if at any time the Regional Supervisor determines that the pipeline decommissioned in-place is an obstruction, it must be removed.

Pursuant to 30 CFR 250.1000(b), your request to relinquish the ROW No. OCS-G21894 is hereby approved with an effective date of April 13, 2018.

As a reminder, pursuant to 30 CFR 250.1753, you must submit a report to this office within 30 days after the completion of the pipeline decommissioning project.

Sincerely,

A handwritten signature in black ink, appearing to read "Bryan A. Domangue", written over a horizontal line.

(for) Bryan A. Domangue  
Acting Regional Supervisor  
Regional Field Operations



April 12, 2018

Regional Supervisor  
Pipelines Section  
Bureau of Safety and Environmental Enforcement (BSEE)  
1201 Elmwood Park Blvd.  
New Orleans, Louisiana 70123-2394

FedEx: 7719862477 Bureau of Safety and Environmental Enforcement (BSEE)

**RECEIVED**

**APR 13 2018**

Office of Field Operations  
Pipeline Section

Attention: Ms. Angie Gobert

**Re: Proposed Abandonment of Right-of-Way Pipeline & Umbilical installed in and/or through Blocks 966, 965, and 921, Ewing Bank Area, OCS Federal Waters, Gulf of Mexico, Offshore Louisiana (Black Widow Project)**  
**ROW OCS-G-21894**  
**Bulk Oil Pipeline - Segment Number 12621**  
**Umbilical - Segment Number 12622**

Pursuant to the authority granted in 43 U.S.C. 1334 (e) and the regulations under Title 30 CFR, Part 250, Subpart J, Apache Deepwater LLC (Apache Deepwater) received approval March 20, 2001 for a 200-foot wide right-of-way number OCS-G 21893 to operate and maintain the afore mentioned pipelines and umbilical from ENI's Platform-A in Ewing Bank Area, Block 921 through Blocks 965 and 966, all in Ewing Banks Area, to Subsea Well No. 001 in Block 966.

Ms. Gobert:

Apache Deepwater LLC (Apache), hereby requests your review and approval of the proposed abandonment of the following pipelines:

Segment Number	ROW	Origin	Terminus	OD (inch)	Length (ft)	Product	Operator
12621	G21894	EW 996	EW 921	10.75"	16,228	BLKO	Apache Deepwater LLC
12622	G21894	EW 921	EW 996	5.08"	16,468	UBEH	Apache Deepwater LLC

Apache is proposing to flush and abandon the above mentioned Right-of-Way Pipeline & Umbilical associated with the Black Widow development in the Ewing Banks area of the Gulf of Mexico.

The pipeline (Segment No. 12621), inclusive of a main flowline segment, and riser transports bulk oil from the subsea tree in Ewing Banks Block 996 in a north westerly direction and travels approximately 16,228 feet (2.98 miles) to the Eni US Operating Co. Inc.-operated Morpeth spar platform located in this Ewing Banks 921.

The umbilical (Segment No. 12622) is comprised of 20 Benso P40 TLO thermal plastic tubes for hydraulic and chemical supply and 5 cable pares for power and communication. The dynamic portion of the umbilical departs the Morpeth spar in a south easterly direction through an I-tube and continues to the Field Umbilical Termination Assembly (FUTA) in Ewing Banks block 996.



**Abandonment Procedures to Decommission  
Right-of-Way G-21894  
Segment Numbers 12621 & 12622  
Page 2 of 4**

The flowline will be flushed in conjunction with the ROW flowline G21893, Segment No. 12620, which is connected to the subsea tree in EW 996. This flowline will also be utilized for round trip pigging operation from the Morpeth TLP. All fluids recovered from the pigging and flushing operations will be processed through the existing facilities. Upon completion of flushing and pigging operations the flowline will be filled with seawater, removed from the Morpeth TLP, have a plumbers plug inserted into the platform and well ends of the flowline. The flowline will be abandoned on the sea floor within the permitted ROW corridor with concrete mattresses covering each end of the flowline.

The umbilical will have a flushing plate installed at the subsea end and will be flushed from the Morpeth spar at 1.5 times the volume of each umbilical tube. All hydrocarbons will be captured for proper disposal any water will be processed and static sheen tests will be performed prior to being discharged overboard.

In support of this application, please find the following attached:

- Proposed Pipeline Abandonment Procedure
- Subsea Layout Diagram
- PayGov receipt in the amount of \$2,170 to cover the processing fee for the Application to Decommission the Right-of-Way Pipeline OCS-G21894.

Please direct any questions concerning this application to Steve Daigle at (713) 296-7455 or via email at [steve.daigle@apachecorp.com](mailto:steve.daigle@apachecorp.com).

Sincerely,



John L. Davis  
Attorney in Fact  
Apache Deepwater LLC

**EW 996 (Black Widow) Project Flowlines and Umbilical Abandonment Procedure**

This procedure will outline the steps that Apache Corporation will take to abandon the flowlines and umbilical connecting the subsea well in EW 996 with the Morpeth TLP in EW 921.

**Flushing Procedure Flowlines Platform End (SN 12620 and SN 12621)**

1. Mobilize Dive Support Vessel (DSV) and filtration equipment to the field.
2. Set up filtration crew at ENI US Operating Co. Inc.- operated Morpeth TLP located in Ewing Banks 921
3. While the filtration crew is rigging up DSV to transit to well location EW 996
  - Disconnect the umbilical flying lead from the subsea tree and UTA and recover to surface
  - Install an umbilical flushing plate on the UTA (Flushing plate will connect the AMON line to all the other lines)
4. The filtration crew at the Morpeth TLP will isolate and rig up to inject through ROW pipeline G21893 SN 12620 and receive returns through ROW pipeline G21894 SN 12621 (Both Segments connect through pigging loop on the EW 996 subsea tree).
5. Once circulation is established the filtration crew will shut in, and install a foam pig in SN 12620. Once the pig is installed the filtration crew will return to pumping with filtered seawater.
  - All hydrocarbons will be captured
  - All water will be processed through filtration and over boarded, a static sheen test will be performed and passed before water is over boarded
6. Once the pig is recovered from SN 12621 and the pipelines have been flushed, pressure will be bled down to 0.0 psig. Blind flanges, with bleed plugs, will be installed to production piping end of each pipeline.

