Form 3160-3
(June 2015)

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMNM0002953

6. If Indian, Allotee or Tribe Name
327327

1a. Type of work: ☑ DRILL ☐ REENTER

1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other

1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☑ Multiple Zone

7. If Unit or CA Agreement, Name and No.
JAMES RANCH / NMNM070965X

8. Lease Name and Well No.
JAMES RANCH UNIT DI 8 BS3-3E
280H

2. Name of Operator
XTO PERMIAN OPERATING LLC

9. API Well No.
30-015-46908

3a. Address
6401 Holiday Hill Road, Bldg 5 Midland TX 79707

3b. Phone No. *(include area code)*
(432)682-8873

10. Field and Pool, or Exploratory
GATUNA CANYON; BONE SPRING

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface SENW / 1901 FNL / 2022 FWL / LAT 32.350615 / LONG -103.836377

At proposed prod. zone SENE / 1650 FNL / 200 FEL / LAT 32.350734 / LONG -103.80911

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 36 / T22S / R30E / NMP

14. Distance in miles and direction from nearest town or post office*

12. County or Parish
EDDY

13. State
NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)
200 feet

16. No of acres in lease
800.86

17. Spacing Unit dedicated to this well
240

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
60 feet

19. Proposed Depth
11047 feet / 18659 feet

20. BLM/BIA Bond No. in file
FED: COB000050

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3317 feet

22. Approximate date work will start*
01/01/2019

23. Estimated duration
90 days

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.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be requested by the BLM.

25. Signature
(Electronic Submission)

Name *(Printed/Typed)*
Kelly Kardos / Ph: (432)620-4374

Date
08/15/2018

Title
Regulatory Coordinator

Approved by *(Signature)*
(Electronic Submission)

Name *(Printed/Typed)*
Cody Layton / Ph: (575)234-5959

Date
03/18/2020

Title
Assistant Field Manager Lands & Minerals

Office
CARLSBAD

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

APPROVED WITH CONDITIONS

kms 3/23/2020

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 03/18/2020

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
District IV
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 Number	[2] Pool Code	[3] Pool Name
30-015-	40295	LOS MEDANOS; BS kms 3/23/2020

[4] Property Code	[5] Property Name	[6] Well Number
327327	JAMES RANCH UNIT DI 8 BS3-3E	280H

[7] OGRID No.	[8] Operator Name	[9] Elevation
373075	XTO PERMIAN OPERATING, LLC.	3,317'

[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
F	36	22 S	30 E		1,901	NORTH	2,022	WEST	EDDY

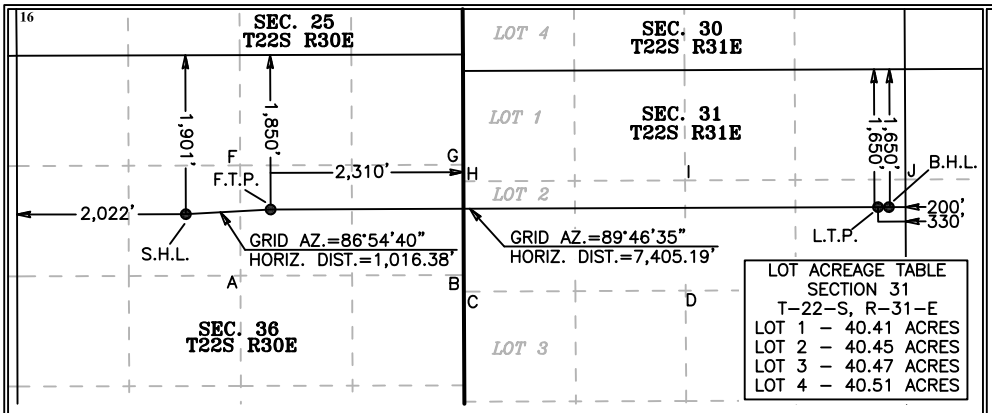
[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	31	22 S	31 E		1,650	NORTH	200	EAST	EDDY

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
240.45	kms 3/23/2020		

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.

[16]



LOT ACREAGE TABLE
SECTION 31
T-22-S, R-31-E
LOT 1 – 40.41 ACRES
LOT 2 – 40.45 ACRES
LOT 3 – 40.47 ACRES
LOT 4 – 40.51 ACRES

GEODETIC COORDINATES
NAD 27 NME
SURFACE LOCATION
Y= 491,581.6
X= 653,617.5
LAT.= 32.350492°N
LONG.= 103.835886°W

LAST TAKE POINT
NAD 27 NME
Y= 491,664.7
X= 661,907.5
LAT.= 32.350612°N
LONG.= 103.809041°W

GEODETIC COORDINATES
NAD 83 NME
SURFACE LOCATION
Y= 491,641.6
X= 694,799.7
LAT.= 32.350615°N
LONG.= 103.836377°W

LAST TAKE POINT
NAD 83 NME
Y= 491,724.7
X= 703,089.7
LAT.= 32.350734°N
LONG.= 103.809531°W

FIRST TAKE POINT
NAD 27 NME
Y= 491,636.3
X= 654,632.4
LAT.= 32.350630°N
LONG.= 103.832598°W

BOTTOM HOLE LOCATION
NAD 27 NME
Y= 491,665.2
X= 662,037.5
LAT.= 32.350612°N
LONG.= 103.808620°W

FIRST TAKE POINT
NAD 83 NME
Y= 491,696.3
X= 695,814.6
LAT.= 32.350752°N
LONG.= 103.833090°W

BOTTOM HOLE LOCATION
NAD 83 NME
Y= 491,725.2
X= 703,219.7
LAT.= 32.350734°N
LONG.= 103.809110°W

CORNER COORDINATES TABLE
NAD 27 NME
A – Y= 490,837.4 N, X= 654,271.6 E
B – Y= 490,852.1 N, X= 656,945.3 E
C – Y= 490,653.9 N, X= 656,946.3 E
D – Y= 490,665.1 N, X= 659,602.9 E
E – Y= 490,676.2 N, X= 662,242.3 E
F – Y= 492,164.7 N, X= 654,267.2 E
G – Y= 492,172.2 N, X= 656,940.3 E
H – Y= 491,974.6 N, X= 656,941.1 E
I – Y= 491,985.4 N, X= 659,596.1 E
J – Y= 491,996.1 N, X= 662,235.8 E

CORNER COORDINATES TABLE
NAD 83 NME
A – Y= 490,897.4 N, X= 695,453.8 E
B – Y= 490,912.1 N, X= 698,127.5 E
C – Y= 490,713.9 N, X= 698,128.5 E
D – Y= 490,725.1 N, X= 700,785.2 E
E – Y= 490,736.2 N, X= 703,424.6 E
F – Y= 492,224.7 N, X= 695,449.4 E
G – Y= 492,232.2 N, X= 698,122.5 E
H – Y= 492,034.6 N, X= 698,123.3 E
I – Y= 492,045.4 N, X= 700,778.3 E
J – Y= 492,056.1 N, X= 703,418.0 E

[17] OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Stephanie Rabadue 12/05/2019
Signature Date

Stephanie Rabadue
Printed Name

stephanie_rabadue@xtoenergy.com
E-mail Address

[18] SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

12-05-2019
Date of Survey

Signatue and Seal of Professional Surveyor:

MARK DILLON HARP NEW MEXICO 23786 PROFESSIONAL SURVEYOR

MARK DILLON HARP 23786
Certificate Number AW/AI 2018040975

P:\PROJECTS\2018\2018040975-XTO-JAMES_RANCH_UNIT_DI_8_280H-EDDY\DWG\2018040975-XTO-JAMES_RANCH_UNIT_DI_8_280H_C-102.dwg

INSTRUCTIONS

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

ITEM I: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the wen, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionany drilled, give distances for subsurface location of hole in any present or objective productive zone.

ITEM 22: Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

ITEM 24: If the proposal will involve hydraulic fracturing operations, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160

PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service wen or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.

ROUTINE USE: Information from the record and/or the record win be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:
The BLM conects this information to anow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Conection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

(Continued on page 3)

Intent [Y] As Drilled [ ]

API #

Operator Name:	Property Name:	Well Number
XTO PERMIAN OPERATING, LLC	James Ranch Unit DI 8 BS3-3E	280H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
F	36	22S	30E		1901	North	2022	West	Eddy

Latitude	Longitude	NAD
32.350615	-103.836377	83

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
G	36	22S	30E		1850	North	2310	East	Eddy

Latitude	Longitude	NAD
32.350752	-103.833090	83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
H	31	22S	31E		1650	North	200	East	Eddy

Latitude	Longitude	NAD
32.350734	-103.809531	83

Is this well the defining well for the Horizontal Spacing Unit? [Y]

Is this well an infill well? [N]

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #

Operator Name:	Property Name:	Well Number
XTO PERMIAN OPERATING, LLC		

KZ 06/29/2018

Additional Operator Remarks

Location of Well

1. SHL: SENW / 1901 FNL / 2022 FWL / TWSP: 22S / RANGE: 30E / SECTION: 36 / LAT: 32.350615 / LONG: -103.836377 (TVD: 0 feet, MD: 0 feet)
   PPP: SWNE / 1850 FNL / 2310 FEL / TWSP: 22S / RANGE: 30E / SECTION: 36 / LAT: 32.350752 / LONG: -103.83309 (TVD: 10916 feet, MD: 11300 feet)
   BHL: SENE / 1650 FNL / 200 FEL / TWSP: 22S / RANGE: 31E / SECTION: 31 / LAT: 32.350734 / LONG: -103.80911 (TVD: 11047 feet, MD: 18659 feet)

BLM Point of Contact

Name: Tenille Ortiz
Title: Legal Instruments Examiner
Phone: 5752342224
Email: tortiz@blm.gov

Review and Appeal Rights

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**XTO Permian Operating, LLC.**
LEASE NO.:	**NMNM-0002953**
WELL NAME & NO.:	**James Ranch Unit DI 8 BS3-3E 280H**
SURFACE HOLE FOOTAGE:	**1901' FNL & 2022' FWL**
BOTTOM HOLE FOOTAGE	**1650' FNL & 0200' FEL Sec. 31, T.22 S., R.31 E.**
LOCATION:	**Section 36, T.22 S., R.30 E., NMPM**
COUNTY:	**Eddy County, New Mexico**

COA

H2S	(•) Yes	( ) No	
Potash	( ) None	( ) Secretary	(•) R-111-P
Cave/Karst Potential	( ) Low	(•) Medium	( ) High
Cave/Karst Potential	( ) Critical		
Variance	( ) None	(•) Flex Hose	( ) Other
Wellhead	( ) Conventional	(•) Multibowl	( ) Both
Other	[ ] 4 String Area	[ ] Capitan Reef	[x] WIPP
Other	[x] Fluid Filled	[ ] Cement Squeeze	[ ] Pilot Hole
Special Requirements	[ ] Water Disposal	[ ] COM	[x] Unit

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the **Salado** formation. As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

R-111-P-Potash/WIPP
Medium Cave/Karst
Possibility of water flows in the Salado and Castile.
Possibility of lost circulation in the Rustler and Delaware.
Abnormal pressure may be encountered within the 3rd Bone Spring Sandstone and the Wolfcamp formation.

