Form 3160-3 FORM APPROVED OMB No. 1004-0137 (June 2015) Expires: January 31, 2018 **UNITED STATES** DEPARTMENT OF THE INTERIOR 5. Lease Serial No. BUREAU OF LAND MANAGEMENT APPLICATION FOR PERMIT TO DRILL OR REENTER 6. If Indian, Allotee or Tribe Name 7. If Unit or CA Agreement, Name and No. DRILL REENTER 1a. Type of work: 1b. Type of Well: Gas Well Oil Well Other 8. Lease Name and Well No. 1c. Type of Completion: Hydraulic Fracturing Single Zone Multiple Zone 9. API Well No. 30 015 47982 2. Name of Operator 3a. Address 3b. Phone No. (include area code) 10. Field and Pool, or Exploratory 4. Location of Well (Report location clearly and in accordance with any State requirements.*) 11. Sec., T. R. M. or Blk. and Survey or Area At surface At proposed prod. zone 14. Distance in miles and direction from nearest town or post office* 12. County or Parish 13. State 15. Distance from proposed* 16. No of acres in lease 17. Spacing Unit dedicated to this well location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 18. Distance from proposed location* 19. Proposed Depth 20. BLM/BIA Bond No. in file to nearest well, drilling, completed, applied for, on this lease, ft. 21. Elevations (Show whether DF, KDB, RT, GL, etc.) 22. Approximate date work will start* 23. Estimated duration 24. Attachments The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable) 1. Well plat certified by a registered surveyor. 4. Bond to cover the operations unless covered by an existing bond on file (see 2. A Drilling Plan. Item 20 above) 3. A Surface Use Plan (if the location is on National Forest System Lands, the 5. Operator certification. 6. Such other site specific information and/or plans as may be requested by the SUPO must be filed with the appropriate Forest Service Office). 25. Signature Name (Printed/Typed) Date Title Approved by (Signature) Date Name (Printed/Typed) Title Office Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon. Conditions of approval, if any, are attached Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency

> APPROVED WITH CONDITIONS **Approval Date: 05/29/2020**

of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction

*(Instructions on page 2)

District I

1625 N. French Dr., Hobbs, NM 88240 Phone: (575) 393-6161 Fax: (575) 393-0720 District II

811 S. First St., Artesia, NM 88210 Phone: (575) 748-1283 Fax: (575) 748-9720 District III

1000 Rio Brazos Road, Aztec, NM 87410 Phone: (505) 334-6178 Fax: (505) 334-6170 <u>District IV</u>

1220 S. St. Francis Dr., Santa Fe, NM 87505 Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico

Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION

1220 South St. Francis Dr. Santa Fe, NM 87505

Form C-102 Revised August 1, 2011 Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Numbe	er	² Pool Code		
30-015	47982			
⁴ Property Code		⁵ Pr	operty Name	⁶ Well Number
		167H		
⁷ OGRID No.		⁹ Elevation		
373075		3,337'		

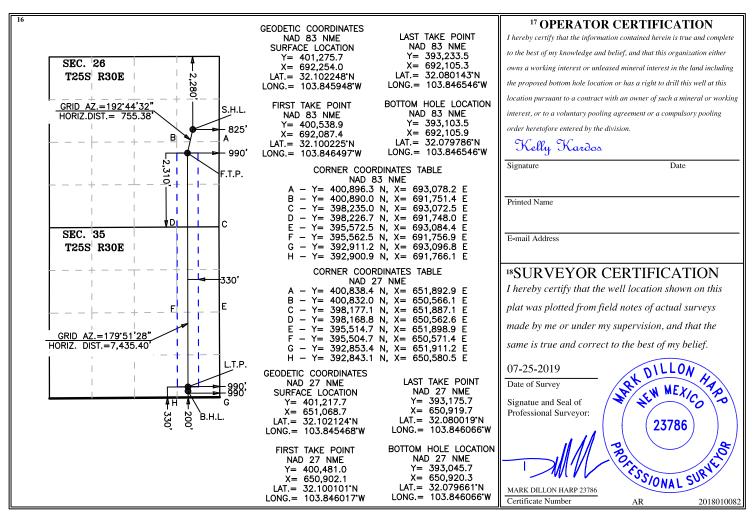
¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County	
Н	26	25 S	30 E		2,280	NORTH	825	EAST	EDDY	

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	35	25 S	30 E		200	SOUTH	990	EAST	EDDY
¹² Dedicated Acres	13 Joint or	r Infill 14 C	Consolidation	Code 15 Or	der No.				

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



Intent		As Dril	led											
API#														
Oper	rator Nar	me:				Prope		Well Number						
Kick O	Off Point ((KOP)												
UL	Section	Township	Range	Lot	Feet	F	rom N	/S	Feet		From	n E/W	County	
Latitu	de				Longitu	ıde							NAD	
First T	ake Poin	t (FTP)	Range	Lot	Feet	-	rom N	/c	Feet	T	Erom	n E/W	County	
		TOWNSHIP	Kange	Lot			TOTTIN	/3	reet		rion	I L/ VV	-	
Latitu	ae		Longitu	Longitude NAD										
Last Ta	ake Poin	t (LTP) Township	Range	Lot	Feet	From	N/S	Feet		From E,	/W	Count	у	
Latitu	de				Longitu	ıde						NAD		
		defining w	vell for th	e Hori	zontal Տր	pacing (Unit?]				
	ng Unit.	ease provi	de API if	availal	ole, Opei	rator Na	ame a	and w	vell ni	umber [.]	for [Definir	ng well fo	or Horizontal
Operator Name:						Prope	erty N	ame:						Well Number

KZ 06/29/2018

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME: XTO Permian Operating LLC
WELL NAME & NO.: Poker Lake Unit 26 BD 167H
LOCATION: Sec 26-25S-30E-NMP
COUNTY: Eddy County, New Mexico

COA

H2S	O Yes	No No	
Potash	None	© Secretary	© R-111-P
Cave/Karst Potential	C Low	• Medium	C High
Cave/Karst Potential	Critical		
Variance	© None	• Flex Hose	Other
Wellhead	Conventional	Multibowl	© Both
Other	☐ 4 String Area	☐ Capitan Reef	□WIPP
Other	☐ Fluid Filled	☐ Cement Squeeze	☐ Pilot Hole
Special Requirements	☐ Water Disposal	□ СОМ	✓ Unit

A. HYDROGEN SULFIDE

Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

B. CASING

- 1. The **13-3/8** inch surface casing shall be set at approximately 1075 feet (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite and above the salt) and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8** hours or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours

- after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
- d. If cement falls back, remedial cementing will be done prior to drilling out that string.
- 2. The minimum required fill of cement behind the 7 inch intermediate casing is:
 - Cement to surface. If cement does not circulate see B.1.a, c-d above.
 Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.
 - ❖ In Medium Cave/Karst Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.
- 3. The minimum required fill of cement behind the 7 inch production casing is:
 - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.
- 4. The minimum required fill of cement behind the 4-1/2 inch production liner is:
 - Cement should tie-back **100 feet** into the previous casing. Operator shall provide method of verification.

C. PRESSURE CONTROL

- 1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'
- 2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 5000 (5M) psi. Variance is approved to use a 5000 (5M) Annular which shall be tested to 3,500 psi.
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

D. SPECIAL REQUIREMENT (S)

Unit Wells

The well sign for a unit well shall include the unit number in addition to the surface and bottom hole lease numbers. This also applies to participating area numbers. If a participating area has not been established, the operator can use the general unit designation, but will replace the unit number with the participating area number when the sign is replaced.

Commercial Well Determination

A commercial well determination shall be submitted after production has been established for at least six months.

GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)
 - Eddy County
 Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822
 - Lea County
 Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575)
 393-3612
- 1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
 - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
 - b. When the operator proposes to set surface casing with Spudder Rig

- Notify the BLM when moving in and removing the Spudder Rig.
- Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
- BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.
- 2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
- 3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

- 1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
- 2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.
- 3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

- 4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
- 5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
- 6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
- 7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
- 8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

- 1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
- 2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
- 3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
- 4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.

- b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
- c. Manufacturer representative shall install the test plug for the initial BOP test.
- d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
- e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
- 5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
 - b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).
 - c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
 - d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall

- have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- e. The results of the test shall be reported to the appropriate BLM office.
- f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.



U.S. Department of the Interior BUREAU OF LAND MANAGEMENT

Drilling Plan Data Report

APD ID: 10400052250

Submission Date: 12/17/2019

Highlighted data reflects the most recent changes

Operator Name: XTO PERMIAN OPERATING LLC

Well Number: 167H

Show Final Text

Well Type: CONVENTIONAL GAS WELL

Well Name: POKER LAKE UNIT 26 BD

Well Work Type: Drill

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
606908	PERMIAN	3337	0	0	OTHER : Quaternary	NONE	N
606899	RUSTLER	2339	998	998	SILTSTONE	USEABLE WATER	N
606900	TOP SALT	2189	1148	1148	SALT	OTHER : Produced Water	N
606901	BASE OF SALT	-569	3906	3906	SALT	OTHER : Produced Water	N
606897	DELAWARE	-661	3998	3998	SANDSTONE	NATURAL GAS, OIL, OTHER: Produced Water	N
606898	BONE SPRING	-4493	7830	7830	SANDSTONE	NATURAL GAS, OIL, OTHER : Produced Water	N
606916	WOLFCAMP	-7852	11189	11189	SHALE	NATURAL GAS, OIL, OTHER : Produced Water	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 10M Rating Depth: 12298

Equipment: Once the permanent WH is installed on the 11-3/4" casing, the blow out preventer equipment (BOP) will consist of a 13-5/8 minimum 5M Hydril and a 13-5/8 minimum 10M 3-Ram BOP. MASP should not exceed 4649 psi.