**Flushing Procedure Umbilical Platform END (SN 12622)**

1. Once the flowlines are flushed the filtration crew will rig up to inject into the AMON line of the umbilical.
2. Filtration crew will inject filtered seawater into the AMON line taking returns through each individual line until 1.5 times the volume of each line is recovered and the fluid passes a static sheen test.
  - All hydrocarbons will be captured
  - All seawater will be processed through filtration and, a static sheen test will be performed and passed before water is over boarded

**Abandonment Procedure Platform END (SN 12620, SN 12621, and SN 12622)**

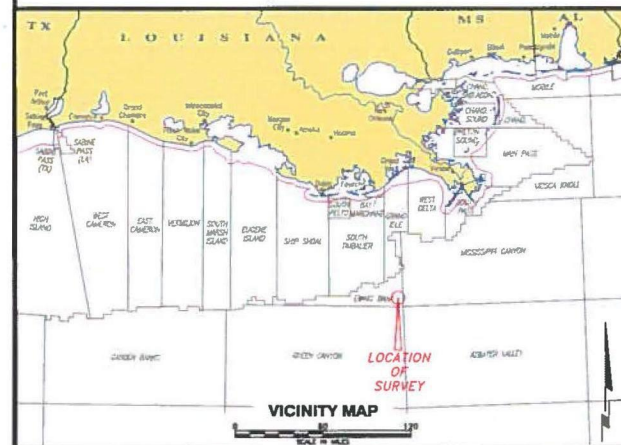
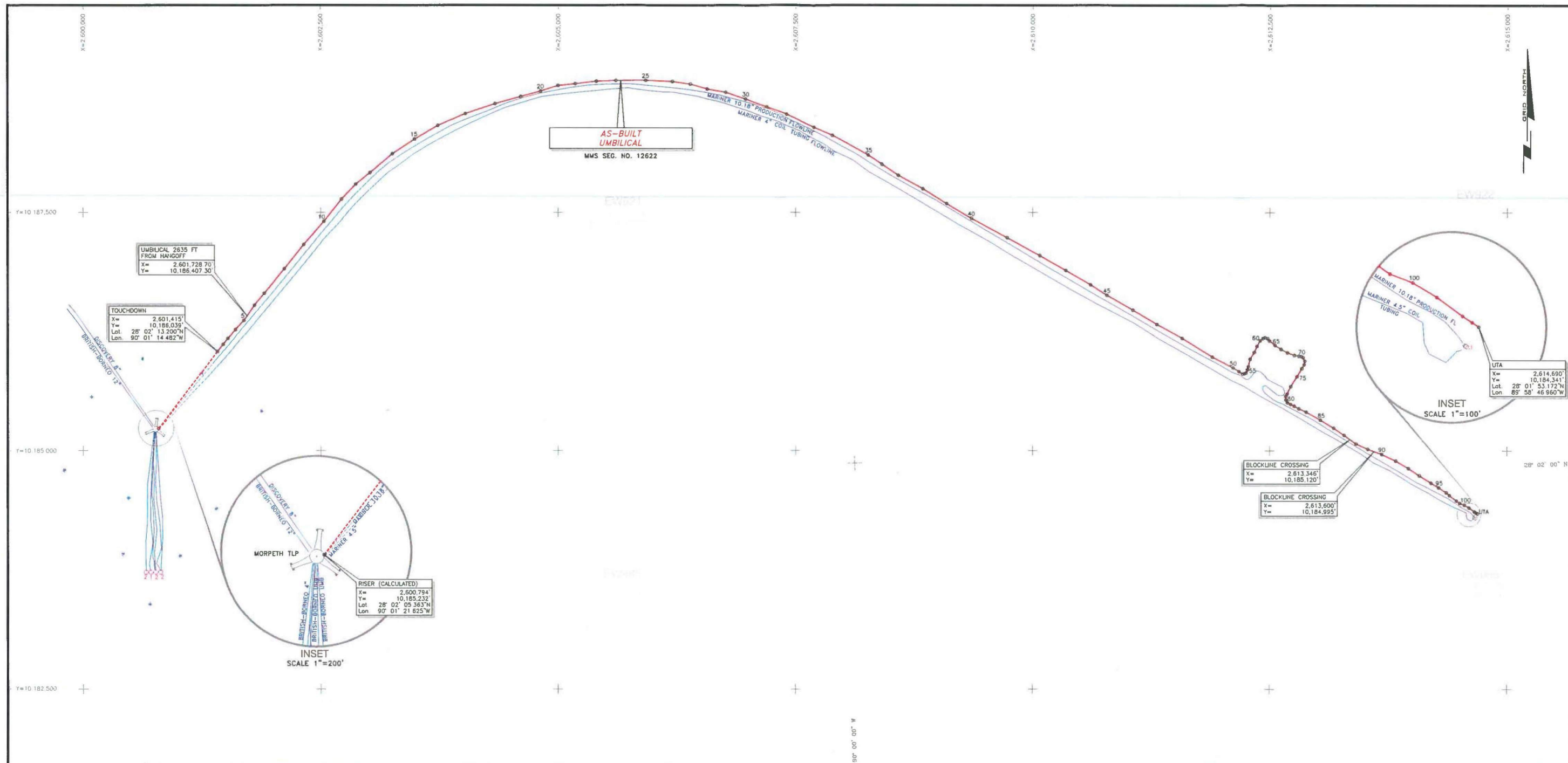
1. Mobilize Winch and crew to Morpeth TLP
  - Install pull heads on both flowlines and the umbilical
2. Mobilize DSV to the Morpeth TLP
3. Locate the riser sections of SN 12620, SN 12621, and SN 12622
4. Utilizing the winch pick up on each individual flowline and remove the split-flange.
5. Lower the riser through the I-Tube.
6. Once clear of the I-tube transfer the pull head to the A/R winch on the DSV
7. The flowline will be laid on the sea floor within the permitted ROW corridor.