B. CASING

1. The **18-5/8** inch surface casing shall be set at approximately **562** 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 **24 hours in the Potash Area** 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.

    13-3/8 inch 1st Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

2. The minimum required fill of cement behind the **13-3/8** inch 1st 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 and potash.**

9-5/8 inch 2nd Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

3. The minimum required fill of cement behind the **9-5/8** inch 2nd intermediate casing is:

   Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. DV tool shall be set a minimum of 50' below previous shoe and a minimum of 200' above current shoe**.** The DV tool may be cancelled if cement circulates to surface on the first stage.

   - First stage to DV tool:
     - Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
   - Second stage above DV tool:
     - Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to potash.**

   ❖ In WIPP Areas cement must come to surface on the first three casing strings.

4. The minimum required fill of cement behind the **5-1/2** inch production casing is:

   - Cement should tie-back **500 feet** into the previous casing. Operator shall provide method of verification. **Excess calculates to 7% - Additional cement may be required.**

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. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M)** psi.

3. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the 13-3/8 inch 1st intermediate casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 13-3/8 inch 1st intermediate casing shoe shall be **5000 (5M)** 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.

WIPP Requirements

The proposed well is located within 330' of the WIPP Land Withdrawal Area boundary. As a result, XTO Permian Operating, LLC is required to submit daily drilling reports, logs and deviation survey information to the Bureau of Land Management and the Department of Energy per requirements of the Joint Powers Agreement until a total vertical depth of 7,000 feet is reached. These reports will have at a minimum the rate of penetration and a clearly marked section showing the deviation for each 500 foot interval. Operator may be required to do more frequent deviation surveys based on the daily information submitted and may be required to take other corrective measures. Information from this well will be included in the Quarterly Drilling Report. Information will also be provided to the New Mexico Oil Conservation Division after drilling activities have been completed. Upon completion of the well, the operator shall submit a complete directional survey. Any future entry into the well for purposes of completing additional drilling will require supplemental information.

XTO Permian Operating, LLC can email the required information to Mr. Melvin Balderrama at Melvin.Balderama@wipp.ws or Mr. J. Neatherlin at Jimmy.Neatherlin@wipp.ws fax to his attention at 575-234-6062.

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

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.

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. 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.

4. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

5. 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.

6. 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.

7. 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.

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. 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).

    b. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer.

    c. 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.

    d. The results of the test shall be reported to the appropriate BLM office.

    e. 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.

    f. 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.

    g. 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.

JAM 011520

APD ID: 10400033077 **Submission Date:** 08/15/2018

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: JAMES RANCH UNIT DI 8 BS3-3E **Well Number:** 280H

Well Type: OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
286140	---	3317	0	0	ALLUVIUM, OTHER : Quaternary	NONE	N
286131	RUSTLER	3030	287	287	SANDSTONE	USEABLE WATER	N
286132	TOP SALT	2730	587	587	SALT	POTASH	N
286133	BASE OF SALT	-270	3587	3587	SALT	POTASH	N
286135	DELAWARE	-510	3827	3827	MARL, SANDSTONE	NATURAL GAS, OIL, OTHER : Produced Water	N
286129	BONE SPRING 1ST	-5411	8728	8728	SANDSTONE	NATURAL GAS, OTHER, POTASH : Produced Water	N
286130	BONE SPRING 2ND	-6249	9566	9566	SANDSTONE	NATURAL GAS, OIL, OTHER : Produced Water	Y
286143	BONE SPRING 3RD	-7219	10536	10536		NATURAL GAS, OIL, OTHER : Produced Water	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 2M **Rating Depth:** 562

Equipment: The blow out preventer equipment (BOP) on surface casing temporary wellhead will consist of a 21-1/4” minimum 2M Hydril.

Requesting Variance? YES

Variance request: 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.

Testing Procedure: All BOP testing will be done by an independent service company. Annular pressure tests will be limited to 50% of the working pressure. When nippling up on the 21-1/4", 2M bradenhead and flange, the BOP test will be limited to 2000 psi. All BOP tests will include a low pressure test as per BLM regulations. The 2M BOP diagrams are attached. Blind rams will be functioned tested each trip, pipe rams will be functioned tested each day. 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 5M Double Ram BOP.

Choke Diagram Attachment:

JRU_DI_8_2MCM_20190525071357.pdf

BOP Diagram Attachment:

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: JAMES RANCH UNIT DI 8 BS3-3E **Well Number:** 280H

JRU_DI_8_2MCM_20190525071357.pdf

JRU_DI_8_2MBOP_20190525071403.pdf

Pressure Rating (PSI): 5M **Rating Depth:** 11047

Equipment: The blow out preventer equipment (BOP) for the permanent wellhead consists of a 13-5/8” minimum 5M Hydril and a 13-5/8” minimum 5M Double Ram BOP.
Requesting Variance? YES

Variance request: 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. Wellhead: Temporary Wellhead · 18-5/8" SOW bottom x 21-1/4" 2M top flange. · Permanent Wellhead – GE RSH Multibowl System A. Starting Head: 13-5/8” 5M top flange x 13-3/8” SOW bottom B. Tubing Head: 13-5/8” 5M bottom flange x 7-1/16” 10M top flange · Wellhead will be installed by manufacturer’s representatives. · Manufacturer will monitor welding process to ensure appropriate temperature of seal. · Operator will test the 9-5/8" casing per BLM Onshore Order 2 · Wellhead Manufacturer representative will not be present for BOP test plug installation
Testing Procedure: All BOP testing will be done by an independent service company. Annular pressure tests will be limited to 50% of the working pressure. When nippling up on the 13-5/8” 5M bradenhead and flange, the BOP test will be limited to 5000psi. All BOP tests will include a low pressure test as per BLM regulations. The 5M BOP diagrams are attached. Blind rams will be functioned tested each trip, pipe rams will be functioned tested each day. Because the 9-5/8” casing will be run with a mandrel hanger through the 13-3/8” BOP without breaking any connections, no additional pressure test would be required.
Choke Diagram Attachment:

JRU_DI_8_5MCM_20180815105733.pdf

BOP Diagram Attachment:

JRU_DI_8_5MBOP_20180815105745.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	24	18.625	NEW	API	N	0	562	0	562			562	H-40	87.5	ST&C	2.48	1.41	DRY	11.37	DRY	11.37
2	INTERMEDIATE	17.5	13.375	NEW	API	N	0	3777	0	3777			3777	J-55	68	ST&C	1.67	1.59	DRY	2.63	DRY	2.63
3	INTERMEDIATE	12.25	9.625	NEW	API	N	0	8372	0	8372			8372	HCL-80	40	LT&C	2.42	1.71	DRY	2.17	DRY	2.17

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: JAMES RANCH UNIT DI 8 BS3-3E **Well Number:** 280H

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
4	PRODUCTION	8.75	5.5	NEW	API	N	0	18659	0	11047			18659	P-110	17	BUTT	1.29	1.12	DRY	2.34	DRY	2.34

Casing Attachments

Casing ID: 1 **String Type:** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

JRU_DI_8_280H_Csg_20191209084018.pdf

Casing ID: 2 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

JRU_DI_8_280H_Csg_20191209084006.pdf

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: JAMES RANCH UNIT DI 8 BS3-3E **Well Number:** 280H

Casing Attachments

Casing ID: 3 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

JRU_DI_8_280H_Csg_20191209083957.pdf

Casing ID: 4 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

JRU_DI_8_280H_Csg_20191209083948.pdf

Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	562	350	1.87	12.9	654.5	100	Econo-Cem-HLTRRC	None
SURFACE	Tail				550	1.35	14.8	742.5	100	HalCem-C	2% CaCl
INTERMEDIATE	Lead		0	3777	2580	1.87	12.9	4824.6	100	EconoCem-HLTRRC	None
INTERMEDIATE	Tail				300	1.35	14.8	405	100	Halcem-C	2% CaCl
INTERMEDIATE	Lead	3827	0	3827	1100	1.88	12.9	2068	100	Halcem-C	2% CaCl

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: JAMES RANCH UNIT DI 8 BS3-3E **Well Number:** 280H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
INTERMEDIATE	Tail				230	1.33	14.8	305.9	100	Halcem-C	2% CaCl
INTERMEDIATE	Lead	3827	3827	8372	1340	1.88	12.9	2519.2	100	Halcem-C	2% CaCl
INTERMEDIATE	Tail				230	1.33	14.8	305.9	100	Halcem-C	2% CaCl
PRODUCTION	Lead		0	18659	1760	1.61	13.2	2833.6	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)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
3777	8372	OTHER : FW/Cut Brine	8.7	9.4							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

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: JAMES RANCH UNIT DI 8 BS3-3E **Well Number:** 280H

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	562	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
562	3777	OTHER : Brine/Gel Sweeps	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
8372	11047	OTHER : Cut Brine/Polymer	9.8	10.1							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

Section 6 - Test, Logging, Coring

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

Open hole logging to include Density/Neutron/PE/Dual Laterlog/Spectral Gamma from kick-off point to intermediate casing shoe.

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

CBL,CNL,DS,GR,MUDLOG

Coring operation description for the well:

No coring will take place on this well.