Requesting Variance? YES

Variance request: In any instance where 10M BOP is required by BLM, XTO requests a variance to utilize 5M annular with 10M ram preventers (a common BOP configuration, which allows use of 10M rams in unlikely event that pressures exceed 5M). Also a variance is requested to test the 5M annular to 70% of working pressure at 3500 psi. · XTO requests to not utilize centralizers in the curve and lateral · 9-5/8" Collapse analyzed using 50% evacuation based on regional experience. · 7-0" Collapse analyzed using 33% evacuation based on regional experience. · 4-1/2" Tension calculated using vertical hanging weight plus the lateral weight multiplied by a friction factor of 0.35 · Test on Casing will be limited to 70% burst of the casing or 1500 psi, whichever is less Permanent Wellhead – GE RSH Multibowl System A. Starting Head: 13-5/8" 10M top flange x 13-3/8" SOW bottom B. Tubing Head: 13-5/8" 10M bottom flange x 7-1/16" 15M top flange A variance is requested to allow use of a flex hose as the choke line from the BOP to the Choke Manifold. If this hose is used, a copy of the manufacturer's certification and pressure test chart will be kept on the rig. Attached is an example of a certification and pressure test chart. The manufacturer does not require anchors. XTO requests a variance to be able to batch drill this well if necessary. In doing so, XTO will set 7" casing and ensure that the well is cemented properly and the well is static. With floats holding, no pressure on the csg annulus, and the installation of a 10K TA cap as per GE recommendations, XTO will contact the BLM to skid the rig to drill the remaining wells on the pad. Once surface and both intermediate strings are all completed, XTO will begin drilling the production hole on each of the wells.

Testing Procedure: All BOP testing will be done by an independent service company. Annular pressure tests will be limited to 70% of the working pressure. When nippling up on the 11-3/4", 10M bradenhead and flange, the BOP test will be limited to

Well Name: POKER LAKE UNIT 26 BD Well Number: 167H

10000 psi. All BOP tests will include a low pressure test as per BLM regulations. The 10M BOP diagrams are attached. Blind rams will be functioned tested each trip, pipe rams will be functioned tested each day.

Choke Diagram Attachment:

PLU_26_BD_10MCM_20191014092533.pdf

BOP Diagram Attachment:

PLU_26_BD_5M10M_BOP_20191014092555.pdf

PLU_26_BD_Multi_20191014092837.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	1075	0	1075	3337	2262	1075	J-55	54.5	ST&C	2.32	2.27	BUOY	8.77	DRY	8.77
1	INTERMED IATE	12.2 5	9.625	NEW	API	N	0	3880	0	3880		-543	3880	J-55	40	ST&C	2.11	1.13	DRY	2.91	DRY	2.91
	PRODUCTI ON	8.75	7.0	NEW	API	N	0	11625	0	11625	3500	-8288	11625	P- 110	32	BUTT	1.78	1.31	DRY	2.41	DRY	2.41
4	LINER	6	4.5	NEW	API	N	10590	20071	10590	12298	-7279	-8961	9481	P- 110	13.5	BUTT	1.45	1.31	DRY	2.05	DRY	2.05

Casing Attachments

Casing ID: 1 String Type: SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

PLU_26_BD_167H_Csg_20191211092214.pdf

Well Name: POKER LAKE UNIT 26 BD Well Number: 167H

Casing ID: 2 String Type: INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

PLU_26_BD_167H_Csg_20191211092247.pdf

Casing ID: 3 String Type: PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

PLU_26_BD_167H_Csg_20191211092313.pdf

Casing ID: 4

String Type: LINER

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

PLU_26_BD_167H_Csg_20191211092410.pdf

Section 4 - Cement

Well Name: POKER LAKE UNIT 26 BD Well Number: 167H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	1075	570	1.87	12.9	1065. 9	100	EconoCem- HLTRRC	none
SURFACE	Tail				300	1.35	14.8	405	100	Halcem-C	2% CaCl
INTERMEDIATE	Lead		0	3880	1030	1.87	12.9	1926. 1	100	EconoCem- HLTRRC	none
INTERMEDIATE	Tail				360	1.35	14.8	486	100	Halcem-C	2% CaCl
PRODUCTION	Lead		0	1162 5	1100	1.88	12.9	2068	100	Halcem-C	2% CaCl
PRODUCTION	Tail				220	1.33	14.8	292.6	100	Halcem-C	2% CaCl
LINER	Lead		1059 0	2007 1	580	1.61	13.2	933.8	30	VersaCem	none

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with Onshore Order #2:

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

Describe what will be on location to control well or mitigate other conditions: The necessary mud products for weight addition and fluid loss control will be on location at all times.

Describe the mud monitoring system utilized: A Pason or Totco will be used to detect changes in loss or gain of mud volume.

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	НА	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
1059 0	1229 8	OIL-BASED MUD	11.2	11.5							A mud test will be performed every 24 hours to determine:

Well Name: POKER LAKE UNIT 26 BD Well Number: 167H

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	ЬН	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
											density, viscosity, strength, filtration and pH as necessary. Use available solids controls equipment to help keep mud weight down after mud up. Rig up solids control equipment to operate as a closed loop system
3880	1162 5	OTHER : FW / Cut Brine	8.7	10							A mud test will be performed every 24 hours to determine: density, viscosity, strength, filtration and pH as necessary. Use available solids controls equipment to help keep mud weight down after mud up. Rig up solids control equipment to operate as a closed loop system
0	1075	OTHER : FW/Native	8.4	8.8							A mud test will be performed every 24 hours to determine: density, viscosity, strength, filtration and pH as necessary. Use available solids controls equipment to help keep mud weight down after mud up. Rig up solids control equipment to operate as a closed loop system
1075	3880	OTHER : Brine	9.8	10.2							A mud test will be performed every 24 hours to determine: density, viscosity, strength, filtration and pH as necessary. Use available solids controls equipment to help keep mud weight down after mud up. Rig up solids control equipment to operate as a closed loop system

Well Name: POKER LAKE UNIT 26 BD Well Number: 167H

Section 6 - Test, Logging, Coring

List of production tests including testing procedures, equipment and safety measures:

Open hole logging to include will not be done on this well.

Mud Logger: Mud Logging Unit (2 man) below intermediate casing.

List of open and cased hole logs run in the well:

COMPENSATED NEUTRON LOG, DIRECTIONAL SURVEY, GAMMA RAY LOG, MUD LOG/GEOLOGIC LITHOLOGY LOG,

Coring operation description for the well:

No coring will take place on this well.

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 7354 Anticipated Surface Pressure: 4648

Anticipated Bottom Hole Temperature(F): 165

Anticipated abnormal pressures, temperatures, or potential geologic hazards? NO

Describe:

Potential loss of circulation through the Capitan Reef.

Contingency Plans geoharzards description:

The necessary mud products for weight addition and fluid loss control will be on location at all times. A Pason or Totco will be used to detect changes in loss or gain of mud volume. A mud test will be performed every 24 hours to determine: density, viscosity, strength, filtration and pH as necessary. Use available solids controls equipment to help keep mud weight down after mud up. Rig up solids control equipment to operate as a closed loop system. Lost circulation could occur but is not expected to be a serious problem in this area and hole seepage will be compensated for by additions of small amounts of LCM in the drilling fluid.

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

PLU_26_BD_H2S_Plan_20191014094949.pdf PLU_26_BD_H2S_Dia_4E_20191211092649.pdf PLU_26_BD_H2S_Dia_4W_20191211092701.pdf

Well Name: POKER LAKE UNIT 26 BD Well Number: 167H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

PLU_26_BD_167H_DD_20191211092953.pdf

Other proposed operations facets description:

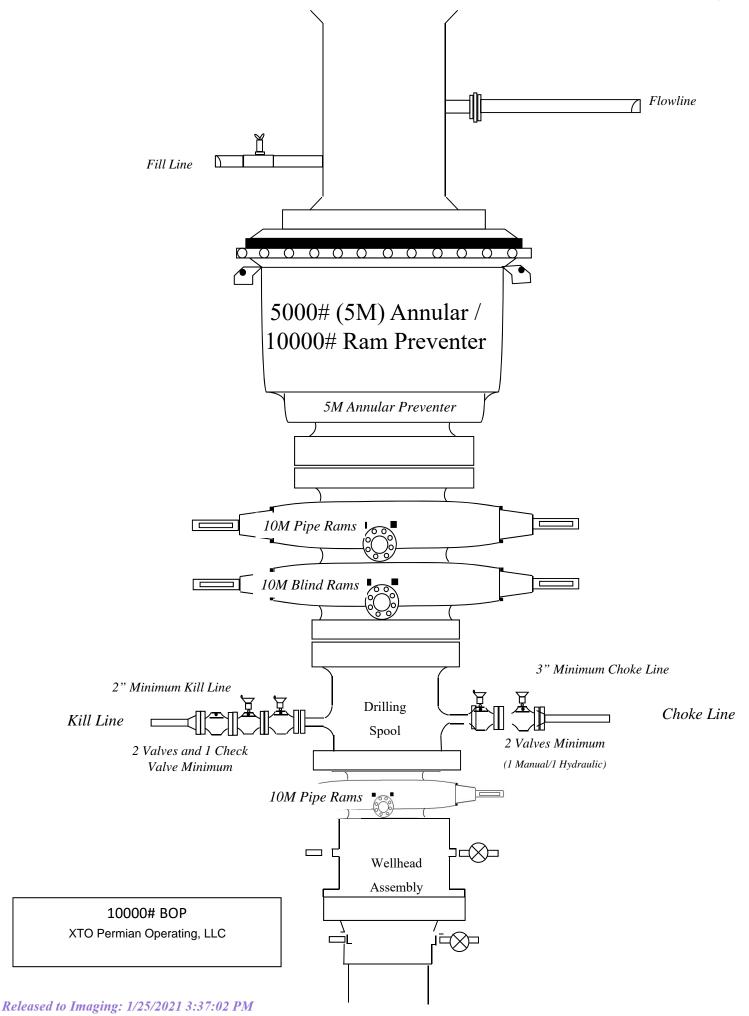
The surface fresh water sands will be protected by setting 13 3/8" inch casing @ 1075' (73' above the salt) and circulating cement back to surface. The salt will be isolated by setting 9-5/8" inch casing at 3880' and circulating cement to surface. The second intermediate will isolate from the salt down to the next casing seat by setting 7-0" inch casing through the curve at 11625' and bringing TOC back 200' inside the previous shoe. A 6-0" inch lateral hole will be drilled to MD/TD and a 4-1/2 inch liner will be set at TD and cemented.