8. Repeat for the other flowline and umbilical
9. The plugged ends of the flowlines and umbilical will be covered with flexible concrete mats, and an as-left survey of the location will be conducted

**Abandonment Procedure Subsea Tree End**

1. Mobilize DSV to EW 996 Subsea Tree end of the flowlines and umbilicals and rig up IWOCS.
2. Using IWOCS DSV will ensure all valves on the subsea tree are closed and the well is isolated from the flowline.
3. Once isolation is verified the ROV will:
  - Disconnect and recover the electrical flying leads,
  - Cut SN 12620 gooseneck above Cameron CVC connector
  - Install plumbers plug in cut end of the flowline and place on the sea floor within the Permitted ROW corridor.
  - Cut SN 12621 gooseneck above Cameron CVC connector
  - Install plumbers plug in cut end of the flowline and place on the sea floor within the Permitted ROW corridor.
  - Cut the umbilical SN 12622 at its connection to the UTA and recover the UTA
  - Install a cap on the end of the umbilical and place it on the sea floor within the Permitted ROW corridor.
  - Cover SN 12620, SN 12621 and SN 12622 with flexible concrete mats
  - Complete an as-left survey of the area.
4. Note: Subsea Wellhead and casing stubs will be cleared and site survey will be performed as part of the permanent well abandonment program.
5. Demobilize DSV.





TIE	X COORDINATE	Y COORDINATE	TIE	X COORDINATE	Y COORDINATE	TIE	X COORDINATE	Y COORDINATE	TIE	X COORDINATE	Y COORDINATE
10	2,601,415'	10,186,039'	28	2,606,570'	10,188,796'	55	2,612,265'	10,185,851'	82	2,612,756'	10,185,471'
2	2,601,473'	10,186,114'	29	2,606,766'	10,188,761'	56	2,612,276'	10,185,883'	83	2,612,805'	10,185,443'
3	2,601,524'	10,186,178'	30	2,606,974'	10,188,691'	57	2,612,294'	10,185,963'	84	2,612,882'	10,185,409'
4	2,601,604'	10,186,270'	31	2,607,195'	10,188,606'	58	2,612,336'	10,186,033'	85	2,613,032'	10,185,325'
5	2,601,691'	10,186,366'	32	2,607,408'	10,188,530'	59	2,612,367'	10,186,097'	86	2,613,173'	10,185,240'
6	2,601,802'	10,186,526'	33	2,607,695'	10,188,393'	60	2,612,400'	10,186,157'	87	2,613,283'	10,185,165'
7	2,601,905'	10,186,651'	34	2,607,888'	10,188,308'	61	2,612,429'	10,186,180'	88	2,613,410'	10,185,075'
8	2,602,116'	10,186,909'	35	2,608,268'	10,188,103'	62	2,612,452'	10,186,189'	89	2,613,535'	10,185,019'
9	2,602,320'	10,187,161'	36	2,608,414'	10,188,005'	63	2,612,478'	10,186,180'	90	2,613,681'	10,184,965'
10	2,602,533'	10,187,406'	37	2,608,585'	10,187,889'	64	2,612,498'	10,186,154'	91	2,613,828'	10,184,895'
11	2,602,718'	10,187,639'	38	2,608,844'	10,187,748'	65	2,612,555'	10,186,108'	92	2,613,960'	10,184,817'
12	2,602,868'	10,187,798'	39	2,609,093'	10,187,592'	66	2,612,617'	10,186,067'	93	2,614,078'	10,184,740'
13	2,603,019'	10,187,917'	40	2,609,355'	10,187,437'	67	2,612,684'	10,186,029'	94	2,614,200'	10,184,664'
14	2,603,253'	10,188,116'	41	2,609,732'	10,187,234'	68	2,612,756'	10,186,003'	95	2,614,281'	10,184,616'
15	2,603,487'	10,188,269'	42	2,610,074'	10,187,047'	69	2,612,802'	10,185,996'	96	2,614,361'	10,184,562'
16	2,603,733'	10,188,413'	43	2,610,349'	10,186,892'	70	2,612,827'	10,185,991'	97	2,614,394'	10,184,534'
17	2,604,023'	10,188,538'	44	2,610,612'	10,186,741'	71	2,612,848'	10,185,980'	98	2,614,469'	10,184,477'
18	2,604,336'	10,188,641'	45	2,610,783'	10,186,631'	72	2,612,867'	10,185,942'	99	2,614,504'	10,184,452'
19	2,604,606'	10,188,716'	46	2,611,054'	10,186,475'	73	2,612,859'	10,185,905'	100	2,614,552'	10,184,434'
20	2,604,815'	10,188,774'	47	2,611,309'	10,186,326'	74	2,612,836'	10,185,865'	101	2,614,602'	10,184,404'
21	2,604,998'	10,188,832'	48	2,611,574'	10,186,181'	75	2,612,784'	10,185,779'	102	2,614,657'	10,184,364'
22	2,605,179'	10,188,851'	49	2,611,891'	10,185,984'	76	2,612,719'	10,185,676'	103	2,614,677'	10,184,351'
23	2,605,403'	10,188,877'	50	2,612,111'	10,185,871'	77	2,612,681'	10,185,599'	104	2,614,690'	10,184,341'
24	2,605,609'	10,188,886'	51	2,612,175'	10,185,833'	78	2,612,666'	10,185,574'			
25	2,605,922'	10,188,887'	52	2,612,213'	10,185,807'	79	2,612,668'	10,185,536'			
26	2,606,199'	10,188,875'	53	2,612,233'	10,185,810'	80	2,612,685'	10,185,506'			
27	2,606,390'	10,188,847'	54	2,612,251'	10,185,818'	81	2,612,719'	10,185,488'			