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: JAMES RANCH UNIT DI 8 BS3-3E **Well Number:** 280H

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 5629 **Anticipated Surface Pressure:** 3198.66

Anticipated Bottom Hole Temperature(F): 160

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:

JRU_DI_8_280H_H2S_Dia_20180815110401.pdf

JRU_DI_8_H2S_Plan_20180815110415.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

JRU_DI_8_280H_DD_20180815110440.pdf

Other proposed operations facets description:

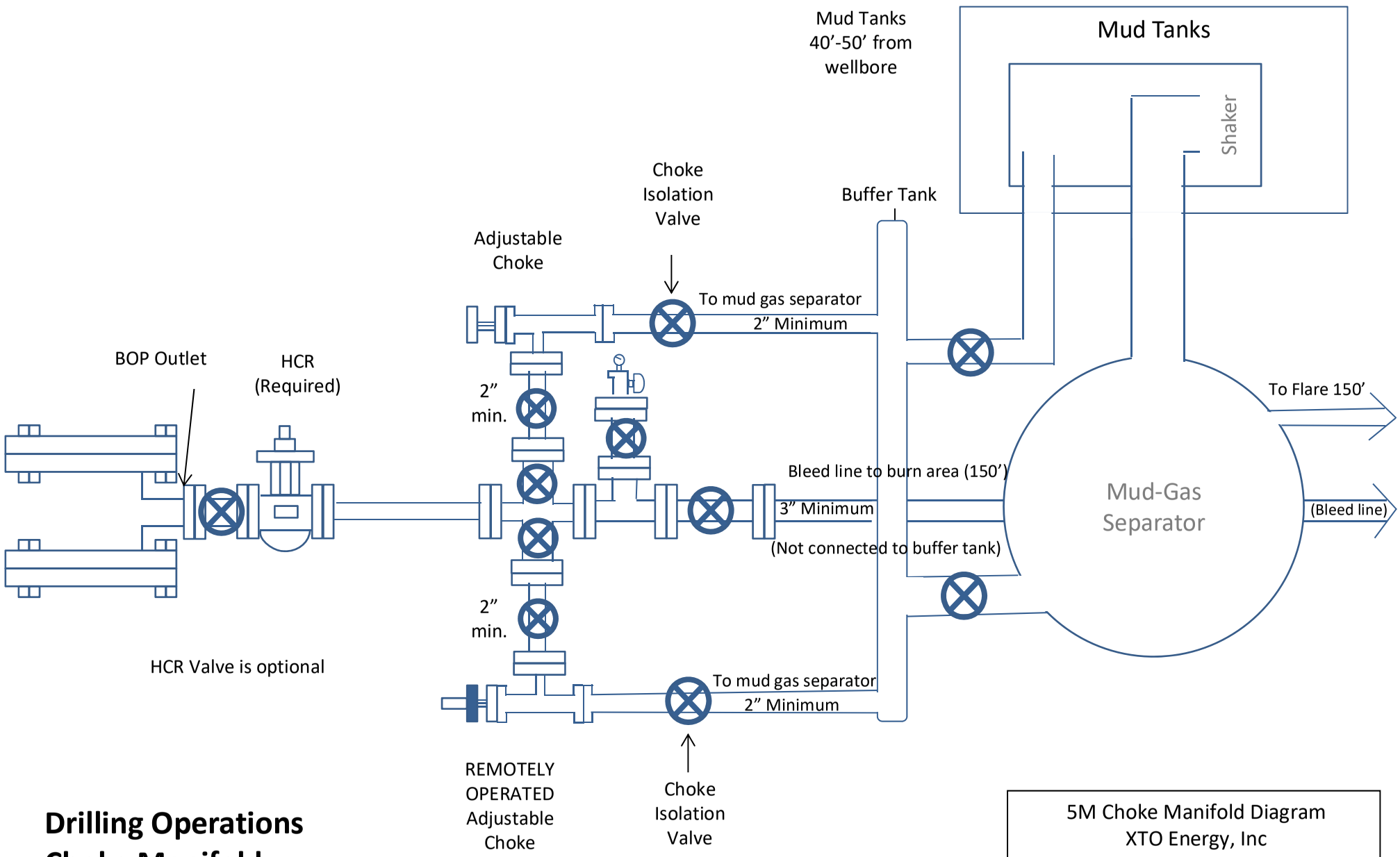
Other proposed operations facets attachment:

JRU_DI_8_280H_GCP_20191209085237.pdf

Other Variance attachment:

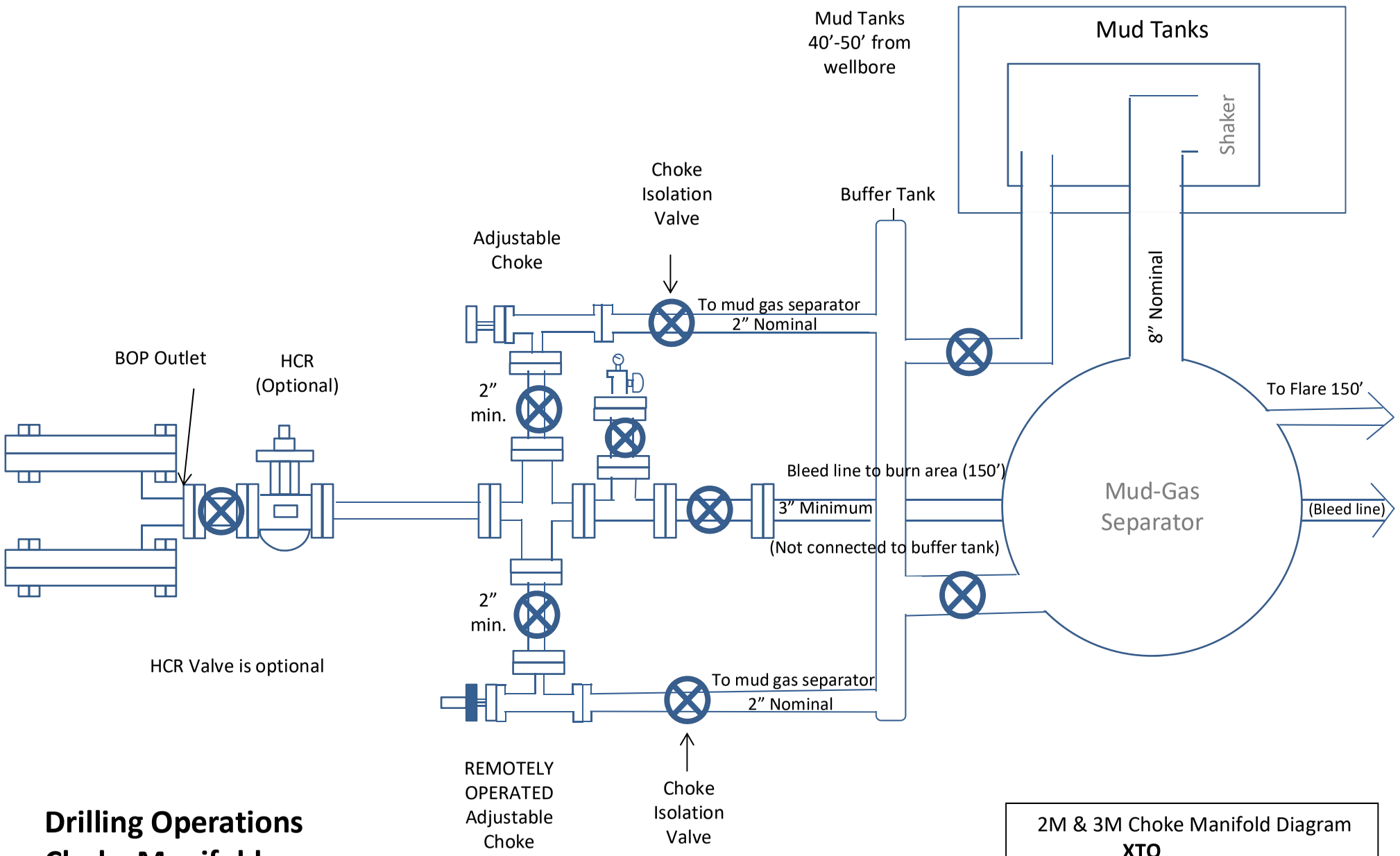
JRU_DI_8_FH_20180815110513.pdf

JRU_DI_8_MBS_20191209085034.pdf



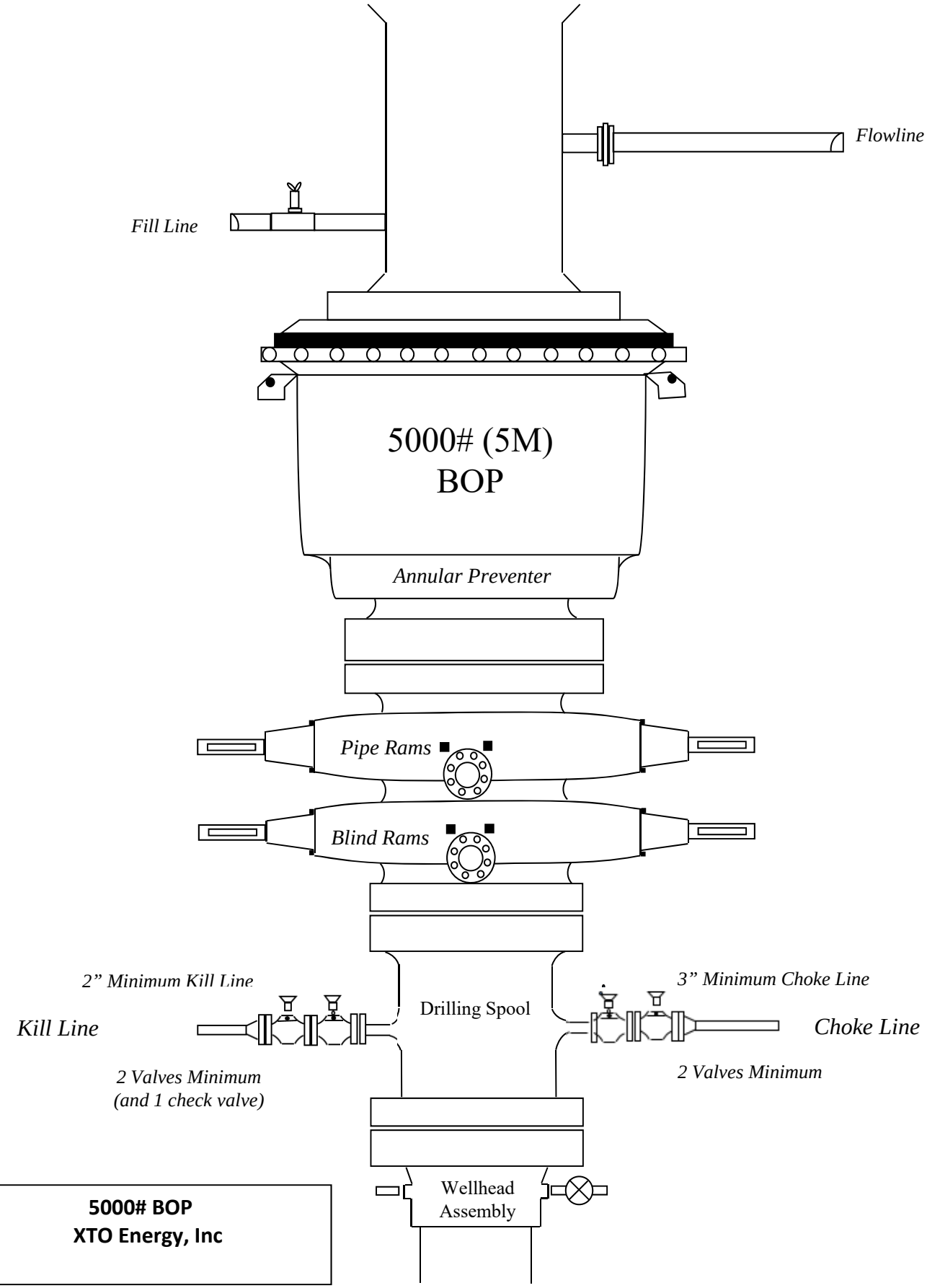
Drilling Operations
Choke Manifold
5M Service