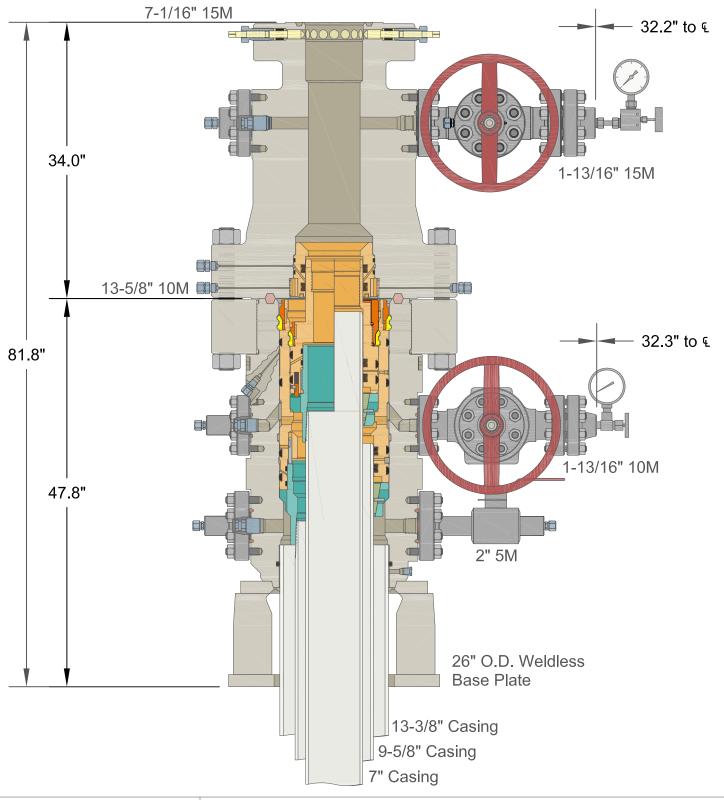
Other proposed operations facets attachment:

PLU_26_BD_GCPE_20191030095432.pdf PLU_26_BD_GCPW_20191030095448.pdf

Other Variance attachment:

PLU_26_BD_FH_20191014095156.pdf PLU_26_BD_WWC_20191014095240.pdf







Pressure Control

13-3/8" x 9-5/8" x 7" 15M RSH-2 Wellhead Assembly, With T-EBS-F-HP Tubing Head

COPYWRIGHT & PROPRIETARY NOTICE
Copywrlght 2017 Baker Hughes, a GE company, LLC (unpublished work). All rights reserved. The Information contained in this document is company confidential and proprietary property of Baker Hughes and its affiliates. It is to be used only for the benefit of Baker Hughes and may not be distributed, transmitted, reproduced, altered or used for any purpose without the express written consent of Baker Hughes.

DRAWN BY: VJK	DRAWING NO.	HP180197
REVIEWED BY:	Rev. NC	Sht. of 1
APPROVED BY:	DATE: 310CT	18

Casing Assumption Worksheet

Hole Size	Depth	OD Csg	Weight	Collar	Grade	New/Used	SF Burst	SF Collapse	SF Tension
17-1/2"	0' – 1075'	13 3/8"	54.5	STC	J-55	New	2.27	2.32	8.77
12-1/4"	0' – 3880'	9-5/8"	40	STC	J-55	New	1.13	2.11	2.91
8-3/4"	0' – 11625'	7-0"	32	BTC	P-110	New	1.31	1.78	2.41
6-0"	10,590' – 20071'	4-1/2"	13.5	BTC	P-110	New	1.31	1.45	2.05

- · XTO requests to not utilize centralizers in the curve and lateral
- \cdot 9-5/8" Collapse analyzed using 50% evacuation based on regional experience.
- \cdot 7-0" Collapse analyzed using 33% evacuation based on regional experience.
- \cdot 4-1/2" Tension calculated using vertical hanging weight plus the lateral weight multiplied by a friction factor of 0.35
- Test on Casing will be limited to 70% burst of the casing or 1500 psi, whichever is less

Permanent Wellhead - GE RSH Multibowl System

A. Starting Head: 13-5/8" 10M top flange x 13-3/8" SOW bottom

B. Tubing Head: 13-5/8" 10M bottom flange x 7-1/16" 15M top flange



HYDROGEN SULFIDE (H2S) CONTINGENCY PLAN

Assumed 100 ppm ROE = 3000'

100 ppm H2S concentration shall trigger activation of this plan.

Emergency Procedures

In the event of a release of gas containing H₂S, the first responder(s) must

- Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- Evacuate any public places encompassed by the 100 ppm ROE.
- Be equipped with H₂S monitors and air packs in order to control the release.
- Use the "buddy system" to ensure no injuries occur during the response
- Take precautions to avoid personal injury during this operation.
- Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
- Have received training in the
 - o Detection of H₂S, and
 - o Measures for protection against the gas,
 - o Equipment used for protection and emergency response.

Ignition of Gas source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO₂). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally, the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever this is an ignition of the gas.

Characteristics of H₂S and SO₂

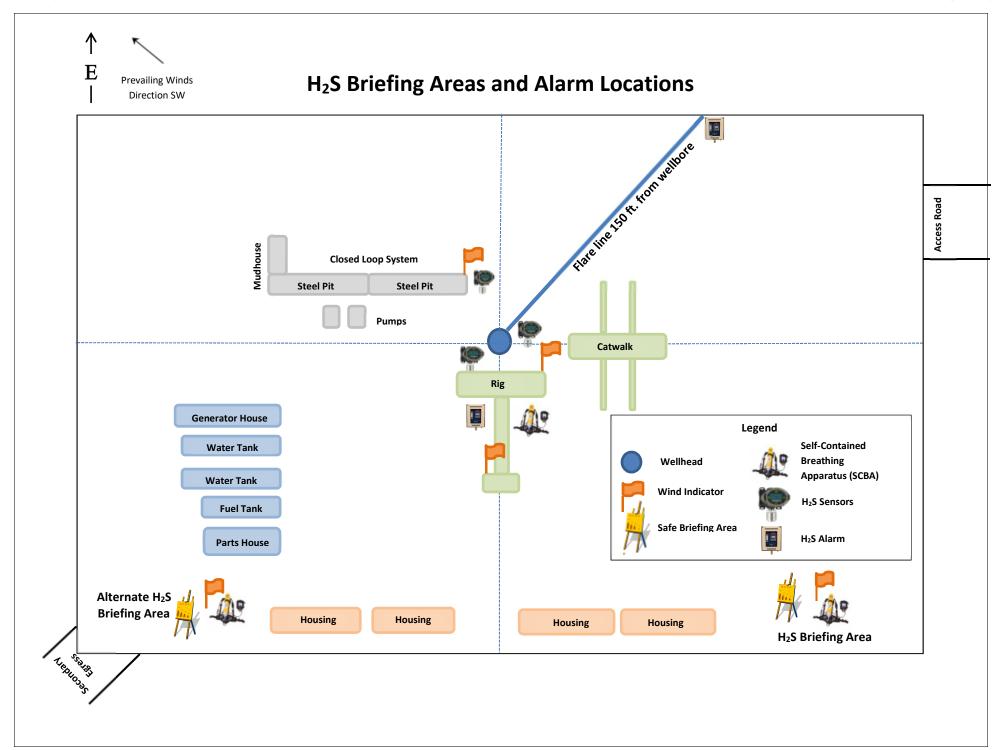
Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H ₂ S	1.189 Air = I	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO ₂	2.21 Air = I	2 ppm	N/A	1000 ppm

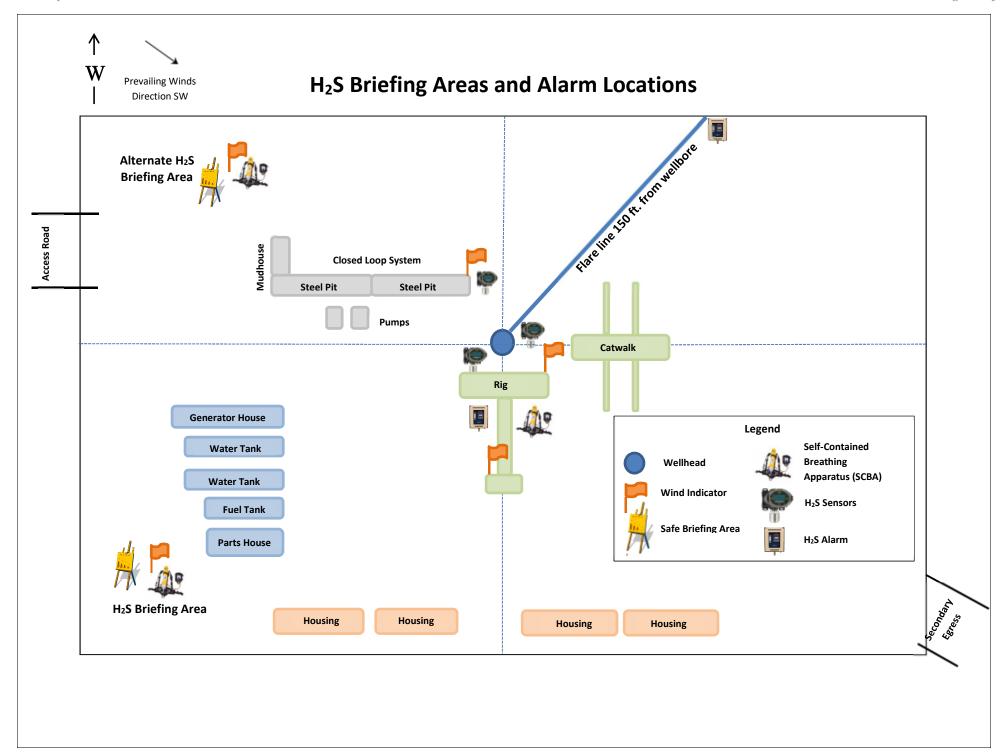
Contacting Authorities

All XTO location personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available including directions to site. The following call list of essential and potential responders has been prepared for use during a release. (Operator Name)'s response must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMER).