**LEGEND**

- EXISTING WELL
- EXISTING PIPELINE
- PIPELINE IN CATERY
- AS-BUILT UMBILICAL
- UMBILICAL IN CATERY
- TRANSPONDER FRAME

**NOTES:**

- UMBILICAL COORDINATES ARE THE POSITIONS OF THE R.O.V. (REMOTELY OPERATED VEHICLE) LOCATED AT THE POINTS USING BOTH STARTER/DEEP POSITIONING AND USBL (ULTRA SHORT BASELINE) ACOUSTIC POSITIONING.
- THE LENGTH OF THE UMBILICAL IS CALCULATED USING SURVEY COORDINATES AND EXCLUDES RISER LENGTHS.
- THIS DRAWING IS NOT FOR NAVIGATION. ONLY PIPELINES AND FEATURES IN THE IMMEDIATE VICINITY OF THE AS-BUILT ARE SHOWN.
- TD DENOTES TOUCHDOWN.
- SURVEY DATE: OCTOBER 23-26, 2000

**CERTIFIED CORRECT AS TO THE HORIZONTAL POSITION OF THE AS-BUILT UMBILICAL BASED ON THE SURVEY METHODS NOTED.**

**DIGITAL COPY**  
ORIGINAL PLAT SIGNED 11/30/00  
REG. PROFESSIONAL LAND SURVEYOR #5092  
STATE OF TEXAS

**STATE OF TEXAS**  
REGISTERED PROFESSIONAL LAND SURVEYOR  
MARK KEITH BUNRKE  
5092

**MARINER ENERGY, INC.**

**BLACK WIDOW PROJECT**  
**AS-BUILT UMBILICAL**  
**BLOCK 921 MORPETH TLP TO 966**  
**EWING BANK AREA**  
**GULF OF MEXICO**

**JOHN E. CHANCE**  
**ASSOCIATES, INC.**

GEODETIC DATUM: NAD 1927  
PROJECTION: U.T.M. 15  
GRID UNITS: US SURVEY FEET

FEET SCALE: 0, 500, 1,000'  
MILES SCALE: 0, 0.05, 0.10, 0.15, 0.20

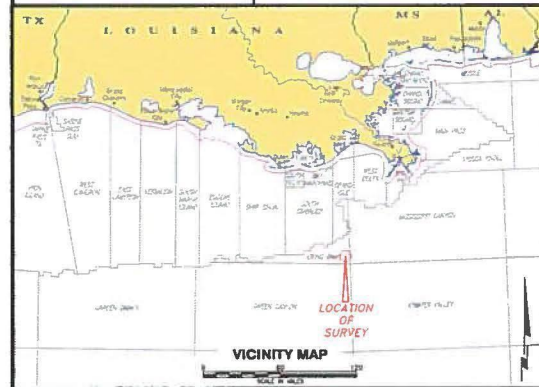
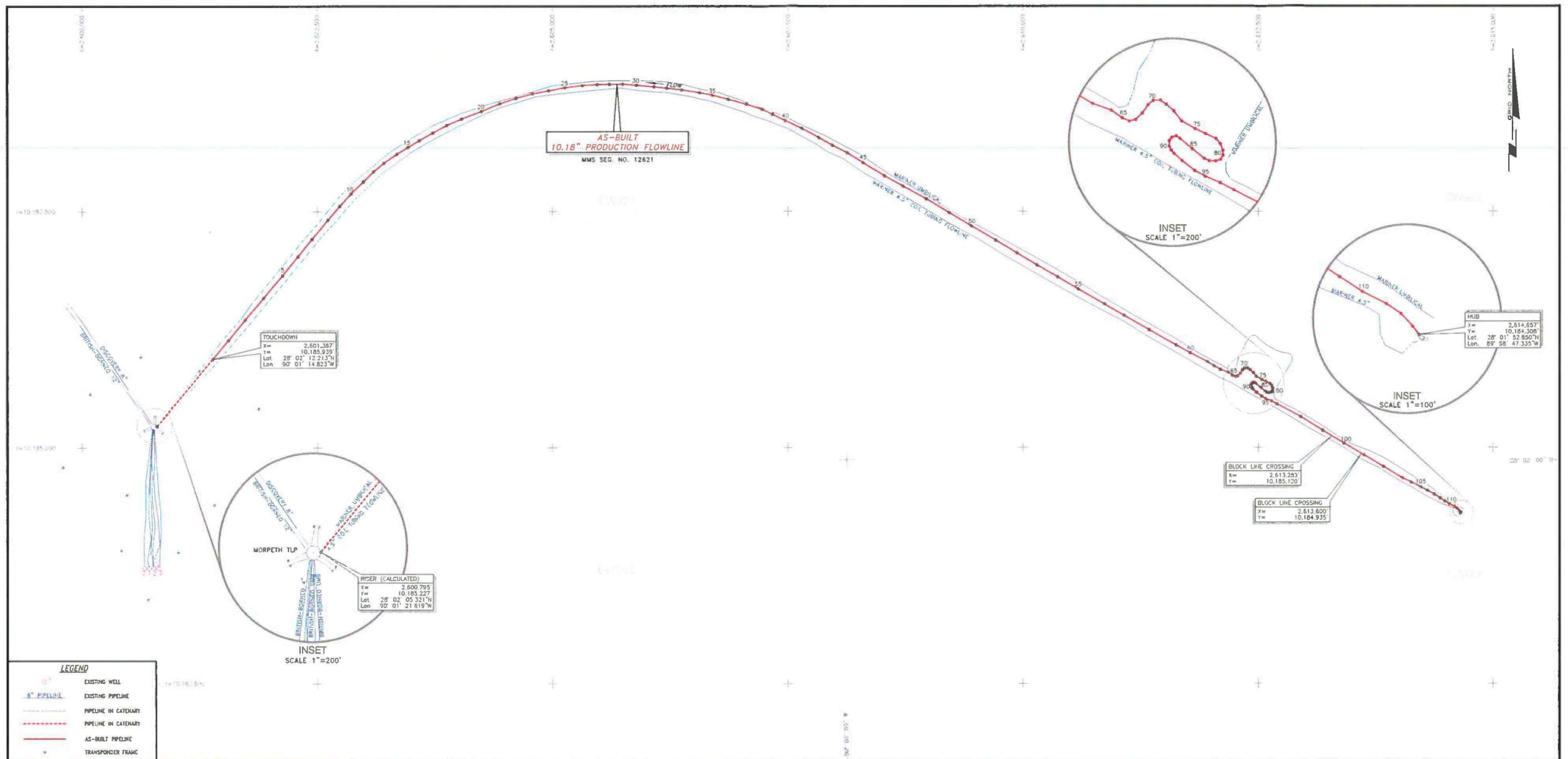
Issue No.	Date	Description	Inter	Draw	Chkd	Appv
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2	11/2/00	TRANSITION MARK INCLUDED		EA	SS	MB
1	10/31/00	FOR REVIEW		EA	SS	MB