5M Choke Manifold Diagram
XTO Energy, Inc

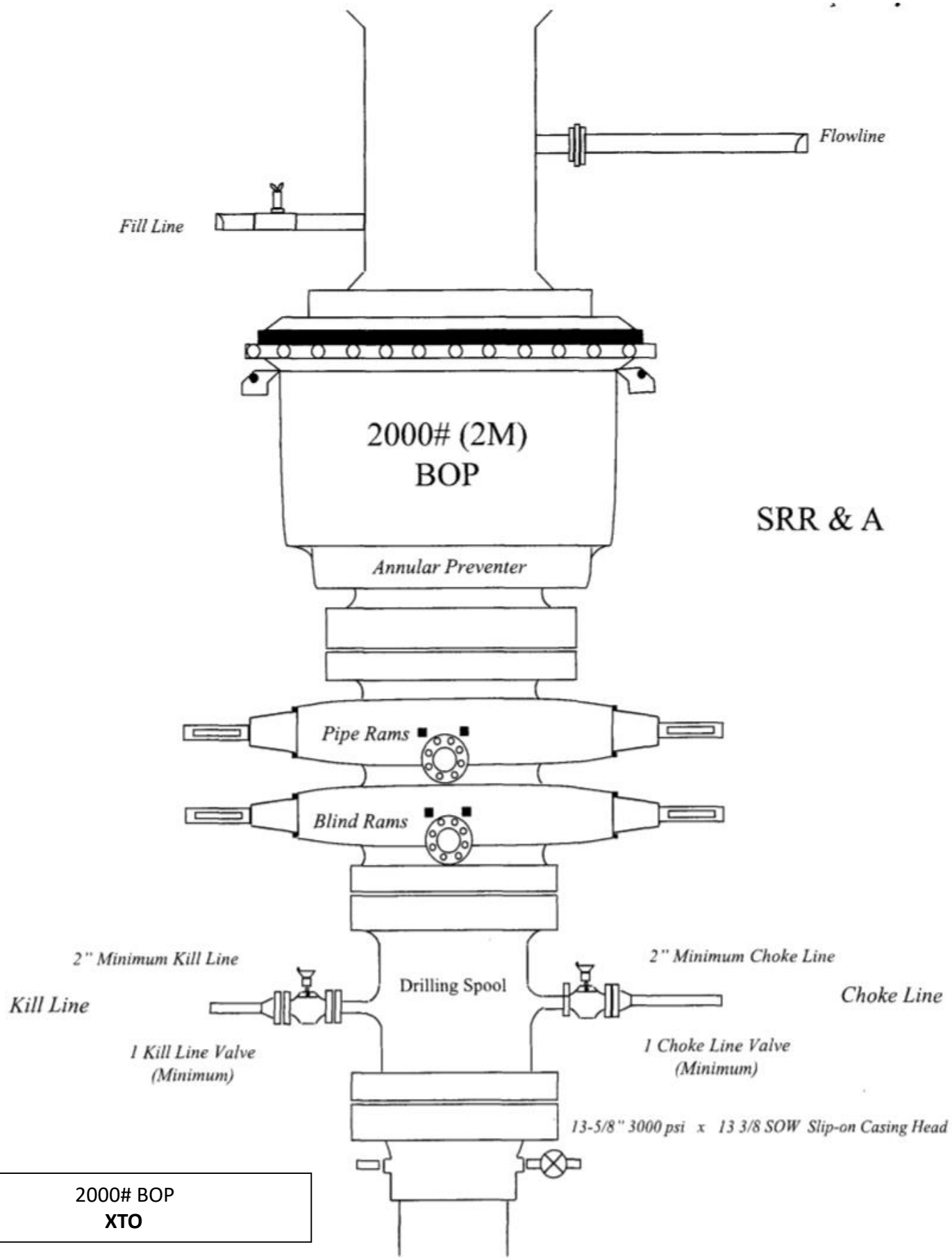


Drilling Operations
Choke Manifold
2M & 3M Service

2M & 3M Choke Manifold Diagram
XTO



5000# BOP
XTO Energy, Inc


Flowline
Fill Line
2000# (2M)
BOP
SRR & A
Annular Preventer
Pipe Rams
Blind Rams
2" Minimum Kill Line
2" Minimum Choke Line
Drilling Spool
Kill Line
Choke Line
1 Kill Line Valve
(Minimum)
1 Choke Line Valve
(Minimum)
13-5/8" 3000 psi x 13 3/8 SOW Slip-on Casing Head

2000# BOP
XTO

Casing Design

Hole Size	Depth	OD Csg	Weight	Collar	Grade	New/Used	SF Burst	SF Collapse	SF Tension
24"	0' – 562'	18-5/8"	87.5	STC	H-40	New	1.41	2.48	11.37
17-1/2"	0' – 3777'	13-3/8"	68	STC	J-55	New	1.59	1.67	2.63
12-1/4"	0' – 8372'	9-5/8"	40	LTC	HCL-80	New	1.71	2.42	2.17
8-3/4"	0' – 18659'	5-1/2"	17	BTC	P-110	New	1.12	1.29	2.34

- XTO requests to not utilize centralizers in the curve and lateral
- 18-5/8" Collapse analyzed using 75% evacuation. Casing to be filled while running.
- 13-3/8" Collapse analyzed using 50% evacuation based on regional experience.
- 9-5/8" Collapse analyzed using 33% evacuation based on regional experience.
- 5-1/2" Tension calculated using vertical hanging weight plus the lateral weight multiplied by a friction factor of 0.35
- Test on 2M Annular & Casing will be limited to 70% burst of the casing or 1500 psi, whichever is less

Wellhead:

Temporary Wellhead

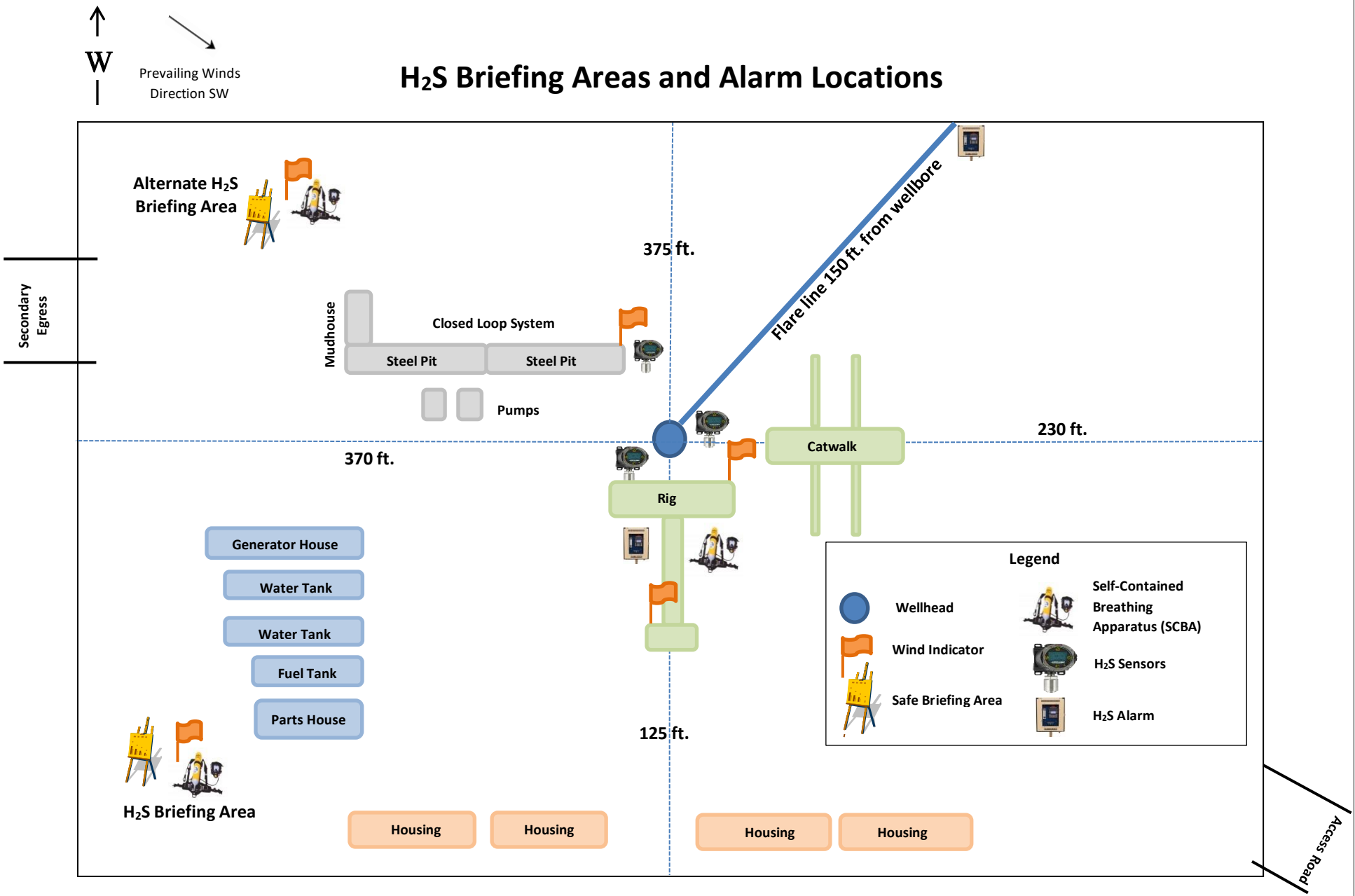
- 18-5/8" SOW bottom x 21-1/4" 2M top flange.
- Permanent Wellhead – GE RSH Multibowl System

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

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

- Wellhead will be installed by manufacturer's representatives.
- Manufacturer will monitor welding process to ensure appropriate temperature of seal.
- Operator will test the 9-5/8" casing per BLM Onshore Order 2
- Wellhead Manufacturer representative will not be present for BOP test plug installation

H_2S Briefing Areas and Alarm Locations



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 H_2S, 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 H_2S 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
    - Detection of H_2S, and
    - Measures for protection against the gas,
    - 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 (SO_2). 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 H_2S and SO_2

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	**H_2S**	**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

XTO Energy, Inc. 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 Energy, Inc. PERSONNEL:

Kendall Decker, Drilling Manager	903-521-6477
Milton Turman, Drilling Superintendent	817-524-5107
Jeff Raines, Construction Foreman	432-557-3159
Toady Sanders, EH & S Manager	903-520-1601
Wes McSpadden, Production Foreman	575-441-1147

SHERIFF DEPARTMENTS:

Eddy County	575-887-7551
Lea County	575-396-3611

NEW MEXICO STATE POLICE: 575-392-5588

FIRE DEPARTMENTS: 911

Carlsbad	575-885-2111
Eunice	575-394-2111
Hobbs	575-397-9308
Jal	575-395-2221
Lovington	575-396-2359

HOSPITALS: 911

Carlsbad Medical Emergency	575-885-2111
Eunice Medical Emergency	575-394-2112
Hobbs Medical Emergency	575-397-9308
Jal Medical Emergency	575-395-2221
Lovington Medical Emergency	575-396-2359