CARLSBAD OFFICE – EDDY & LEA COUNTIES

3104 E. Greene St., Carlsbad, NM 88220 Carlsbad, NM	575-887-7329
XTO PERSONNEL: Kendall Decker, Drilling Manager Milton Turman, Drilling Superintendent Jeff Raines, Construction Foreman Toady Sanders, EH & S Manager Wes McSpadden, Production Foreman	903-521-6477 817-524-5107 432-557-3159 903-520-1601 575-441-1147
SHERIFF DEPARTMENTS: Eddy County Lea County	575-887-7551 575-396-3611
NEW MEXICO STATE POLICE:	575-392-5588
FIRE DEPARTMENTS: Carlsbad Eunice Hobbs Jal Lovington	911 575-885-2111 575-394-2111 575-397-9308 575-395-2221 575-396-2359
HOSPITALS: Carlsbad Medical Emergency Eunice Medical Emergency Hobbs Medical Emergency Jal Medical Emergency Lovington Medical Emergency	911 575-885-2111 575-394-2112 575-397-9308 575-395-2221 575-396-2359
AGENT NOTIFICATIONS: For Lea County: Bureau of Land Management – Hobbs New Mexico Oil Conservation Division – Hobbs	575-393-3612 575-393-6161
For Eddy County: Bureau of Land Management - Carlsbad New Mexico Oil Conservation Division - Artesia	575-234-5972 575-748-1283







XTO Energy

Eddy County, NM (NAD-27) Poker Lake Unit 26 BD #167H

OH

Plan: PERMIT

Standard Planning Report

22 August, 2019

1000

2000

3000

4000

Base Salt Delaware

Released to Imaging the 1/25/2021 sor 37.02 the M

1800



West(-)/East(+) (1200 usft/in)

Project: Eddy County, NM (NAD-27) Site: Poker Lake Unit 26 BD Well: #167H Wellbore: OH Design: PERMIT

PROJECT DETAILS: Eddy County, NM (NAD-27)

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level

WELL DETAILS: #167H

Rig Name: RKB=23' @ 3360.00usft Ground Level: 3337.00 Easting 651068.70 3: +N/-S 0.00 +E/-W 0.00 Northing 401217.70 Latittude 32.102124 Longitude -103.845468

-1800

-1200

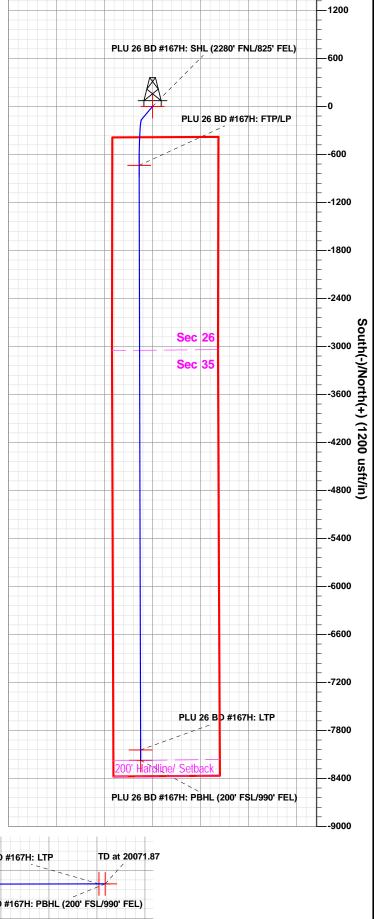
DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PLU 26 BD #167H: SHL (2280' FNL/825' FEL)	0.00	0.00	0.00	401217.7Ŏ	651068.7Ŏ	32.102124	-103.845468	Point
PLU 26 BD #167H: PBHL (200' FSL/990' FEL)	12285.02	-8172.53	-148.41	393045.70	650920.30	32.079661	-103.846066	Point
PLU 26 BD #167H: LTP `	12285.25	-8042.52	-149.01	393175.70	650919.70	32.080019	-103.846066	Point
PLU 26 BD #167H: FTP/LP	12298.00	-736.75	-166.61	400481.00	650902.10	32.100101	-103.846016	Point

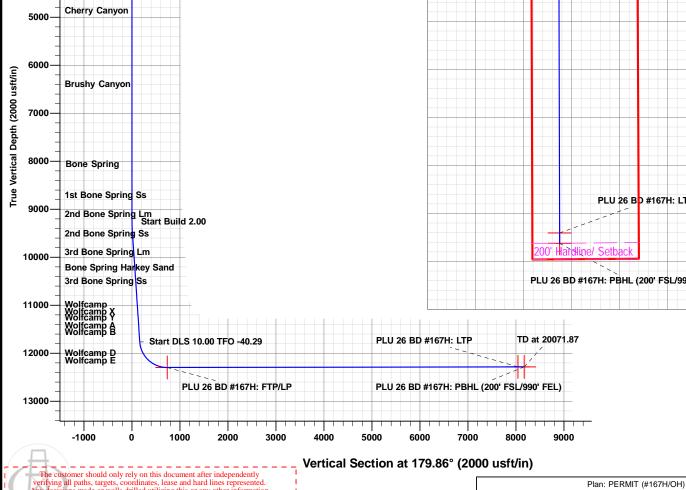
SECTION DETAILS TFace 0.00 0.00 220.04 0.00 -40.29 0.00 0.00

FORMATION TOP DETAILS

_	
TVDPath	Formation
998.00	Rustler
1148.00	Top Salt
3906.00	Base Salt
3998.00	Delaware
4962.00	Cherry Canyon
6500.00	Brushy Canyon
7830.00	Bone Spring
8805.00	1st Bone Spring Ss
9205.00	2nd Bone Spring Lm
9615.00	2nd Bone Spring Ss
9994.00	3rd Bone Spring Lm
10370.00	Bone Spring Harkey Šand
10598.00	3rd Bone Spring Ss
11189.00	Wolfcamp
11215.00	Wolfcamp X
11260.00	Wolfcamp Y
11270.00	Wolfcamp A
11668.00	Wolfcamp B
12098.00	Wolfcamp D
12173.00	Wolfcamp E



Created By: Matthew May Date: 5:00, August 22 2019





Planning Report

EDM 5000.1 Single User Db Database:

Company: XTO Energy

Project: Eddy County, NM (NAD-27) Poker Lake Unit 26 BD Site:

Well: #167H Wellbore: OH **PERMIT** Design:

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well #167H

RKB=23' @ 3360.00usft RKB=23' @ 3360.00usft

Minimum Curvature

Project Eddy County, NM (NAD-27)

US State Plane 1927 (Exact solution) Map System:

IGRF2015

NAD 1927 (NADCON CONUS) Geo Datum:

New Mexico East 3001 Map Zone:

Mean Sea Level

Using geodetic scale factor

59.88

47,614

Poker Lake Unit 26 BD Site

Northing: 401,344.70 usft Site Position: Latitude: 32.102518 From: Мар Easting: 647,380.00 usft Longitude: -103.857378 **Position Uncertainty:** 0.00 usft Slot Radius: 13-3/16 " **Grid Convergence:** 0.25

System Datum:

Well #167H

Well Position +N/-S -127.01 usft Northing: 401,217.70 usft Latitude: 32.102124 +E/-W 3,688.94 usft Easting: 651,068.70 usft Longitude: -103.845468

Position Uncertainty 0.00 usft Wellhead Elevation: 0.00 usft **Ground Level:** 3,337.00 usft

Wellbore ОН Field Strength Magnetics **Model Name** Sample Date Declination **Dip Angle** (nT) (°) (°)

6.84

8/21/2019

PERMIT Design **Audit Notes:** Version: Phase: PLAN Tie On Depth: 0.00 **Vertical Section:** Depth From (TVD) +N/-S +E/-W Direction (usft) (usft) (usft) (°) 179.86 0.00 0.00 0.00

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
9,190.00	0.00	0.00	9,190.00	0.00	0.00	0.00	0.00	0.00	0.00	
9,439.95	5.00	220.04	9,439.63	-8.34	-7.01	2.00	2.00	0.00	220.04	
11,773.23	5.00	220.04	11,764.04	-163.99	-137.82	0.00	0.00	0.00	0.00	
12,636.06	90.10	179.86	12,298.00	-736.75	-166.61	10.00	9.86	-4.66	-40.29	PLU 26 BD #167H: F
19,941.86	90.10	179.86	12,285.25	-8,042.52	-148.73	0.00	0.00	0.00	0.00	PLU 26 BD #167H: L1
20,071.87	90.10	179.86	12,285.02	-8,172.53	-148.41	0.00	0.00	0.00	0.00	PLU 26 BD #167H: Pl



Planning Report

EDM 5000.1 Single User Db Database: Company:

XTO Energy

Project: Eddy County, NM (NAD-27) Poker Lake Unit 26 BD Site:

Well: #167H ОН Wellbore: Design: PERMIT Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well #167H

RKB=23' @ 3360.00usft RKB=23' @ 3360.00usft

sign:	PERIVITI								
lanned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
998.00	0.00	0.00	998.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,148.00	0.00	0.00	1,148.00	0.00	0.00	0.00	0.00	0.00	0.00
Top Salt									
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4 000 00	0.00	0.00	4 000 00	0.00	0.00	2.22	0.00		0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4 000 00	0.00	0.00	4 000 00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
0.000.00	0.00	0.00	0.000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
0.000.00	0.00	0.00	0.000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
,			3,900.00		0.00	0.00			
3,900.00	0.00	0.00		0.00			0.00	0.00	0.00
3,906.00	0.00	0.00	3,906.00	0.00	0.00	0.00	0.00	0.00	0.00
Base Salt									
3,998.00	0.00	0.00	3,998.00	0.00	0.00	0.00	0.00	0.00	0.00
Delaware									
4.000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
→,000.00	0.00	0.00	₹,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00			,						
4 500 00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00