Job No.: 00-7313  
Dwgfile: Q:\DATA\CAD\00-7313\00731305

Chart: 1 of 1

Printed: 12/1/00





STATION	X COORDINATE	Y COORDINATE	STATION	X COORDINATE	Y COORDINATE	STATION	X COORDINATE	Y COORDINATE	STATION	X COORDINATE	Y COORDINATE
10	2,601,387	10,185,939	28	2,605,607	10,188,548	55	2,610,593	10,186,678	82	2,612,624	10,185,581
2	2,601,555	10,186,156	29	2,605,748	10,188,650	56	2,610,869	10,186,519	83	2,612,597	10,185,582
4	2,601,731	10,186,353	30	2,605,894	10,188,839	57	2,611,077	10,186,399	84	2,612,575	10,185,592
6	2,601,928	10,186,585	31	2,606,079	10,188,821	58	2,611,339	10,186,247	85	2,612,524	10,185,633
8	2,602,128	10,186,823	32	2,606,212	10,188,808	59	2,611,828	10,186,084	86	2,612,472	10,185,677
10	2,602,333	10,187,023	33	2,606,371	10,188,789	60	2,611,777	10,186,003	87	2,612,455	10,185,687
12	2,602,442	10,187,207	34	2,606,561	10,188,758	61	2,611,963	10,185,906	88	2,612,427	10,185,688
14	2,602,613	10,187,411	35	2,606,697	10,188,733	62	2,612,034	10,185,864	89	2,612,427	10,185,688
16	2,602,729	10,187,559	36	2,606,866	10,188,689	63	2,612,102	10,185,825	90	2,612,426	10,185,644
18	2,602,859	10,187,689	37	2,607,060	10,188,638	64	2,612,161	10,185,797	91	2,612,434	10,185,617
20	2,602,991	10,187,816	38	2,607,225	10,188,583	65	2,612,226	10,185,765	92	2,612,446	10,185,613
22	2,603,100	10,187,924	39	2,607,339	10,188,530	66	2,612,257	10,185,750	93	2,612,481	10,185,583
24	2,603,209	10,188,014	40	2,607,469	10,188,461	67	2,612,283	10,185,757	94	2,612,535	10,185,540
26	2,603,346	10,188,109	41	2,607,653	10,188,380	68	2,612,312	10,185,784	95	2,612,579	10,185,517
28	2,603,462	10,188,180	42	2,607,834	10,188,282	69	2,612,335	10,185,820	96	2,612,643	10,185,489
30	2,603,585	10,188,253	43	2,607,979	10,188,201	70	2,612,387	10,185,838	97	2,612,701	10,185,459
32	2,603,729	10,188,334	44	2,608,131	10,188,121	71	2,612,388	10,185,838	98	2,612,957	10,185,326
34	2,603,876	10,188,414	45	2,608,297	10,188,016	72	2,612,413	10,185,821	99	2,613,193	10,185,180
36	2,604,033	10,188,481	46	2,608,529	10,187,877	73	2,612,445	10,185,793	100	2,613,414	10,185,043
38	2,604,243	10,188,561	47	2,608,726	10,187,767	74	2,612,478	10,185,751	101	2,613,625	10,184,920
40	2,604,440	10,188,642	48	2,608,974	10,187,632	75	2,612,536	10,185,718	102	2,613,835	10,184,797
42	2,604,612	10,188,700	49	2,609,218	10,187,488	76	2,612,580	10,185,687	103	2,614,034	10,184,678
44	2,604,789	10,188,747	50	2,609,452	10,187,346	77	2,612,625	10,185,676	104	2,614,132	10,184,630
46	2,604,960	10,188,789	51	2,609,710	10,187,195	78	2,612,644	10,185,654	105	2,614,231	10,184,580
48	2,605,131	10,188,811	52	2,609,937	10,187,053	79	2,612,655	10,185,626	106	2,614,303	10,184,542
50	2,605,319	10,188,836	53	2,610,147	10,186,933	80	2,612,655	10,185,605	107	2,614,377	10,184,504
52	2,605,476	10,188,849	54	2,610,368	10,186,808	81	2,612,645	10,185,585	108	2,614,440	10,184,463

NOTES:  
1) PIPELINE COORDINATES ARE THE POSITIONS OF THE R.O.V. (REMOTELY OPERATED VEHICLE) LOCATED AT THE POINTS USING BOTH STARTUP/STOP POSTIONING AND USER (ULTRA SHORT) BASELINE ACUSTIC POSTIONING.  
2) THE LENGTH OF THE PIPELINE IS CALCULATED USING SURVEY COORDINATES AND EXCLUDES ASER LENGTHS.  
3) THE BEARING IS NOT FOR NAVIGATION. ONLY PIPELINES AND FEATURES IN THE IMMEDIATE VICINITY OF THE AS-BUILT ARE SHOWN.  
4) TO DENOTES TOUCHDOWN AND CT DENOTES CHINESE FINGERS.  
5) SURVEY DATE, SEPTEMBER 8, 2000

CERTIFIED CORRECT AS TO THE HORIZONTAL POSITION OF THE AS-BUILT PIPELINE BASED ON THE SURVEY METHODS NOTED.