AGENT NOTIFICATIONS:

For Lea County:

Bureau of Land Management – Hobbs	575-393-3612
New Mexico Oil Conservation Division – Hobbs	575-393-6161

For Eddy County:

Bureau of Land Management - Carlsbad	575-234-5972
New Mexico Oil Conservation Division - Artesia	575-748-1283

XTO Energy

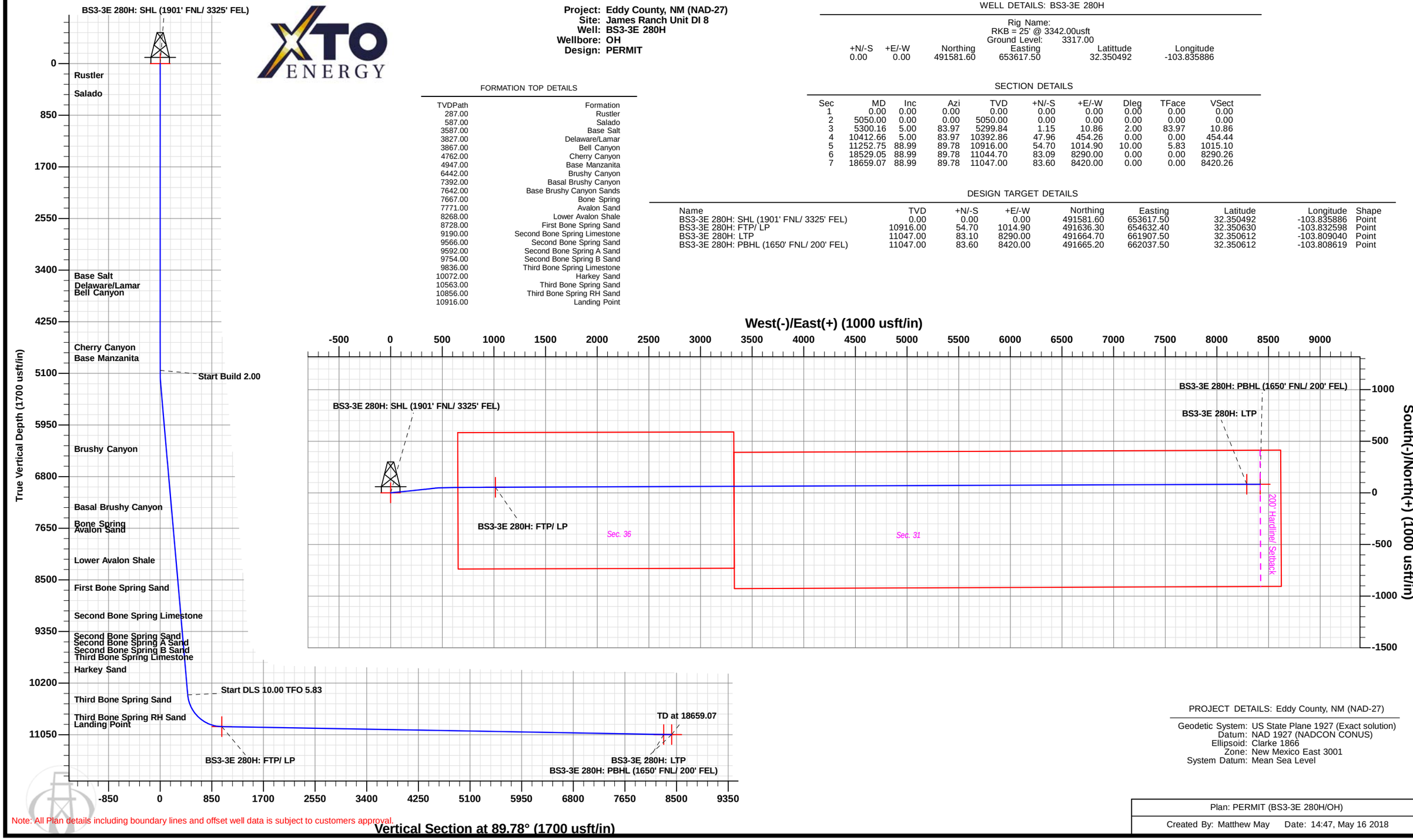
Eddy County, NM (NAD-27)
James Ranch Unit DI 8
BS3-3E 280H

OH

Plan: PERMIT

Standard Planning Report

16 May, 2018



XTO ENERGY

Project: Eddy County, NM (NAD-27)
Site: James Ranch Unit DI 8
Well: BS3-3E 280H
Wellbore: OH
Design: PERMIT

WELL DETAILS: BS3-3E 280H

Rig Name:
RKB = 25' @ 3342.00usft
Ground Level: 3317.00

+N/-S	+E/-W	Northing	Easting	Latittude	Longitude
0.00	0.00	491581.60	653617.50	32.350492	-103.835886

FORMATION TOP DETAILS

TVDPath	Formation
287.00	Rustler
587.00	Salado
3587.00	Base Salt
3827.00	Delaware/Lamar
3867.00	Bell Canyon
4762.00	Cherry Canyon
4947.00	Base Manzanita
6442.00	Brushy Canyon
7392.00	Basal Brushy Canyon
7642.00	Base Brushy Canyon Sands
7667.00	Bone Spring
7771.00	Avalon Sand
8268.00	Lower Avalon Shale
8728.00	First Bone Spring Sand
9190.00	Second Bone Spring Limestone
9566.00	Second Bone Spring Sand
9592.00	Second Bone Spring A Sand
9754.00	Second Bone Spring B Sand
9836.00	Third Bone Spring Limestone
10072.00	Harkey Sand
10563.00	Third Bone Spring Sand
10856.00	Third Bone Spring RH Sand
10916.00	Landing Point

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	5050.00	0.00	0.00	5050.00	0.00	0.00	0.00	0.00	0.00
3	5300.16	5.00	83.97	5299.84	1.15	10.86	2.00	83.97	10.86
4	10412.66	5.00	83.97	10392.86	47.96	454.26	0.00	0.00	454.44
5	11252.75	88.99	89.78	10916.00	54.70	1014.90	10.00	5.83	1015.10
6	18529.05	88.99	89.78	11044.70	83.09	8290.00	0.00	0.00	8290.26
7	18659.07	88.99	89.78	11047.00	83.60	8420.00	0.00	0.00	8420.26

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
BS3-3E 280H: SHL (1901' FNL/ 3325' FEL)	0.00	0.00	0.00	491581.60	653617.50	32.350492	-103.835886	Point
BS3-3E 280H: FTP/ LP	10916.00	54.70	1014.90	491636.30	654632.40	32.350630	-103.832598	Point
BS3-3E 280H: LTP	11047.00	83.10	8290.00	491664.70	661907.50	32.350612	-103.809040	Point
BS3-3E 280H: PBHL (1650' FNL/ 200' FEL)	11047.00	83.60	8420.00	491665.20	662037.50	32.350612	-103.808619	Point

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

Plan: PERMIT (BS3-3E 280H/OH)

Created By: Matthew May Date: 14:47, May 16 2018

Note: All Plan details including boundary lines and offset well data is subject to customers approval.

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well BS3-3E 280H
Company:	XTO Energy	**TVD Reference:**	RKB = 25' @ 3342.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB = 25' @ 3342.00usft
Site:	James Ranch Unit DI 8	**North Reference:**	Grid
Well:	BS3-3E 280H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PERMIT		

Project Eddy County, NM (NAD-27)

Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site James Ranch Unit DI 8

Site Position:		**Northing:**	491,410.50 usft	**Latitude:**	32.350025
From:	Map	**Easting:**	653,432.80 usft	**Longitude:**	-103.836487
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.27 °

Well BS3-3E 280H

Well Position	**+N/-S**	171.10 usft	**Northing:**	491,581.60 usft	**Latitude:**	32.350493
	+E/-W	184.70 usft	**Easting:**	653,617.50 usft	**Longitude:**	-103.835886
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	0.00 usft	**Ground Level:**	3,317.00 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	5/14/2018	6.99	60.12	47,893

Design PERMIT

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	89.78

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	
5,050.00	0.00	0.00	5,050.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,300.16	5.00	83.97	5,299.84	1.15	10.86	2.00	2.00	0.00	83.97	
10,412.66	5.00	83.97	10,392.86	47.96	454.26	0.00	0.00	0.00	0.00	
11,252.75	88.99	89.78	10,916.00	54.70	1,014.90	10.00	10.00	0.69	5.83	BS3-3E 280H: FTP,
18,529.05	88.99	89.78	11,044.70	83.09	8,290.00	0.00	0.00	0.00	0.00	BS3-3E 280H: LTP
18,659.07	88.99	89.78	11,047.00	83.60	8,420.00	0.00	0.00	0.00	0.00	BS3-3E 280H: PBH

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well BS3-3E 280H
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Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB = 25' @ 3342.00usft
Site:	James Ranch Unit DI 8	**North Reference:**	Grid
Well:	BS3-3E 280H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PERMIT		

Planned 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
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
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	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
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
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
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
4,000.00	0.00	0.00	4,000.00	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	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
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
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,050.00	0.00	0.00	5,050.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	1.00	83.97	5,100.00	0.05	0.43	0.43	2.00	2.00	0.00
5,200.00	3.00	83.97	5,199.93	0.41	3.90	3.91	2.00	2.00	0.00

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Site:	James Ranch Unit DI 8	**North Reference:**	Grid
Well:	BS3-3E 280H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PERMIT		