Planning Report

Database: EDM 5000.1 Single User Db

Company: XTO Energy

Project: Eddy County, NM (NAD-27)
Site: Poker Lake Unit 26 BD

Well: #167H
Wellbore: OH
Design: PERMIT

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well #167H

RKB=23' @ 3360.00usft RKB=23' @ 3360.00usft

Grid

Design.		FLIXIVIII								
Planned	l Survey									
· iaiiiicc	Curvey									
	Measured			\/#!I			Vertical	Danie.	D. Hal	T
				Vertical				Dogleg	Build	Turn
	Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Section	Rate	Rate	Rate
	(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)
	4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
	4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
	4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
	4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
	4,962.00	0.00	0.00	4,962.00	0.00	0.00	0.00	0.00	0.00	0.00
	Cherry Canyo	on								
	5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
	5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
	5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
	5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00
	5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
	5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
	5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
	5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
	5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
	5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
	6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
	6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
	6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00
	6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00
	6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00
	6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00
	Brushy Cany	on								
	6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00
	6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00
	6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00
	6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00
	7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00
	7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00
	7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	0.00	0.00
	7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0.00	0.00
	7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	0.00	0.00
	7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00
	7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.00	0.00	0.00
	7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00	0.00	0.00
	7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.00	0.00	0.00
	7,830.00	0.00	0.00	7,830.00	0.00	0.00	0.00	0.00	0.00	0.00
	Bone Spring	3.00	3.00	. ,000.00	0.00	3.00	3.00	3.00	3.00	0.00
	7,900.00	0.00	0.00	7,900.00	0.00	0.00	0.00	0.00	0.00	0.00
	8,000.00	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00
	8,100.00	0.00	0.00	8,100.00	0.00	0.00	0.00	0.00	0.00	0.00
	8,200.00	0.00	0.00	8,200.00	0.00	0.00	0.00	0.00	0.00	0.00
	8,300.00	0.00	0.00	8,300.00	0.00	0.00	0.00	0.00	0.00	0.00
	8,400.00	0.00	0.00	8,400.00	0.00	0.00	0.00	0.00	0.00	0.00
	8,500.00	0.00	0.00	8,500.00	0.00	0.00	0.00	0.00	0.00	0.00
	8,600.00	0.00	0.00	8,600.00	0.00	0.00	0.00	0.00	0.00	0.00
	8,700.00	0.00	0.00	8,700.00	0.00	0.00	0.00	0.00	0.00	0.00
	8,800.00	0.00	0.00	8,800.00	0.00	0.00	0.00	0.00	0.00	0.00
	8,805.00	0.00	0.00	8,805.00	0.00	0.00	0.00	0.00	0.00	0.00
	1st Bone Spr		0.00	0,000.00	0.00	0.00	0.00	0.00	0.00	3.00
	8,900.00	o.00	0.00	8,900.00	0.00	0.00	0.00	0.00	0.00	0.00
	9,000.00	0.00	0.00	9,000.00	0.00	0.00	0.00	0.00	0.00	0.00
	9,100.00	0.00	0.00	9,100.00	0.00	0.00	0.00	0.00	0.00	0.00



Planning Report

Database: EDM 5000.1 Single User Db

Company: XTO Energy

Project: Eddy County, NM (NAD-27)
Site: Poker Lake Unit 26 BD

Well: #167H
Wellbore: OH
Design: PERMIT

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well #167H

RKB=23' @ 3360.00usft RKB=23' @ 3360.00usft

Grid

sigii.		FLIXIVIII								
anned	Survey									
	Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
	9,190.00	0.00	0.00	9,190.00	0.00	0.00	0.00	0.00	0.00	0.00
	9,200.00 9,205.00	0.20 0.30	220.04 220.04	9,200.00 9,205.00	-0.01 -0.03	-0.01 -0.03	0.01 0.03	2.00 2.00	2.00 2.00	0.00 0.00
	2nd Bone Sp	ring Lm								
	9,300.00 9,400.00 9,439.95	2.20 4.20 5.00	220.04 220.04 220.04	9,299.97 9,399.81 9,439.63	-1.62 -5.89 -8.34	-1.36 -4.95 -7.01	1.61 5.88 8.32	2.00 2.00 2.00	2.00 2.00 2.00	0.00 0.00 0.00
	9,500.00 9,600.00 9,615.99	5.00 5.00 5.00	220.04 220.04 220.04	9,499.45 9,599.07 9,615.00	-12.35 -19.02 -20.09	-10.38 -15.98 -16.88	12.32 18.98 20.04	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00
	2nd Bone Sp		220.01	0,010.00	20.00	10.00	20.01	0.00	0.00	0.00
	9,700.00 9,800.00	5.00 5.00	220.04 220.04	9,698.69 9,798.31	-25.69 -32.36	-21.59 -27.20	25.64 32.29	0.00 0.00	0.00 0.00	0.00 0.00
	9,900.00 9,996.43	5.00 5.00	220.04 220.04	9,897.93 9,994.00	-39.03 -45.46	-32.80 -38.21	38.95 45.37	0.00 0.00	0.00 0.00	0.00 0.00
	3rd Bone Spi	ring Lm								
	10,000.00 10,100.00 10,200.00	5.00 5.00 5.00	220.04 220.04 220.04	9,997.55 10,097.17 10,196.79	-45.70 -52.37 -59.04	-38.41 -44.02 -49.62	45.61 52.26 58.92	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00
	10,300.00 10,373.87	5.00 5.00	220.04 220.04	10,296.41 10,370.00	-65.71 -70.64	-55.23 -59.37	65.58 70.50	0.00 0.00	0.00 0.00	0.00 0.00
	Bone Spring	Harkey Sand								
	10,400.00 10,500.00 10,600.00	5.00 5.00 5.00	220.04 220.04 220.04	10,396.03 10,495.65 10,595.27	-72.39 -79.06 -85.73	-60.83 -66.44 -72.05	72.24 78.89 85.55	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00
	10,602.74	5.00	220.04	10,598.00	-85.91	-72.20	85.73	0.00	0.00	0.00
	3rd Bone Spi									
	10,700.00 10,800.00 10,900.00 11,000.00	5.00 5.00 5.00 5.00	220.04 220.04 220.04 220.04	10,694.89 10,794.51 10,894.13 10,993.75	-92.40 -99.07 -105.74 -112.41	-77.65 -83.26 -88.87 -94.47	92.21 98.86 105.52 112.18	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
	11,100.00 11,196.00	5.00 5.00	220.04 220.04	11,093.37 11,189.00	-119.08 -125.48	-100.08 -105.46	118.84 125.23	0.00 0.00	0.00 0.00	0.00 0.00
	Wolfcamp									
	11,200.00 11,222.10	5.00 5.00	220.04 220.04	11,192.99 11,215.00	-125.75 -127.23	-105.69 -106.92	125.49 126.96	0.00 0.00	0.00 0.00	0.00 0.00
	Wolfcamp X 11,267.27	5.00	220.04	11,260.00	-130.24	-109.46	129.97	0.00	0.00	0.00
	Wolfcamp Y									
	11,277.31	5.00	220.04	11,270.00	-130.91	-110.02	130.64	0.00	0.00	0.00
	Wolfcamp A	F 00	220.04	11 202 01	120.40	144.00	100.45	0.00	0.00	0.00
	11,300.00 11,400.00	5.00 5.00	220.04 220.04	11,292.61 11,392.23	-132.42 -139.09	-111.29 -116.90	132.15 138.81	0.00 0.00	0.00 0.00	0.00 0.00
	11,400.00	5.00	220.04	11,392.23	-139.09 -145.76	-116.90	138.81	0.00	0.00	0.00
	11,600.00	5.00	220.04	11,591.47	-152.43	-128.11	152.12	0.00	0.00	0.00
	11,676.83 Wolfcamp B	5.00	220.04	11,668.00	-157.56	-132.42	157.24	0.00	0.00	0.00
	11,700.00	5.00	220.04	11,691.09	-159.11	-133.72	158.78	0.00	0.00	0.00
	11,773.23	5.00	220.04	11,764.04	-163.99	-133.72	163.65	0.00	0.00	0.00
	11,800.00	7.25	206.20	11,790.65	-166.40	-139.32	166.06	10.00	8.41	-51.72
	11,850.00	11.93	195.35	11,839.95	-174.22	-142.08	173.87	10.00	9.37	-21.69
	11,900.00	16.80	190.64	11,888.37	-186.31	-144.79	185.96	10.00	9.73	-9.43