DIGITAL COPY  
ORIGINAL PLAT SIGNED 11/30/00  
REG. PROFESSIONAL LAND SURVEYOR #5092  
STATE OF TEXAS

STATE OF TEXAS  
REGISTERED  
MARK KEITH BUHRKE  
5092  
LAND SURVEYOR

MARINER ENERGY, INC.

BLACK WIDOW PROJECT  
AS-BUILT 10.18" PRODUCTION FLOWLINE  
BLOCK 921 MORPETH TLP TO 966  
EWING BANK AREA  
GULF OF MEXICO

JOHN E. CHANCE  
ASSOCIATES, INC.

GEODETIC DATUM: NAD 1927  
PROJECTION: U.T.M. 15  
GRID UNITS: US SURVEY FEET

FEET SCALE  
0 500' 1,000'

Issue No. Date Description Inter Drwn Chkd Appr

3 11/30/00 PIPE DIAMETER SS SS MKB

2 10/31/00 ASBUILT UMBILICAL EA SS MKB

1 9/13/00 FOR REVIEW EA SS MKB

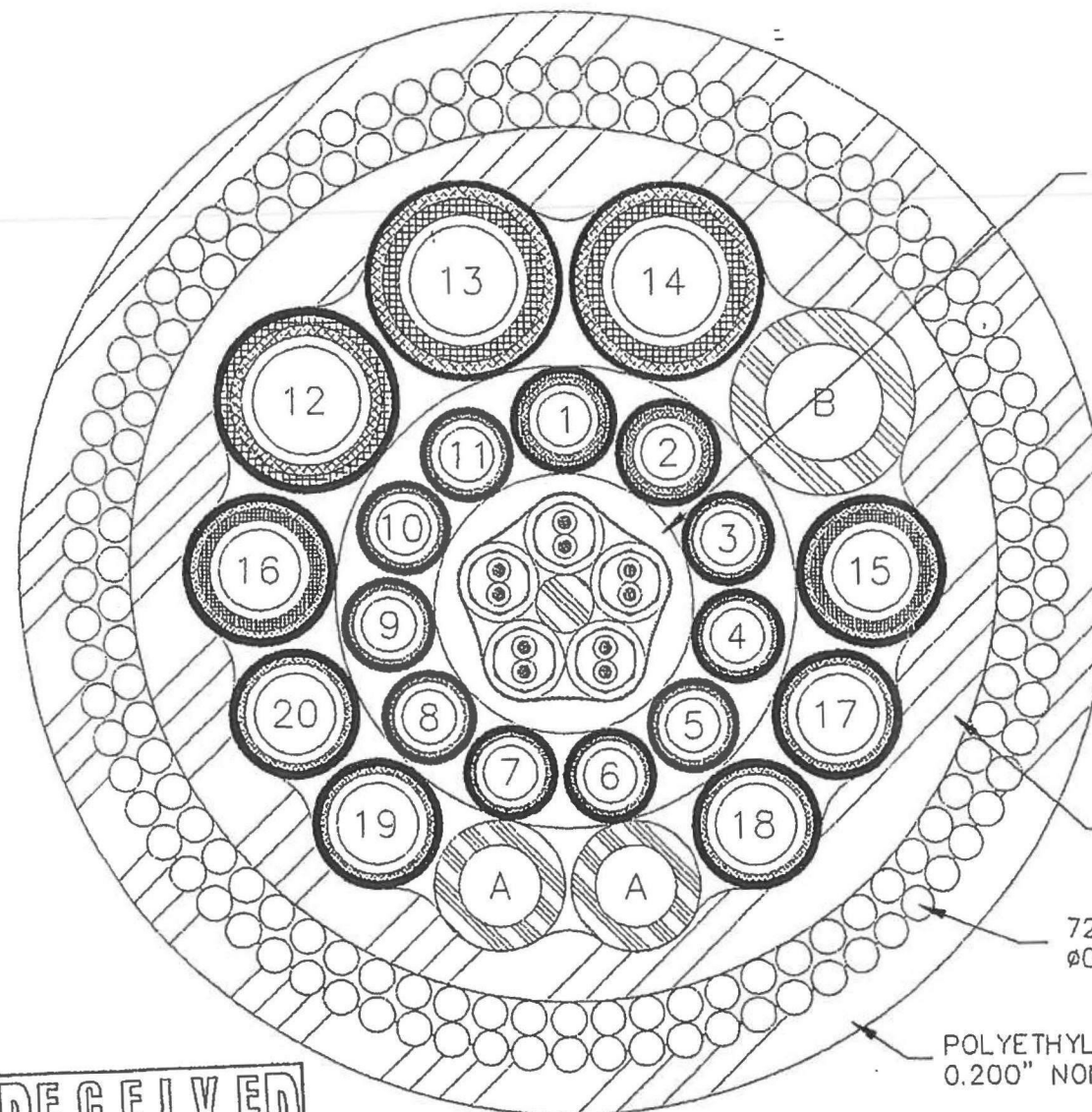
Job No.: 00-7313  
Dwg No.: C:\007313\03P0F