Planned 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)
5,300.16	5.00	83.97	5,299.84	1.15	10.86	10.86	2.00	2.00	0.00
5,400.00	5.00	83.97	5,399.30	2.06	19.51	19.52	0.00	0.00	0.00
5,500.00	5.00	83.97	5,498.92	2.98	28.19	28.20	0.00	0.00	0.00
5,600.00	5.00	83.97	5,598.54	3.89	36.86	36.87	0.00	0.00	0.00
5,700.00	5.00	83.97	5,698.16	4.81	45.53	45.55	0.00	0.00	0.00
5,800.00	5.00	83.97	5,797.78	5.72	54.21	54.23	0.00	0.00	0.00
5,900.00	5.00	83.97	5,897.40	6.64	62.88	62.90	0.00	0.00	0.00
6,000.00	5.00	83.97	5,997.02	7.55	71.55	71.58	0.00	0.00	0.00
6,100.00	5.00	83.97	6,096.63	8.47	80.22	80.26	0.00	0.00	0.00
6,200.00	5.00	83.97	6,196.25	9.39	88.90	88.93	0.00	0.00	0.00
6,300.00	5.00	83.97	6,295.87	10.30	97.57	97.61	0.00	0.00	0.00
6,400.00	5.00	83.97	6,395.49	11.22	106.24	106.29	0.00	0.00	0.00
6,500.00	5.00	83.97	6,495.11	12.13	114.92	114.96	0.00	0.00	0.00
6,600.00	5.00	83.97	6,594.73	13.05	123.59	123.64	0.00	0.00	0.00
6,700.00	5.00	83.97	6,694.35	13.96	132.26	132.31	0.00	0.00	0.00
6,800.00	5.00	83.97	6,793.97	14.88	140.94	140.99	0.00	0.00	0.00
6,900.00	5.00	83.97	6,893.59	15.80	149.61	149.67	0.00	0.00	0.00
7,000.00	5.00	83.97	6,993.21	16.71	158.28	158.34	0.00	0.00	0.00
7,100.00	5.00	83.97	7,092.82	17.63	166.95	167.02	0.00	0.00	0.00
7,200.00	5.00	83.97	7,192.44	18.54	175.63	175.70	0.00	0.00	0.00
7,300.00	5.00	83.97	7,292.06	19.46	184.30	184.37	0.00	0.00	0.00
7,400.00	5.00	83.97	7,391.68	20.37	192.97	193.05	0.00	0.00	0.00
7,500.00	5.00	83.97	7,491.30	21.29	201.65	201.73	0.00	0.00	0.00
7,600.00	5.00	83.97	7,590.92	22.21	210.32	210.40	0.00	0.00	0.00
7,700.00	5.00	83.97	7,690.54	23.12	218.99	219.08	0.00	0.00	0.00
7,800.00	5.00	83.97	7,790.16	24.04	227.66	227.76	0.00	0.00	0.00
7,900.00	5.00	83.97	7,889.78	24.95	236.34	236.43	0.00	0.00	0.00
8,000.00	5.00	83.97	7,989.40	25.87	245.01	245.11	0.00	0.00	0.00
8,100.00	5.00	83.97	8,089.01	26.78	253.68	253.78	0.00	0.00	0.00
8,200.00	5.00	83.97	8,188.63	27.70	262.36	262.46	0.00	0.00	0.00
8,300.00	5.00	83.97	8,288.25	28.62	271.03	271.14	0.00	0.00	0.00
8,400.00	5.00	83.97	8,387.87	29.53	279.70	279.81	0.00	0.00	0.00
8,500.00	5.00	83.97	8,487.49	30.45	288.37	288.49	0.00	0.00	0.00
8,600.00	5.00	83.97	8,587.11	31.36	297.05	297.17	0.00	0.00	0.00
8,700.00	5.00	83.97	8,686.73	32.28	305.72	305.84	0.00	0.00	0.00
8,800.00	5.00	83.97	8,786.35	33.19	314.39	314.52	0.00	0.00	0.00
8,900.00	5.00	83.97	8,885.97	34.11	323.07	323.20	0.00	0.00	0.00
9,000.00	5.00	83.97	8,985.59	35.03	331.74	331.87	0.00	0.00	0.00
9,100.00	5.00	83.97	9,085.20	35.94	340.41	340.55	0.00	0.00	0.00
9,200.00	5.00	83.97	9,184.82	36.86	349.09	349.22	0.00	0.00	0.00
9,300.00	5.00	83.97	9,284.44	37.77	357.76	357.90	0.00	0.00	0.00
9,400.00	5.00	83.97	9,384.06	38.69	366.43	366.58	0.00	0.00	0.00
9,500.00	5.00	83.97	9,483.68	39.60	375.10	375.25	0.00	0.00	0.00
9,600.00	5.00	83.97	9,583.30	40.52	383.78	383.93	0.00	0.00	0.00
9,700.00	5.00	83.97	9,682.92	41.44	392.45	392.61	0.00	0.00	0.00
9,800.00	5.00	83.97	9,782.54	42.35	401.12	401.28	0.00	0.00	0.00
9,900.00	5.00	83.97	9,882.16	43.27	409.80	409.96	0.00	0.00	0.00
10,000.00	5.00	83.97	9,981.78	44.18	418.47	418.64	0.00	0.00	0.00
10,100.00	5.00	83.97	10,081.39	45.10	427.14	427.31	0.00	0.00	0.00
10,200.00	5.00	83.97	10,181.01	46.01	435.81	435.99	0.00	0.00	0.00
10,300.00	5.00	83.97	10,280.63	46.93	444.49	444.66	0.00	0.00	0.00
10,400.00	5.00	83.97	10,380.25	47.85	453.16	453.34	0.00	0.00	0.00
10,412.66	5.00	83.97	10,392.86	47.96	454.26	454.44	0.00	0.00	0.00
10,450.00	8.73	86.47	10,429.93	48.31	458.71	458.89	10.00	9.97	6.70

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Site:	James Ranch Unit DI 8	**North Reference:**	Grid
Well:	BS3-3E 280H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PERMIT		

Planned 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)
10,500.00	13.72	87.70	10,478.96	48.78	468.42	468.61	10.00	9.99	2.46
10,550.00	18.72	88.29	10,526.95	49.26	482.38	482.56	10.00	9.99	1.16
10,600.00	23.72	88.63	10,573.55	49.74	500.46	500.65	10.00	10.00	0.69
10,650.00	28.72	88.86	10,618.39	50.22	522.53	522.72	10.00	10.00	0.46
10,700.00	33.71	89.02	10,661.14	50.69	548.43	548.63	10.00	10.00	0.33
10,750.00	38.71	89.15	10,701.47	51.16	577.96	578.15	10.00	10.00	0.26
10,800.00	43.71	89.25	10,739.07	51.62	610.89	611.09	10.00	10.00	0.20
10,850.00	48.71	89.34	10,773.65	52.06	646.97	647.17	10.00	10.00	0.17
10,900.00	53.71	89.41	10,804.97	52.48	685.93	686.13	10.00	10.00	0.15
10,950.00	58.71	89.48	10,832.76	52.89	727.47	727.67	10.00	10.00	0.13
11,000.00	63.71	89.53	10,856.83	53.26	771.28	771.48	10.00	10.00	0.12
11,050.00	68.71	89.59	10,876.99	53.61	817.01	817.21	10.00	10.00	0.11
11,100.00	73.71	89.64	10,893.09	53.93	864.33	864.54	10.00	10.00	0.10
11,150.00	78.71	89.68	10,905.01	54.22	912.88	913.08	10.00	10.00	0.09
11,200.00	83.71	89.73	10,912.64	54.47	962.27	962.48	10.00	10.00	0.09
11,252.75	88.99	89.78	10,916.00	54.70	1,014.90	1,015.10	10.00	10.00	0.09
11,300.00	88.99	89.78	10,916.84	54.88	1,062.14	1,062.34	0.00	0.00	0.00
11,400.00	88.99	89.78	10,918.60	55.27	1,162.12	1,162.33	0.00	0.00	0.00
11,500.00	88.99	89.78	10,920.37	55.66	1,262.11	1,262.31	0.00	0.00	0.00
11,600.00	88.99	89.78	10,922.14	56.05	1,362.09	1,362.30	0.00	0.00	0.00
11,700.00	88.99	89.78	10,923.91	56.45	1,462.07	1,462.28	0.00	0.00	0.00
11,800.00	88.99	89.78	10,925.68	56.84	1,562.06	1,562.27	0.00	0.00	0.00
11,900.00	88.99	89.78	10,927.45	57.23	1,662.04	1,662.25	0.00	0.00	0.00
12,000.00	88.99	89.78	10,929.22	57.62	1,762.03	1,762.23	0.00	0.00	0.00
12,100.00	88.99	89.78	10,930.99	58.01	1,862.01	1,862.22	0.00	0.00	0.00
12,200.00	88.99	89.78	10,932.75	58.40	1,961.99	1,962.20	0.00	0.00	0.00
12,300.00	88.99	89.78	10,934.52	58.79	2,061.98	2,062.19	0.00	0.00	0.00
12,400.00	88.99	89.78	10,936.29	59.18	2,161.96	2,162.17	0.00	0.00	0.00
12,500.00	88.99	89.78	10,938.06	59.57	2,261.94	2,262.16	0.00	0.00	0.00
12,600.00	88.99	89.78	10,939.83	59.96	2,361.93	2,362.14	0.00	0.00	0.00
12,700.00	88.99	89.78	10,941.60	60.35	2,461.91	2,462.12	0.00	0.00	0.00
12,800.00	88.99	89.78	10,943.37	60.74	2,561.89	2,562.11	0.00	0.00	0.00
12,900.00	88.99	89.78	10,945.14	61.13	2,661.88	2,662.09	0.00	0.00	0.00
13,000.00	88.99	89.78	10,946.90	61.52	2,761.86	2,762.08	0.00	0.00	0.00
13,100.00	88.99	89.78	10,948.67	61.91	2,861.85	2,862.06	0.00	0.00	0.00
13,200.00	88.99	89.78	10,950.44	62.30	2,961.83	2,962.05	0.00	0.00	0.00
13,300.00	88.99	89.78	10,952.21	62.69	3,061.81	3,062.03	0.00	0.00	0.00
13,400.00	88.99	89.78	10,953.98	63.08	3,161.80	3,162.01	0.00	0.00	0.00
13,500.00	88.99	89.78	10,955.75	63.47	3,261.78	3,262.00	0.00	0.00	0.00
13,600.00	88.99	89.78	10,957.52	63.86	3,361.76	3,361.98	0.00	0.00	0.00
13,700.00	88.99	89.78	10,959.29	64.25	3,461.75	3,461.97	0.00	0.00	0.00
13,800.00	88.99	89.78	10,961.05	64.64	3,561.73	3,561.95	0.00	0.00	0.00
13,900.00	88.99	89.78	10,962.82	65.03	3,661.71	3,661.94	0.00	0.00	0.00
14,000.00	88.99	89.78	10,964.59	65.42	3,761.70	3,761.92	0.00	0.00	0.00
14,100.00	88.99	89.78	10,966.36	65.81	3,861.68	3,861.91	0.00	0.00	0.00
14,200.00	88.99	89.78	10,968.13	66.20	3,961.66	3,961.89	0.00	0.00	0.00
14,300.00	88.99	89.78	10,969.90	66.59	4,061.65	4,061.87	0.00	0.00	0.00
14,400.00	88.99	89.78	10,971.67	66.98	4,161.63	4,161.86	0.00	0.00	0.00
14,500.00	88.99	89.78	10,973.44	67.37	4,261.62	4,261.84	0.00	0.00	0.00
14,600.00	88.99	89.78	10,975.21	67.76	4,361.60	4,361.83	0.00	0.00	0.00
14,700.00	88.99	89.78	10,976.97	68.15	4,461.58	4,461.81	0.00	0.00	0.00
14,800.00	88.99	89.78	10,978.74	68.54	4,561.57	4,561.80	0.00	0.00	0.00
14,900.00	88.99	89.78	10,980.51	68.93	4,661.55	4,661.78	0.00	0.00	0.00
15,000.00	88.99	89.78	10,982.28	69.32	4,761.53	4,761.76	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well BS3-3E 280H
Company:	XTO Energy	**TVD Reference:**	RKB = 25' @ 3342.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB = 25' @ 3342.00usft
Site:	James Ranch Unit DI 8	**North Reference:**	Grid
Well:	BS3-3E 280H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PERMIT		