Planning Report

Database: EDM 5000.1 Single User Db

Company: XTO Energy

Project: Eddy County, NM (NAD-27)
Site: Poker Lake Unit 26 BD

Well: #167H
Wellbore: OH
Design: PERMIT

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well #167H

RKB=23' @ 3360.00usft RKB=23' @ 3360.00usft

Grid

sign:	PERMIT								
anned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,950.00	0 21.72	188.01	11,935.56	-202.59	-147.41	202.23	10.00	9.85	-5.26
12,000.00		186.31	11,981.15	-222.92	-149.94	222.55	10.00	9.90	-3.39
12,050.00		185.12	12,024.80	-247.15	-152.34	246.78	10.00	9.93	-2.39
12,100.00		184.22	12,066.18	-275.11	-154.61	274.73	10.00	9.95	-1.80
			,						
12,140.76		183.63	12,098.00	-300.50	-156.35	300.11	10.00	9.96	-1.45
Wolfcamp									
12,150.00		183.51	12,104.96	-306.56	-156.73	306.18	10.00	9.96	-1.30
12,200.00		182.93	12,140.86	-341.29	-158.67	340.90	10.00	9.97	-1.17
12,249.02	2 51.47	182.44	12,173.00	-378.25	-160.40	377.86	10.00	9.97	-0.99
Wolfcamp	Ε								
12,250.00	0 51.57	182.43	12,173.61	-379.01	-160.43	378.62	10.00	9.97	-0.92
12,300.00	0 56.55	182.00	12,202.94	-419.45	-161.99	419.05	10.00	9.98	-0.86
12,350.00		181.62	12,228.65	-462.30	-163.34	461.90	10.00	9.98	-0.77
12,400.00		181.27	12,250.53	-507.22	-164.47	506.82	10.00	9.98	-0.70
12,450.00		180.95	12,268.42	-553.89	-165.37	553.48	10.00	9.98	-0.65
12,500.00		180.64	12,282.18	-601.93	-166.03	601.53	10.00	9.98	-0.61
12,550.00		180.35	12,291.71	-651.00	-166.46	650.59	10.00	9.98	-0.59
12,600.00		180.06	12,296.93	-700.71	-166.64	700.30	10.00	9.98	-0.57
12,636.0		179.86	12,298.00	-736.75	-166.61	736.34	10.00	9.98	-0.56
12,700.00	90.10	179.86	12,297.89	-800.69	-166.45	800.28	0.00	0.00	0.00
12,800.00	90.10	179.86	12,297.71	-900.69	-166.21	900.28	0.00	0.00	0.00
12,900.00	0 90.10	179.86	12,297.54	-1,000.69	-165.96	1,000.28	0.00	0.00	0.00
13,000.00		179.86	12,297.37	-1,100.69	-165.72	1,100.28	0.00	0.00	0.00
13,100.00		179.86	12,297.19	-1,200.69	-165.48	1,200.28	0.00	0.00	0.00
13,200.00		179.86	12,297.02	-1,300.69	-165.23	1,300.28	0.00	0.00	0.00
13,300.00		179.86	12,296.84	-1,400.69	-164.99	1,400.28	0.00	0.00	0.00
13,400.00		179.86	12,296.67	-1,500.69	-164.74	1,500.28	0.00	0.00	0.00
13,500.00		179.86	12,296.49	-1,600.69	-164.50	1,600.28	0.00	0.00	0.00
13,600.00		179.86	12,296.32	-1,700.69	-164.25	1,700.28	0.00	0.00	0.00
13,700.00		179.86	12,296.14	-1,800.68	-164.01	1,800.28	0.00	0.00	0.00
13,800.00	0 90.10	179.86	12,295.97	-1,900.68	-163.76	1,900.28	0.00	0.00	0.00
13,900.00	0 90.10	179.86	12,295.79	-2,000.68	-163.52	2,000.28	0.00	0.00	0.00
14,000.00		179.86	12,295.62	-2.100.68	-163.27	2,100.28	0.00	0.00	0.00
14,100.00		179.86	12,295.45	-2.200.68	-163.03	2,200.28	0.00	0.00	0.00
14,200.00		179.86	12,295.27	-2.300.68	-162.78	2,300.28	0.00	0.00	0.00
14,300.00		179.86	12,295.10	-2,400.68	-162.54	2,400.28	0.00	0.00	0.00
,						,			
14,400.00		179.86	12,294.92	-2,500.68	-162.29	2,500.28	0.00	0.00	0.00
14,500.00		179.86	12,294.75	-2,600.68	-162.05	2,600.28	0.00	0.00	0.00
14,600.00		179.86	12,294.57	-2,700.68	-161.80	2,700.28	0.00	0.00	0.00
14,700.00		179.86	12,294.40	-2,800.68	-161.56	2,800.28	0.00	0.00	0.00
14,800.00	0 90.10	179.86	12,294.22	-2,900.68	-161.31	2,900.28	0.00	0.00	0.00
14,900.00	0 90.10	179.86	12,294.05	-3,000.68	-161.07	3,000.28	0.00	0.00	0.00
15,000.00		179.86	12,293.87	-3,100.68	-160.82	3,100.28	0.00	0.00	0.00
15,100.00		179.86	12,293.70	-3,200.68	-160.58	3,200.28	0.00	0.00	0.00
15,200.00		179.86	12,293.53	-3,300.68	-160.33	3,300.28	0.00	0.00	0.00
15,300.00		179.86	12,293.35	-3,400.68	-160.09	3,400.28	0.00	0.00	0.00
15,400.00		179.86	12,293.18	-3,500.68	-159.85	3,500.28	0.00	0.00	0.00
15,500.00		179.86	12,293.00	-3,600.68	-159.60	3,600.28	0.00	0.00	0.00
15,600.00		179.86	12,292.83	-3,700.68	-159.36	3,700.28	0.00	0.00	0.00
15,700.00		179.86	12,292.65	-3,800.68	-159.11	3,800.28	0.00	0.00	0.00
15,800.00	0 90.10	179.86	12,292.48	-3,900.68	-158.87	3,900.28	0.00	0.00	0.00
15,900.00	90.10	179.86	12,292.30	-4,000.67	-158.62	4,000.28	0.00	0.00	0.00
16,000.00	90.10	179.86	12,292.13	-4,100.67	-158.38	4,100.28	0.00	0.00	0.00
16,100.00		179.86	12,291.95	-4,200.67	-158.13	4,200.27	0.00	0.00	0.00

Prototype Well Planning LLC Planning Report



EDM 5000.1 Single User Db Database: Company:

XTO Energy

Project: Eddy County, NM (NAD-27) Poker Lake Unit 26 BD Site:

Well: #167H ОН Wellbore: Design: PERMIT Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well #167H

RKB=23' @ 3360.00usft RKB=23' @ 3360.00usft

ned Survey									
Measured			Vertical			Vertical	Dogleg	Build	Turn
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Section	Rate	Rate	Rate
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)
16,200.00	90.10	179.86	12,291.78	-4,300.67	-157.89	4,300.27	0.00	0.00	0.00
16,300.00	90.10	179.86	12,291.61	-4,400.67	-157.64	4,400.27	0.00	0.00	0.00
16,400.00	90.10	179.86	12,291.43	-4,500.67	-157.40	4,500.27	0.00	0.00	0.00
16,500.00	90.10	179.86	12,291.26	-4,600.67	-157.15	4,600.27	0.00	0.00	0.00
16,600.00	90.10	179.86	12,291.08	-4,700.67	-156.91	4,700.27	0.00	0.00	0.00
16,700.00	90.10	179.86	12,290.91	-4,800.67	-156.66	4,800.27	0.00	0.00	0.00
16,800.00	90.10	179.86	12,290.73	-4,900.67	-156.42	4,900.27	0.00	0.00	0.00
16,900.00	90.10	179.86	12,290.56	-5,000.67	-156.17	5,000.27	0.00	0.00	0.00
17,000.00	90.10	179.86	12,290.38	-5,100.67	-155.93	5,100.27	0.00	0.00	0.00
17,100.00	90.10	179.86	12,290.21	-5,200.67	-155.68	5,200.27	0.00	0.00	0.00
17,200.00	90.10	179.86	12,290.03	-5,300.67	-155.44	5,300.27	0.00	0.00	0.00
17,300.00	90.10	179.86	12,289.86	-5,400.67	-155.19	5,400.27	0.00	0.00	0.00
17,400.00	90.10	179.86	12,289.69	-5,500.67	-154.95	5,500.27	0.00	0.00	0.00
17,500.00	90.10	179.86	12,289.51	-5,600.67	-154.70	5,600.27	0.00	0.00	0.00
17,600.00	90.10	179.86	12,289.34	-5,700.67	-154.46	5,700.27	0.00	0.00	0.00
17,700.00	90.10	179.86	12,289.16	-5,800.67	-154.22	5,800.27	0.00	0.00	0.00
17,800.00	90.10	179.86	12,288.99	-5,900.67	-153.97	5,900.27	0.00	0.00	0.00
17,900.00	90.10	179.86	12,288.81	-6,000.67	-153.73	6,000.27	0.00	0.00	0.00
18,000.00	90.10	179.86	12,288.64	-6,100.67	-153.48	6,100.27	0.00	0.00	0.00
18,100.00	90.10	179.86	12,288.46	-6,200.66	-153.24	6,200.27	0.00	0.00	0.00
18,200.00	90.10	179.86	12,288.29	-6,300.66	-152.99	6,300.27	0.00	0.00	0.00
18,300.00	90.10	179.86	12,288.11	-6,400.66	-152.75	6,400.27	0.00	0.00	0.00
18,400.00	90.10	179.86	12,287.94	-6,500.66	-152.50	6,500.27	0.00	0.00	0.00
18,500.00	90.10	179.86	12,287.77	-6,600.66	-152.26	6,600.27	0.00	0.00	0.00
18,600.00	90.10	179.86	12,287.59	-6,700.66	-152.01	6,700.27	0.00	0.00	0.00
18,700.00	90.10	179.86	12,287.42	-6,800.66	-151.77	6,800.27	0.00	0.00	0.00
18,800.00	90.10	179.86	12,287.24	-6,900.66	-151.52	6,900.27	0.00	0.00	0.00
18,900.00	90.10	179.86	12.287.07	-7,000.66	-151.28	7,000.27	0.00	0.00	0.00
19,000.00	90.10	179.86	12,286.89	-7,100.66	-151.03	7,100.27	0.00	0.00	0.00
19,100.00	90.10	179.86	12,286.72	-7,200.66	-150.79	7,200.27	0.00	0.00	0.00
19,200.00	90.10	179.86	12,286.54	-7,300.66	-150.54	7,300.27	0.00	0.00	0.00
19,300.00	90.10	179.86	12,286.37	-7,400.66	-150.30	7,400.27	0.00	0.00	0.00
19,400.00	90.10	179.86	12.286.19	-7,500.66	-150.05	7,500.27	0.00	0.00	0.00
19,500.00	90.10	179.86	12,286.02	-7,600.66	-149.81	7,600.27	0.00	0.00	0.00
19,600.00	90.10	179.86	12,285.85	-7,700.66	-149.56	7,700.27	0.00	0.00	0.00
19,700.00	90.10	179.86	12,285.67	-7,800.66	-149.32	7,800.27	0.00	0.00	0.00
19,800.00	90.10	179.86	12,285.50	-7,900.66	-149.08	7,900.27	0.00	0.00	0.00
19,900.00	90.10	179.86	12,285.32	-8,000.66	-148.83	8,000.27	0.00	0.00	0.00
19,941.86	90.10	179.86	12,285.25	-8,042.52	-148.73	8,042.13	0.00	0.00	0.00
20,000.00	90.10	179.86	12,285.15	-8,100.66	-148.59	8,100.27	0.00	0.00	0.00
20,000.00	90.10	179.86	12,285.02	-8,172.53	-148.41	8,172.14	0.00	0.00	0.00