Chrt: 1 of 1



IDENT	MATERIAL	TYPE	SIZE	LINE FUNCTION	W.P.
1	BESNO P40 TLO	4H10	1/4"	SCSSV #1 Control	10,000 psi
2	BESNO P40 TLO	4H10	1/4"	SCSSV #2 Control	10,000 psi
3	BESNO P40 TLO	4H5	1/4"	Annulus Wing Valve	5,000 psi
4	BESNO P40 TLO	4H5	1/4"	Annulus Master Valve	5,000 psi
5	BESNO P40 TLO	4H5	1/4"	Annulus Monitor Valve	5,000 psi
6	BESNO P40 TLO	4H5	1/4"	Chemical Injection Valve/DH	5,000 psi
7	BESNO P40 TLO	4H5	1/4"	Chemical Injection Valve/DH	5,000 psi
8	BESNO P40 TLO	4H5	1/4"	Chemical Injection Valve/Tree	5,000 psi
9	BESNO P40 TLO	4H5	1/4"	Crossover Valve	5,000 psi
10	BESNO P40 TLO	4H5	1/4"	Production Choke Valve	5,000 psi
11	BESNO P40 TLO	4H5	1/4"	Spare	5,000 psi
12	BESNO P40 TLO	8H7.5	1/2"	Chemical Supply Tree	7,500 psi
13	BESNO P40 TLO	8H10	1/2"	Chemical Supply/DH	10,000 psi
14	BESNO P40 TLO	8H10	1/2"	Chemical Supply/DH	10,000 psi
15	BESNO P40 TLO	6H10	3/8"	Annulus Bleed Line	10,000 psi
16	BESNO P40 TLO	6H10	3/8"	Spare	10,000 psi
17	BESNO P40 TLO	6H5	3/8"	Production Master Valve	5,000 psi
18	BESNO P40 TLO	6H5	3/8"	Production Wing Valve	5,000 psi
19	BESNO P40 TLO	6H5	3/8"	Flow Isolation Valve #1	5,000 psi
20	BESNO P40 TLO	6H5	3/8"	Flow Isolation Valve #2	5,000 psi

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(1) ELECTRICAL BUNDLE  
(SEE DETAIL)

FILLERS	
IDENT	NOM. O.D.
A	ø0.605"
B	ø0.862"

(2) #16 AWG (19 x 0.0113")  
BARE COPPER WIRE

(6) #30 AWG COPPER  
DRAIN WIRE

COPPER MYLAR TAPE

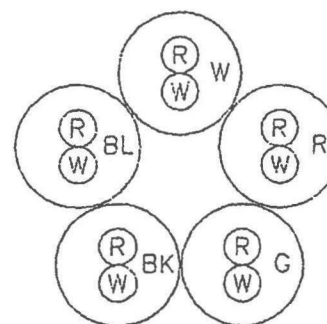
DUAL PASS EPC  
INSULATION

LDPE BELT TO  
ø0.282"

LDPE JACKET

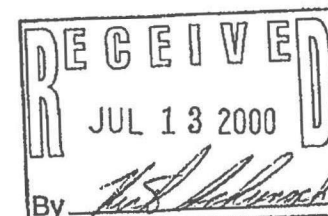
#16 AWG TSJP  
DETAIL

ELECTRICAL BUNDLE DATA		
COMPONENT	NOM. O.D.	M.B.R.
INSULATED COND.	0.111" ± $\begin{smallmatrix} 0.002" \\ 0.002" \end{smallmatrix}$	2.0"
TSJP	0.370" ± $\begin{smallmatrix} 0.007" \\ 0.007" \end{smallmatrix}$	5.6"
ELECTRICAL BUNDLE	1.200" ± $\begin{smallmatrix} 0.010" \\ 0.010" \end{smallmatrix}$	18.0"



ELECTRICAL COLOR  
CODE

W - WHITE  
R - RED  
G - GREEN  
BK - BLACK  
BL - BLUE



cc. Tim Davis  
Kirk Schumacher

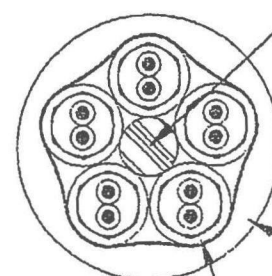
CONTROLLED COPY

ISSUED TO: B. Hesse  
DATE: JUL 11 2000

## UMBILICAL PERFORMANCE SUMMARY

NOMINAL O.D. 5.08" in  
WEIGHT IN AIR 17.3 lbf/ft  
(HOSES FILLED, INTERSTICES DRY)  
WEIGHT IN WATER 9.6 lbf/ft  
(HOSES FILLED, INTERSTICES FLOODED)  
MINIMUM BEND RADIUS (STORAGE) 46"  
MINIMUM BEND RADIUS (OPERATING) 61"  
ROX. BREAK STRENGTH 109 tons  
MAX WORKING LOAD 27 tons  
ESTIMATED BEND STIFFNESS 9,880 newton-m<sup>2</sup>  
ESTIMATED AXIAL STIFFNESS 50,000,000 newton

ELECTRICAL BUNDLE  
DETAIL

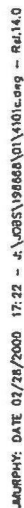


(1) NON-METALLIC FILLER  
ø0.270" NOMINAL O.D.

POLYETHYLENE JACKET  
0.085" NOMINAL THICKNESS

(5) #16 AWG TSJP  
(SEE DETAIL)

D	-	-	-	-
C	000077	MM	28JUN00	REPLACED (2) 8H7.5 WITH 8H10
B	000017	DA	07FEB00	REMOVE OUTSIDE FILLERS FROM ELECT. CORE
REV	ECN No	BY	DATE	DESCRIPTION
DO NOT SCALE DRAWING				
CUSTOMER/PROJECT:				OCEANEERING-MULTIFLEX
MARINER / BLACK WIDOW				MAGNOLIA, TEXAS
APPROVALS		DATE		TITLE:
DRAWN BY: M.MENASCO		27JUN00		UMBILICAL
CHECKED BY: P. DeCott		10/07/00		CROSS SECTION
APPROVED BY:		18651		CLASS: C
DRAWING No:		100		SHEET: 1 of 1
REV:		C		







## Receipt

### Your payment is complete

Pay.gov Tracking ID: 2690IJ7U

Agency Tracking ID: 75464644433

Form Name: Application to Relinquish a ROW and Decommission Pipeline

Application Name: BSEE Application to Relinquish a ROW and Decommission Pipeline - BU/RR