Planned 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)
15,100.00	88.99	89.78	10,984.05	69.71	4,861.52	4,861.75	0.00	0.00	0.00
15,200.00	88.99	89.78	10,985.82	70.10	4,961.50	4,961.73	0.00	0.00	0.00
15,300.00	88.99	89.78	10,987.59	70.49	5,061.48	5,061.72	0.00	0.00	0.00
15,400.00	88.99	89.78	10,989.36	70.88	5,161.47	5,161.70	0.00	0.00	0.00
15,500.00	88.99	89.78	10,991.12	71.27	5,261.45	5,261.69	0.00	0.00	0.00
15,600.00	88.99	89.78	10,992.89	71.66	5,361.44	5,361.67	0.00	0.00	0.00
15,700.00	88.99	89.78	10,994.66	72.05	5,461.42	5,461.66	0.00	0.00	0.00
15,800.00	88.99	89.78	10,996.43	72.44	5,561.40	5,561.64	0.00	0.00	0.00
15,900.00	88.99	89.78	10,998.20	72.83	5,661.39	5,661.62	0.00	0.00	0.00
16,000.00	88.99	89.78	10,999.97	73.22	5,761.37	5,761.61	0.00	0.00	0.00
16,100.00	88.99	89.78	11,001.74	73.61	5,861.35	5,861.59	0.00	0.00	0.00
16,200.00	88.99	89.78	11,003.51	74.00	5,961.34	5,961.58	0.00	0.00	0.00
16,300.00	88.99	89.78	11,005.27	74.39	6,061.32	6,061.56	0.00	0.00	0.00
16,400.00	88.99	89.78	11,007.04	74.78	6,161.30	6,161.55	0.00	0.00	0.00
16,500.00	88.99	89.78	11,008.81	75.18	6,261.29	6,261.53	0.00	0.00	0.00
16,600.00	88.99	89.78	11,010.58	75.57	6,361.27	6,361.51	0.00	0.00	0.00
16,700.00	88.99	89.78	11,012.35	75.96	6,461.25	6,461.50	0.00	0.00	0.00
16,800.00	88.99	89.78	11,014.12	76.35	6,561.24	6,561.48	0.00	0.00	0.00
16,900.00	88.99	89.78	11,015.89	76.74	6,661.22	6,661.47	0.00	0.00	0.00
17,000.00	88.99	89.78	11,017.66	77.13	6,761.21	6,761.45	0.00	0.00	0.00
17,100.00	88.99	89.78	11,019.42	77.52	6,861.19	6,861.44	0.00	0.00	0.00
17,200.00	88.99	89.78	11,021.19	77.91	6,961.17	6,961.42	0.00	0.00	0.00
17,300.00	88.99	89.78	11,022.96	78.30	7,061.16	7,061.40	0.00	0.00	0.00
17,400.00	88.99	89.78	11,024.73	78.69	7,161.14	7,161.39	0.00	0.00	0.00
17,500.00	88.99	89.78	11,026.50	79.08	7,261.12	7,261.37	0.00	0.00	0.00
17,600.00	88.99	89.78	11,028.27	79.47	7,361.11	7,361.36	0.00	0.00	0.00
17,700.00	88.99	89.78	11,030.04	79.86	7,461.09	7,461.34	0.00	0.00	0.00
17,800.00	88.99	89.78	11,031.81	80.25	7,561.07	7,561.33	0.00	0.00	0.00
17,900.00	88.99	89.78	11,033.57	80.64	7,661.06	7,661.31	0.00	0.00	0.00
18,000.00	88.99	89.78	11,035.34	81.03	7,761.04	7,761.30	0.00	0.00	0.00
18,100.00	88.99	89.78	11,037.11	81.42	7,861.02	7,861.28	0.00	0.00	0.00
18,200.00	88.99	89.78	11,038.88	81.81	7,961.01	7,961.26	0.00	0.00	0.00
18,300.00	88.99	89.78	11,040.65	82.20	8,060.99	8,061.25	0.00	0.00	0.00
18,400.00	88.99	89.78	11,042.42	82.59	8,160.98	8,161.23	0.00	0.00	0.00
18,500.00	88.99	89.78	11,044.19	82.98	8,260.96	8,261.22	0.00	0.00	0.00
18,529.05	88.99	89.78	11,044.70	83.09	8,290.00	8,290.26	0.00	0.00	0.00
18,600.00	88.99	89.78	11,045.96	83.37	8,360.94	8,361.20	0.00	0.00	0.00
18,659.07	88.99	89.78	11,047.00	83.60	8,420.00	8,420.26	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well BS3-3E 280H
Company:	XTO Energy	**TVD Reference:**	RKB = 25' @ 3342.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB = 25' @ 3342.00usft
Site:	James Ranch Unit DI 8	**North Reference:**	Grid
Well:	BS3-3E 280H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PERMIT		

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
BS3-3E 280H: SHL (1 - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	491,581.60	653,617.50	32.350493	-103.835886
BS3-3E 280H: FTP/ L - plan hits target center - Point	0.00	0.00	10,916.00	54.70	1,014.90	491,636.30	654,632.40	32.350630	-103.832599
BS3-3E 280H: PBHL (- plan hits target center - Point	0.00	0.00	11,047.00	83.60	8,420.00	491,665.20	662,037.50	32.350612	-103.808620
BS3-3E 280H: LTP - plan misses target center by 2.30usft at 18529.09usft MD (11044.70 TVD, 83.09 N, 8290.04 E) - Point	0.00	0.00	11,047.00	83.10	8,290.00	491,664.70	661,907.50	32.350612	-103.809041

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
287.00	287.00	Rustler			
587.00	587.00	Salado			
3,587.00	3,587.00	Base Salt			
3,827.00	3,827.00	Delaware/Lamar			
3,867.00	3,867.00	Bell Canyon			
4,762.00	4,762.00	Cherry Canyon			
4,947.00	4,947.00	Base Manzanita			
6,446.69	6,442.00	Brushy Canyon			
7,400.32	7,392.00	Basal Brushy Canyon			
7,651.28	7,642.00	Base Brushy Canyon Sands			
7,676.37	7,667.00	Bone Spring			
7,780.77	7,771.00	Avalon Sand			
8,279.67	8,268.00	Lower Avalon Shale			
8,741.43	8,728.00	First Bone Spring Sand			
9,205.20	9,190.00	Second Bone Spring Limestone			
9,582.63	9,566.00	Second Bone Spring Sand			
9,608.73	9,592.00	Second Bone Spring A Sand			
9,771.35	9,754.00	Second Bone Spring B Sand			
9,853.67	9,836.00	Third Bone Spring Limestone			
10,090.57	10,072.00	Harkey Sand			
10,588.53	10,563.00	Third Bone Spring Sand			
10,998.13	10,856.00	Third Bone Spring RH Sand			
11,252.75	10,916.00	Landing Point			

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

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

Submit Original
to Appropriate
District Office

GAS CAPTURE PLAN

Date:05/06/2018

☒ Original Operator & OGRID No.: XTO Permian Operating, LLC. [260737]
☐ 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: JRU DI 8 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
James Ranch Unit DI 8 BS3-1E 280H		F-36-22S-30E	1940'FNL & 2022'FWL	2500 MCF/D	Flared/Sold	3rd Party Bldg to CTB

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 ETC and will be connected to ETC low/high pressure gathering system located in Lea County, New Mexico. It will require 0' of pipeline to connect the facility to low/high pressure gathering system. XTO Permian Operating, LLC. provides (periodically) to ETC 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, LLC. and ETC have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at ETC's Processing Plant located in Sec. 33 Twn. 24S, Rng. 37E, Lea 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 ETC's system at that time. Based on current information, it is XTO Permian Operating, 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
  - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
  - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
  - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines

GATES E & S NORTH AMERICA, INC
DU-TEX
134 44TH STREET
CORPUS CHRISTI, TEXAS 78405

PHONE: 361-887-9807
FAX: 361-887-0812
EMAIL: crpe&s@gates.com
WEB: www.gates.com

GRADE D PRESSURE TEST CERTIFICATE

Customer :	AUSTIN DISTRIBUTING	Test Date:	6/8/2014
Customer Ref. :	PENDING	Hose Serial No.:	D-060814-1
Invoice No. :	201709	Created By:	NORMA

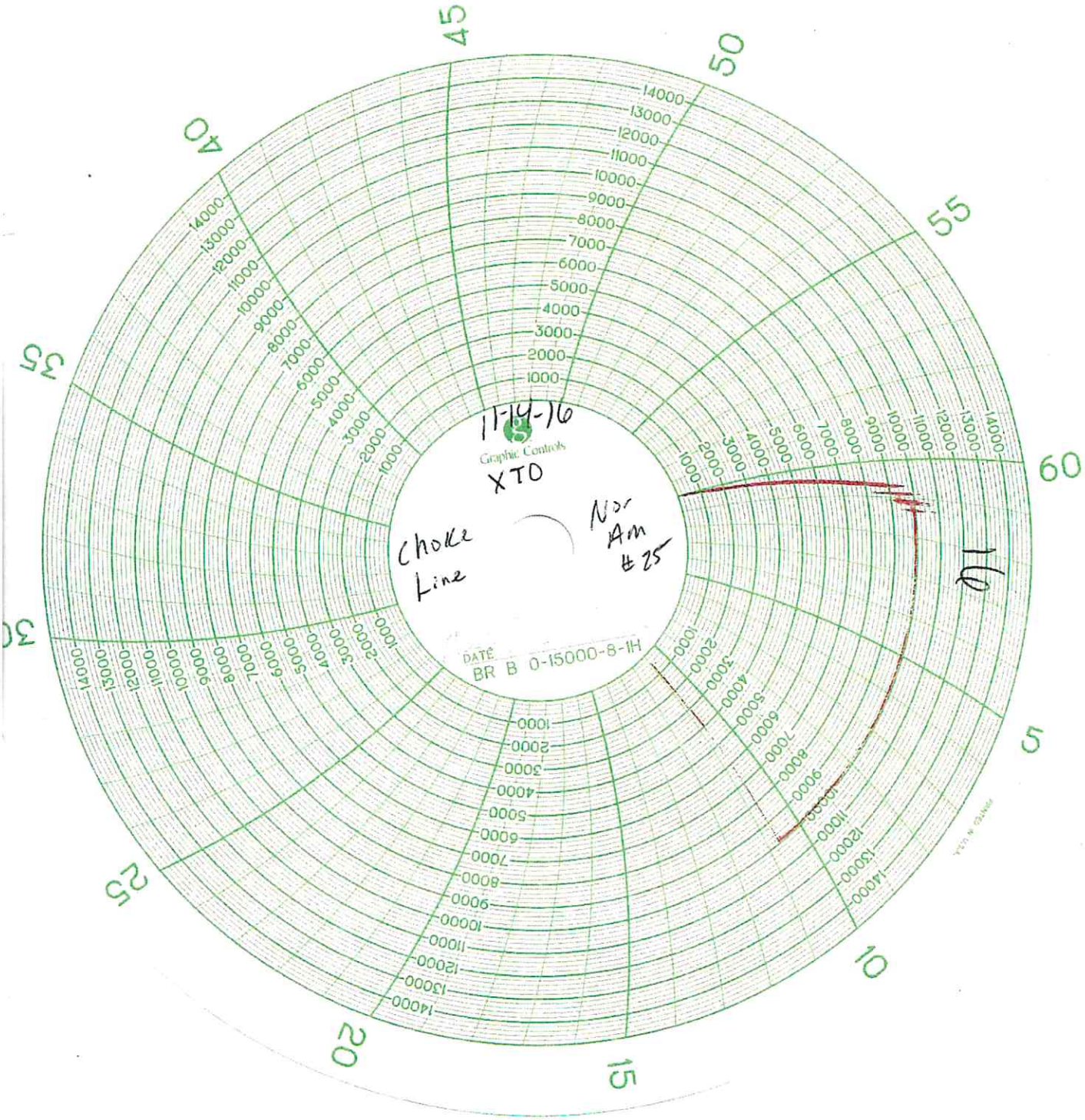
Product Description:	FD3.042.0R41/16.5KFLGE/E LE