Planning Report

Database: EDM 5000.1 Single User Db

Company: XTO Energy

Project: Eddy County, NM (NAD-27)
Site: Poker Lake Unit 26 BD

Well: #167H
Wellbore: OH
Design: PERMIT

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well #167H

RKB=23' @ 3360.00usft RKB=23' @ 3360.00usft

Grid

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PLU 26 BD #167H: SHL - plan hits target cent - Point	0.00 ter	0.00	0.00	0.00	0.00	401,217.70	651,068.70	32.102124	-103.845468
PLU 26 BD #167H: PBH - plan hits target cent - Point	0.00 ter	0.00	12,285.02	-8,172.53	-148.41	393,045.70	650,920.30	32.079661	-103.846066
PLU 26 BD #167H: LTP - plan misses target of Point	0.00 center by 0.28	0.00 Jusft at 1994	12,285.25 1.86usft MD	-8,042.52 (12285.25 TV	-149.01 'D, -8042.52 N	393,175.70 I, -148.73 E)	650,919.70	32.080019	-103.846066
PLU 26 BD #167H: FTP, - plan hits target cent - Point	0.00 ter	0.00	12,298.00	-736.75	-166.61	400,481.00	650,902.10	32.100101	-103.846017

Formations						
	Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
	998.00	998.00	Rustler			
	1,148.00	1,148.00	Top Salt			
	3,906.00	3,906.00	Base Salt			
	3,998.00	3,998.00	Delaware			
	4,962.00	4,962.00	Cherry Canyon			
	6,500.00	6,500.00	Brushy Canyon			
	7,830.00	7,830.00	Bone Spring			
	8,805.00	8,805.00	1st Bone Spring Ss			
	9,205.00	9,205.00	2nd Bone Spring Lm			
	9,615.99	9,615.00	2nd Bone Spring Ss			
	9,996.43	9,994.00	3rd Bone Spring Lm			
	10,373.87	10,370.00	Bone Spring Harkey Sand			
	10,602.74	10,598.00	3rd Bone Spring Ss			
	11,196.00	11,189.00	Wolfcamp			
	11,222.10	11,215.00	Wolfcamp X			
	11,267.27	11,260.00	Wolfcamp Y			
	11,277.31	11,270.00	Wolfcamp A			
	11,676.83	11,668.00	Wolfcamp B			
	12,140.76	12,098.00	Wolfcamp D			
	12,249.02	12,173.00	Wolfcamp E			

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy, Minerals and Natural Resources Department

Submit Original to Appropriate District Office

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

GAS CAPTURE PLAN

Date: <u>10/17/2019</u>	
☑ Original☐ Amended - Reason for Amendment:	Operator & OGRID No.: XTO Permian Operating, LLC [373075]

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomplete to new zone, re-frac) activity.

Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).

Well(s)/Production Facility - Name of facility: Poker Lake Unit 26 BD East CTB

The well(s) that will be located at the production facility are shown in the table below.

Well Name	API	Well Location	Footages	Expected MCF/D	Flared or	Comments
		(ULSTR)		MICF/D	Vented	
Poker Lake Unit 26 BD 105H		G-26-25S-30E	2340'FNL & 2145'FEL	2800	Flared/Sold	
Poker Lake Unit 26 BD 125H		G-26-25S-30E	2310'FNL & 2145'FEL	2800	Flared/Sold	
Poker Lake Unit 26 BD 165H		G-26-25S-30E	2280'FNL & 2145'FEL	2800	Flared/Sold	
Poker Lake Unit 26 BD 106H		G-26-25S-30E	2340'FNL & 1845'FEL	2800	Flared/Sold	
Poker Lake Unit 26 BD 126H		G-26-25S-30E	2310'FNL & 1845'FEL	2800	Flared/Sold	
Poker Lake Unit 26 BD 156H		G-26-25S-30E	2280'FNL & 1845'FEL	2800	Flared/Sold	
Poker Lake Unit 26 BD 107H		H-26-25S-30E	2340'FNL & 825'FEL	2800	Flared/Sold	
Poker Lake Unit 26 BD 127H		H-26-25S-30E	2310'FNL & 825'FEL	2800	Flared/Sold	
Poker Lake Unit 26 BD 167H		H-26-25S-30E	2280'FNL & 825'FEL	2800	Flared/Sold	
Poker Lake Unit 26 BD 108H		H-26-25S-30E	2340'FNL & 524'FEL	2800	Flared/Sold	
Poker Lake Unit 26 BD 128H		H-26-25S-30E	2310'FNL & 525'FEL	2800	Flared/Sold	
Poker Lake Unit 26 BD 158H		H-26-25S-30E	2280'FNL & 525'FEL	2800	Flared/Sold	

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to <u>LUCID</u> and will be connected to <u>LUCID</u> low/high pressure gathering system located in Eddy County, New Mexico. It will require <u>2442.44'</u> of pipeline to connect the facility to low/high pressure gathering system. <u>XTO PERMIAN OPERATING, LLC</u> provides (periodically) to <u>LUCID</u> a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, <u>XTO PERMIAN OPERATING, LLC</u> and <u>LUCID</u> have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at <u>Red Hills Processing Plant</u> located in Sec.32, Twn. T32S, Rng 28E, Eddy County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on <u>LUCID</u> system at that time. Based on current information, it is <u>XTO PERMIAN OPERATING</u>, LLC's belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

Alternatives to Reduce Flaring

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation On lease
 - o Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas On lease
 - o Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal On lease
 - o Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy, Minerals and Natural Resources Department

Submit Original to Appropriate District Office

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

GAS CAPTURE PLAN

Date: <u>10/17/2019</u>	
⊠ Original	Operator & OGRID No.: XTO Permian Operating, LLC [373075]
☐ Amended - Reason for Amendment:	

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomplete to new zone, re-frac) activity.

Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).

Well(s)/Production Facility - Name of facility: Poker Lake Unit 26 BD West CTB

The well(s) that will be located at the production facility are shown in the table below.

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
Poker Lake Unit 26 BD 105H		G-26-25S-30E	2340'FNL & 2145'FEL	2800	Flared/Sold	
Poker Lake Unit 26 BD 125H		G-26-25S-30E	2310'FNL & 2145'FEL	2800	Flared/Sold	
Poker Lake Unit 26 BD 165H		G-26-25S-30E	2280'FNL & 2145'FEL	2800	Flared/Sold	
Poker Lake Unit 26 BD 106H		G-26-25S-30E	2340'FNL & 1845'FEL	2800	Flared/Sold	
Poker Lake Unit 26 BD 126H		G-26-25S-30E	2310'FNL & 1845'FEL	2800	Flared/Sold	
Poker Lake Unit 26 BD 156H		G-26-25S-30E	2280'FNL & 1845'FEL	2800	Flared/Sold	
Poker Lake Unit 26 BD 107H		H-26-25S-30E	2340'FNL & 825'FEL	2800	Flared/Sold	
Poker Lake Unit 26 BD 127H		H-26-25S-30E	2310'FNL & 825'FEL	2800	Flared/Sold	
Poker Lake Unit 26 BD 167H		H-26-25S-30E	2280'FNL & 825'FEL	2800	Flared/Sold	
Poker Lake Unit 26 BD 108H		H-26-25S-30E	2340'FNL & 524'FEL	2800	Flared/Sold	
Poker Lake Unit 26 BD 128H		H-26-25S-30E	2310'FNL & 525'FEL	2800	Flared/Sold	
Poker Lake Unit 26 BD 158H		H-26-25S-30E	2280'FNL & 525'FEL	2800	Flared/Sold	

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to <u>LUCID</u> and will be connected to <u>LUCID</u> low/high pressure gathering system located in Eddy County, New Mexico. It will require 831.58 of pipeline to connect the facility to low/high pressure gathering system. XTO PERMIAN OPERATING, <u>LLC</u> provides (periodically) to <u>LUCID</u> a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, XTO PERMIAN OPERATING, <u>LLC</u> and <u>LUCID</u> have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at <u>Red Hills Processing Plant</u> located in Sec.32, Twn. T32S, Rng 28E, Eddy County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on <u>LUCID</u> system at that time. Based on current information, it is <u>XTO PERMIAN OPERATING, LLC's</u> belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

Alternatives to Reduce Flaring

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation On lease
 - o Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas On lease
 - o Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal On lease
 - o Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines

Received by OCD: 1/24/2021 5:31:56 PM



CORPUS CHRISTI, TEXAS 78405

GATES E & S NORTH AMERICA, INC

361-887-0812 :XA7 PHONE: 361-887-9807

www.gates.com MEB: EMAIL: crpe&s@gates.com

D-000814-1 10Z/8/9

501105 PENDING DNITUBIRTZIO MITZUA

1Sd 000'S

1009-1221

4 1/16 ID.5K FLG

Invoice Mo.: Customer Ref.:

134 44TH STREET

DU-TEX

Product Description:

Vorking Pressure:

Gates Part No. :

: I grilling 1 :

Created By: Hose Senal No.: Test Date:

Test Pressure:

End Fitting 2:

Assembly Code:

FD3.042.0R41/16.5KFLGE/E LE

Customer:

GRADE D PRESSURE TEST CERTIFICATE

minimum of 2.5 times the working pressure per Table 9. to 7,500 psi in accordance with this product number. Hose burst pressure 9.6.7.2 exceeds the hydrostatic test per API Spec 7K/Q1, Fifth Edition, June 2010, Test pressure 9.6.7 and per Table 9