### Payment Information

Payment Type: Debit or credit card

Payment Amount: \$2,170.00

Transaction Date: 04/12/2018 04:54:56 PM EDT

Payment Date: 04/12/2018

Region: Gulf of Mexico

Contact Name: Steve Daigle

Contact Phone: 713-296-7455

Email Address: steve.daigle@apachecorp.com

ROW Holder or Applicant Name: Apache Deepwater LLC

Company Number: 3165

Right of Way Number: G21894

Purpose: Decommission a Pipeline

### Account Information

Cardholder Name: Apache Deepwater LLC

Card Type: Visa

Card Number: \*\*\*\*\*2108

### Email Confirmation Receipt

Confirmation Receipts have been emailed to:

steve.daigle@apachecorp.com

```

*****
*
*           Pipeline Decommissioning Report
*
*   Segment number: 12621
*   Right_of_Way Number: G21894
*   Application Date: 2018-04-12
*   Operator: Apache Deepwater LLC
*   Operator Code: 03165
*
*   Review User: PELOUSS
*   Review Run Date: 2018-May-07 15:07:34
*
*****

```

```

.
.
----- The Pipeline Crosses The Following Block(s) -----
-                               EW921                               -
-                               EW965                               -
-                               EW966                               -
-----

```

(1) Blocks and Leases

Area	Lease No.	Status	Operator
EW921	G12142	UNIT	Eni US Operating Co. Inc.
EW965	G12145	UNIT	Eni US Operating Co. Inc.
EW966	G18184	PROD	Chevron U.S.A. Inc.

(2.1) --- Crossed Pipelines ---

Seg.No.	Row No.	Area	Product	Status	H2S	Operator-Lease/ROW Holder-ROW
15587	G26969	EW921~EW921	BLKO	ACT	N	Eni Petroleum US LLC
15588	G26969	EW921~EW921	UMBE	ACT	N	Eni Petroleum US LLC

(2.2) --- Nearby Pipelines ---

Seg.No.	Row No.	Area	Product	Status	H2S	Operator-Lease/ROW Holder-ROW
12620	G21893	EW966~EW921	LIFT	ACT	N	Apache Deepwater LLC
12622	G21894	EW921~EW966	UMB	ACT	N	Apache Deepwater LLC

(2.3) --- Crossed Proposed Pipelines ---

Seg.No.	Row No.	Area	Product	Status	H2S	Operator-Lease/ROW Holder-ROW
12622	G21894	EW921~EW966	UMB	ACT	N	Apache Deepwater LLC
15587	G26969	EW921~EW921	BLKO	ACT	N	Eni Petroleum US LLC
15588	G26969	EW921~EW921	UMBE	ACT	N	Eni Petroleum US LLC

(2.4) --- Nearby Proposed Pipelines ---

Seg.No.	Row No.	Area	Product	Status	H2S	Operator-Lease/ROW Holder-ROW
12620	G21893	EW966~EW921	LIFT	ACT	N	Apache Deepwater LLC

(3) Federal/State Boundary

NO

(4) Construction Zone Of Artificial Reef Site

NO

(5) Anchorage Area

NO



.  
(6) Fairway  
NO

.  
(7) MMS District  
New Orleans

.  
(8) U.S. Coast Guard  
Morgan City Cotp Zone

.  
(9) H2S Block  
NO

.  
(10) 400 Meter Water Depth  
The Proposed pipeline crosses water depth greater than 400 meter area

.  
(11) Intersection of Marine Mineral Blocks and Pipeline Route  
NO Marine Mineral Blocks Impacted

```

*****
*
*           Pipeline Decommissioning Report
*
*
*   Segment number: 12622
*   Right_of_Way Number: G21894
*   Application Date: 2018-04-12
*   Operator: Apache Deepwater LLC
*   Operator Code: 03165
*
*   Review User: PELOUSS
*   Review Run Date: 2018-May-07 15:08:43
*
*****

```

```

.
.
----- The Pipeline Crosses The Following Block(s) -----
-                               EW921                               -
-                               EW965                               -
-                               EW966                               -
-----

```

(1) Blocks and Leases

Area	Lease No.	Status	Operator
EW921	G12142	UNIT	Eni US Operating Co. Inc.
EW965	G12145	UNIT	Eni US Operating Co. Inc.
EW966	G18184	PROD	Chevron U.S.A. Inc.

(2.1) --- Crossed Pipelines ---

Seg.No.	Row No.	Area	Product	Status	H2S	Operator-Lease/ROW Holder-ROW
15587	G26969	EW921~EW921	BLKO	ACT	N	Eni Petroleum US LLC
15588	G26969	EW921~EW921	UMBE	ACT	N	Eni Petroleum US LLC

(2.2) --- Nearby Pipelines ---

Seg.No.	Row No.	Area	Product	Status	H2S	Operator-Lease/ROW Holder-ROW
12620	G21893	EW966~EW921	LIFT	ACT	N	Apache Deepwater LLC
12621	G21894	EW966~EW921	BLKO	ACT	N	Apache Deepwater LLC

(2.3) --- Crossed Proposed Pipelines ---

Seg.No.	Row No.	Area	Product	Status	H2S	Operator-Lease/ROW Holder-ROW
15587	G26969	EW921~EW921	BLKO	ACT	N	Eni Petroleum US LLC
15588	G26969	EW921~EW921	UMBE	ACT	N	Eni Petroleum US LLC

(2.4) --- Nearby Proposed Pipelines ---

Seg.No.	Row No.	Area	Product	Status	H2S	Operator-Lease/ROW Holder-ROW
12620	G21893	EW966~EW921	LIFT	ACT	N	Apache Deepwater LLC
12621	G21894	EW966~EW921	BLKO	ACT	N	Apache Deepwater LLC

(3) Federal/State Boundary

NO

(4) Construction Zone Of Artificial Reef Site

NO

(5) Anchorage Area

NO



.  
(6) Fairway  
NO

.  
(7) MMS District  
New Orleans

.  
(8) U.S. Coast Guard  
Morgan City Cotp Zone

.  
(9) H2S Block  
NO

.  
(10) 400 Meter Water Depth  
The Proposed pipeline crosses water depth greater than 400 meter area

.  
(11) Intersection of Marine Mineral Blocks and Pipeline Route  
NO Marine Mineral Blocks Impacted