End Fitting 1 :	4 1/16 in.5K FLG	End Fitting 2 :	4 1/16 in.5K FLG
Gates Part No. :	4774-6001	Assembly Code :	L33090011513D-060814-1
Working Pressure :	5,000 PSI	Test Pressure :	7,500 PSI

Gates E & S North America, Inc. certifies that the following hose assembly has been tested to the Gates Oilfield Roughneck Agreement/Specification requirements and passed the 15 minute hydrostatic test per API Spec 7K/Q1, Fifth Edition, June 2010, Test pressure 9.6.7 and per Table 9 to 7,500 psi in accordance with this product number. Hose burst pressure 9.6.7.2 exceeds the minimum of 2.5 times the working pressure per Table 9.

Quality:	QUALITY	Technical Supervisor :	PRODUCTION
Date :	6/8/2014	Date :	6/8/2014
Signature :		Signature :	

Form PTC - 01 Rev.0 2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Graphic Controls
XTO
Choke Line
Nor Am #25
DATE
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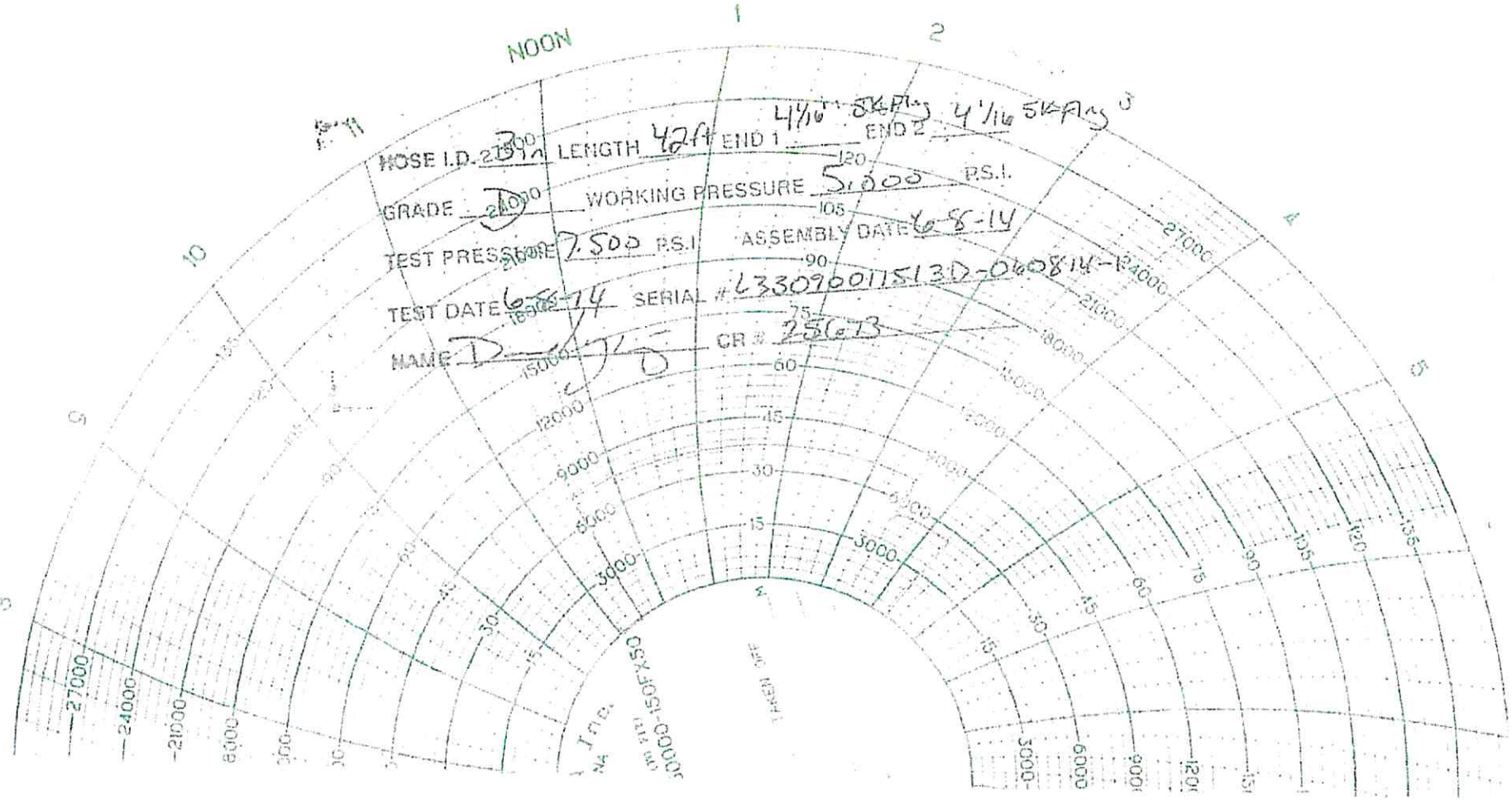
16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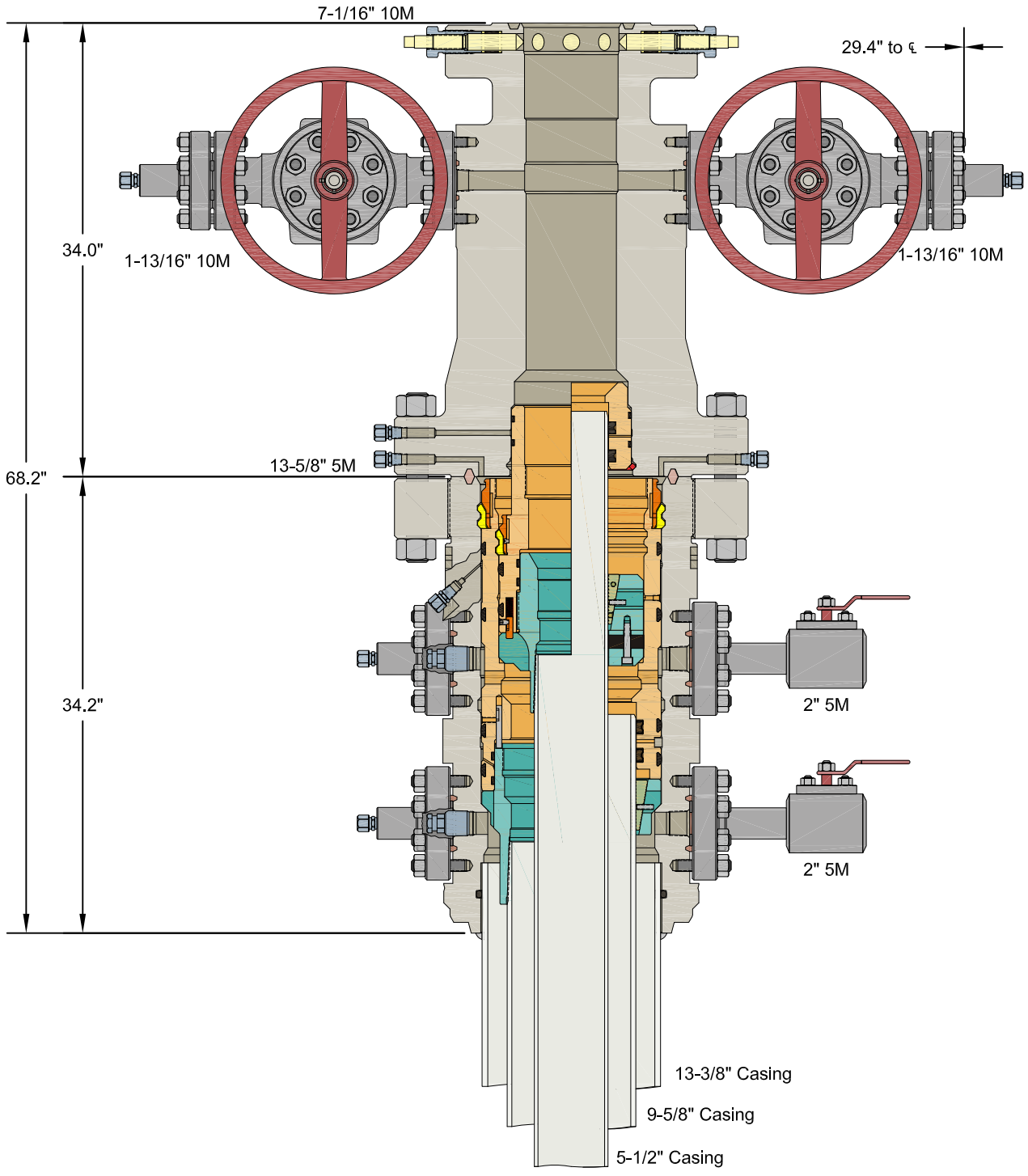
HOSE I.D. 2 1/2"
LENGTH 42ft
END 1 4 1/16 5K FLG
END 2 4 1/16 5K FLG
GRADE D
WORKING PRESSURE 5,000 P.S.I.
TEST PRESSURE 7,500 P.S.I.
ASSEMBLY DATE 6-8-14
TEST DATE 6-8-14
SERIAL # 433090011513D-060814-1
NAME D-[illegible]
CR # 25673

GE Oil & Gas



ALL DIMENSIONS ARE APPROXIMATE

XTO ENERGY, INC.

13-3/8" x 9-5/8" x 5-1/2" 10M RSH-2 Wellhead Assembly, With T-EBS-F Tubing Head

DRAWN	VJK	16FEB17
APPRV	KN	16FEB17

FOR REFERENCE ONLY
DRAWING NO. 10012842