12500 PSI

133090011213D-060814-1

4 1/10 in.5K FLG

NORMA

P/8/5014

PRODUCTION

: Signature : : ol60 Technical Supervisor:

Gates Oilfield Roughneck Agreement/Specification requirements and passed the 15 minute Gates E & S North America, Inc. certifies that the following hose assembly has been tested to the

FEN7/8/9 YTIJAUD

: aimengis

: plo0 Quality:

Form PTC - 01 Rev.0 2

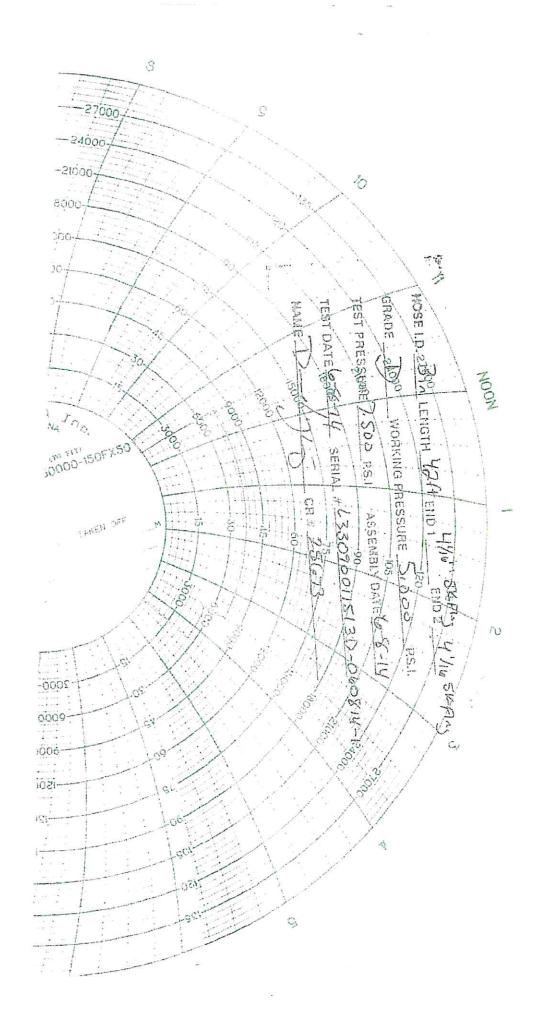
BR B 0-15000-8-1H

त

£0005 -0009

-80007 FOOOL

-0006

10,000 PSI Annular BOP Variance Request

XTO Energy/XTO Permian Op. request a variance to use a 5000 psi annular BOP with a 10,000 psi BOP stack. The component and compatibility tables along with the general well control plans demonstrate how the 5000 psi annular BOP will be protected from pressures that exceed its rated working pressure (RWP). The pressure at which the control of the wellbore is transferred from the annular preventer to another available preventer will not exceed 3500 psi (70% of the RWP of the 5000 psi annular BOPL).

1. Component and Preventer Compatibility Tables

The tables below outline the tubulars and the compatible preventers in use. This table, combined with the drilling fluid, documents that two barriers to flow will be maintained at all times.

8-1/2" Production Hole Section 10M psi Requirement					
Component	OD	Primary Preventer	RWP	Alternate Preventer(s)	RWP
Drillpipe	5.000" or	Annular	5M	Upper 3.5"-5.5" VBR	10M
	4.500"			Lower 3.5"-5.5" VBR	10M
HWDP	5.000" or	Annular	5M	Upper 3.5"-5.5" VBR	10M
	4.500"			Lower 3.5"-5.5" VBR	10M
Jars	6.500"	Annular	5M	-	-
DCs and MWD tools	6.500"-8.000"	Annular	5M	-	-
Mud Motor	6.750"-8.000"	Annular	5M	-	-
Production Casing	5-1/2"	Annular	5M	-	-
Open-Hole	-	Blind Rams	10M	-	-

2. Well Control Procedures

Below are the minimal high-level tasks prescribed to assure a proper shut-in while drilling, tripping, running casing, pipe out of the hole (open hole), and moving the BHA through the BOPs. At least one well control drill will be performed weekly per crew to demonstrate compliance with the procedure and well control plan. The well control drill will be recorded in the daily drilling log. The type of drill will be determined by the ongoing operations, but reasonable attempts will be made to vary the type of drill conducted (pit, trip, open hole, choke, etc.). This well control plan will be available for review by rig personnel in the XTO Energy/Permian Operating drilling supervisor's office on location and on the rig floor. All BOP equipment will be tested as per Onshore O&G Order No. 2 with the exception of the 5000 psi annular which will be tested to 70% of its RWP.

General Procedure While Drilling

- 1. Sound alarm (alert crew)
- 2. Space out drill string
- 3. Shut down pumps (stop pumps and rotary)
- 4. Shut-in well (uppermost applicable BOP, typically annular preventer, first. HCR & choke will already be in the closed position.)
- 5. Confirm shut-in
- 6. Notify toolpusher/company representative
- 7. Read and record the following:
 - a. SIDPP & SICP
 - b. Pit gain
 - c. Time
- 8. Regroup and identify forward plan

9. If pressure has built or is anticipated during the kill to reach 70% or greater of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure While Tripping

- 1. Sound alarm (alert crew)
- 2. Stab full-opening safety valve & close
- 3. Space out drill string
- 4. Shut-in well (uppermost applicable BOP, typically annular preventer, first. HCR & choke will already be in the closed position.)
- 5. Confirm shut-in
- 6. Notify toolpusher/company representative
- 7. Read and record the following:
 - a. SIDPP & SICP
 - b. Pit gain
 - c. Time
- 8. Regroup and identify forward plan
- 9. If pressure has built or is anticipated during the kill to reach 70% of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure While Running Production Casing

- 1. Sound alarm (alert crew)
- 2. Stab crossover and full-opening safety valve and close
- 3. Space out string
- 4. Shut-in well (uppermost applicable BOP, typically annular preventer, first. HCR & choke will already be in the closed position.)
- 5. Confirm shut-in
- 6. Notify toolpusher/company representative
- 7. Read and record the following:
 - a. SIDPP & SICP
 - b. Pit gain
 - c. Time
- 8. Regroup and identify forward plan
- 9. If pressure has built or is anticipated during the kill to reach 70% or greater of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure With No Pipe In Hole (Open Hole)

- 1. Sound alarm (alert crew)
- 2. Shut-in with blind rams (HCR & choke will already be in the closed position)
- 3. Confirm shut-in
- 4. Notify toolpusher/company representative
- 5. Read and record the following:
 - a. SICP
 - b. Pit gain
 - c. Time
- 6. Regroup and identify forward plan

General Procedures While Pulling BHA Through Stack

- 1. PRIOR to pulling last joint of drillpipe through stack:
 - a. Perform flow check. If flowing, continue to (b).
 - b. Sound alarm (alert crew)
 - c. Stab full-opening safety valve and close
 - d. Space out drill string with tool joint just beneath the upper variable bore rams
 - e. Shut-in using upper variable bore rams (HCR & choke will already be in the closed position)
 - f. Confirm shut-in
 - g. Notify toolpusher/company representative
 - h. Read and record the following:
 - i. SIDPP & SICP
 - ii. Pit gain
 - iii. Time
 - i. Regroup and identify forward plan
- 2. With BHA in the stack and compatible ram preventer and pipe combination immediately available:
 - a. Sound alarm (alert crew)
 - b. Stab crossover and full-opening safety valve and close
 - c. Space out drill string with upset just beneath the upper variable bore rams
 - d. Shut-in using upper variable bore rams (HCR & choke will already be in the closed position)
 - e. Confirm shut-in
 - f. Notify toolpusher/company representative
 - g. Read and record the following:
 - i. SIDPP & SICP

- ii. Pit gain
- iii. Time
- h. Regroup and identify forward plan
- 3. With BHA in the stack and NO compatible ram preventer and pipe combination immediately available:
 - a. Sound alarm (alert crew)
 - b. If possible, pull string clear of the stack and follow "Open Hole" procedure.
 - c. If impossible to pull string clear of the stack:
 - d. Stab crossover, make up one joint/stand of drillpipe and full-opening safety valve and close
 - e. Space out drill string with tooljoint just beneath the upper variable bore ram
 - f. Shut-in using upper variable bore ram (HCR & choke will already be in the closed position)
 - g. Confirm shut-in
 - h. Notify toolpusher/company representative
 - i. Read and record the following:
 - i. SIDPP & SICP
 - ii. Pit gain
 - iii. Time
 - j. Regroup and identify forward plan

<u>District I</u> 1625 N. French Dr., Hobbs, NM 88240 Phone:(575) 393-6161 Fax:(575) 393-0720

811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III
1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division 1220 S. St Francis Dr. **Santa Fe, NM 87505**

COMMENTS

Action 15468

COMMENTS

Operator:			OGRID:	Action Number:	Action Type:
XTO PERMIA	AN OPERATING LLC.	6401 HOLIDAY HILL ROAD	373075	15468	FORM 3160-3
BUILDING 5	MIDLAND, TX79707				

Created By	Comment	Comment Date
kpickford	KP GEO Review 1/25/2021	01/25/2021

<u>District I</u> 1625 N. French Dr., Hobbs, NM 88240 Phone:(575) 393-6161 Fax:(575) 393-0720

811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III
1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division 1220 S. St Francis Dr. **Santa Fe, NM 87505**

CONDITIONS

Action 15468

CONDITIONS OF APPROVAL

Operator:			OGRID:	Action Number:	Action Type:
	IIAN OPERATING LLC.	6401 HOLIDAY HILL ROAD	373075	15468	FORM 3160-3
BUILDING 5	MIDLAND, TX79707				

OCD Reviewer	Condition
kpickford	Notify OCD 24 hours prior to casing & cement
kpickford	Will require a File As Drilled C-102 and a Directional Survey with the C-104
kpickford	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
kpickford	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system