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.
NMNM121477

6. If Indian, Allotee or Tribe Name

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.

8. Lease Name and Well No.
SOPHIA 32-20 FED
123H

2. Name of Operator
XTO ENERGY INCORPORATED

9. API Well No.
30-015-53812

3a. Address	3b. Phone No. *(include area code)*	10. Field and Pool, or Exploratory
22777 Springwoods Village Parkway Spring TX 77389	(432)620-6700	Purple Sage

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface LOT 1 / 258 FSL / 1305 FEL / LAT 32.000835 / LONG -103.898998
At proposed prod. zone NENE / 200 FNL / 750 FEL / LAT 32.0347 / LONG -103.897341

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 32 / T26S / R30E / NMP

14. Distance in miles and direction from nearest town or post office*	12. County or Parish	13. State
	EDDY	NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
258 feet		800

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
30 feet	10702 feet / 23308 feet	FED: UTB000138

21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
2924 feet	06/01/2019	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	Name *(Printed/Typed)*	Date
(Electronic Submission)		01/16/2019

Title

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
(Electronic Submission)	Cody Layton / Ph: (575)234-5959	07/23/2021
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

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 07/23/2021

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- 53812	98220	Purple Sage; Wolfcamp

[4] Property Code	[5] Property Name	[6] Well Number
334075	SOPHIA 32-20 FED	123H

[7] OGRID No.	[8] Operator Name	[9] Elevation
005380	XTO ENERGY, INC.	2,924'

[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
L1	32	26 S	30 E		258	SOUTH	1,305	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
A	20	26 S	30 E		200	NORTH	750	EAST	EDDY

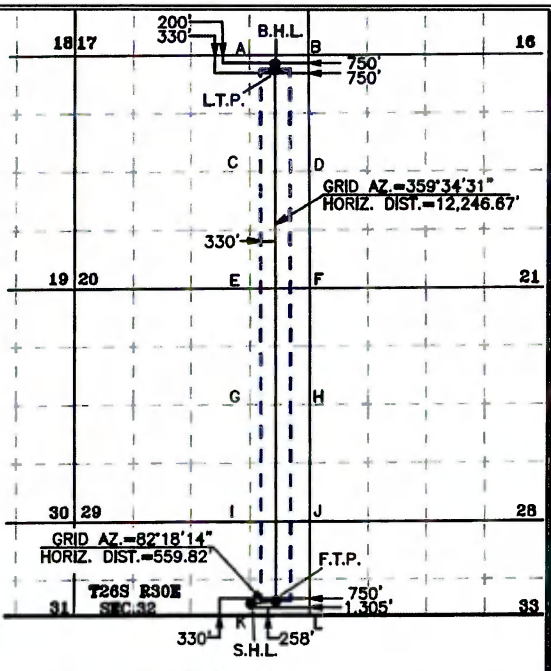
[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
800			

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]

CORNER COORDINATES TABLE
NAD 83 NME
A – Y= 376,830.9 N, X= 675,861.3 E
B – Y= 376,839.9 N, X= 677,187.1 E
C – Y= 374,175.0 N, X= 675,884.4 E
D – Y= 374,184.2 N, X= 677,214.1 E
E – Y= 371,517.3 N, X= 675,907.1 E
F – Y= 371,526.6 N, X= 677,240.2 E
G – Y= 368,860.3 N, X= 675,923.2 E
H – Y= 368,869.1 N, X= 677,256.0 E
I – Y= 366,202.6 N, X= 675,939.7 E
J – Y= 366,211.9 N, X= 677,272.5 E
K – Y= 364,055.9 N, X= 675,949.4 E
L – Y= 364,061.9 N, X= 677,281.6 E

CORNER COORDINATES TABLE
NAD 27 NME
A – Y= 376,773.4 N, X= 634,675.4 E
B – Y= 376,782.4 N, X= 636,001.2 E
C – Y= 374,117.5 N, X= 634,698.5 E
D – Y= 374,126.8 N, X= 636,028.1 E
E – Y= 371,459.9 N, X= 634,721.1 E
F – Y= 371,469.2 N, X= 636,054.1 E
G – Y= 368,803.0 N, X= 634,737.1 E
H – Y= 368,811.8 N, X= 636,069.9 E
I – Y= 366,145.3 N, X= 634,753.5 E
J – Y= 366,154.6 N, X= 636,086.3 E
K – Y= 363,998.7 N, X= 634,763.1 E
L – Y= 364,004.7 N, X= 636,095.3 E



GEODETIC COORDINATES
NAD 83 NME
SURFACE LOCATION
Y= 364,313.5
X= 675,975.5
LAT.= 32.000835°N
LONG.= 103.898998°W

LAST TAKE POINT
NAD 83 NME
Y= 376,504.9
X= 676,440.5
LAT.= 32.034342°N
LONG.= 103.897340°W

GEODETIC COORDINATES
NAD 27 NME
SURFACE LOCATION
Y= 364,256.3
X= 634,789.2
LAT.= 32.000709°N
LONG.= 103.898520°W

LAST TAKE POINT
NAD 27 NME
Y= 376,447.4
X= 635,254.6
LAT.= 32.034217°N
LONG.= 103.896860°W

FIRST TAKE POINT
NAD 83 NME
Y= 364,388.5
X= 676,530.2
LAT.= 32.001034°N
LONG.= 103.897208°W

BOTTOM HOLE LOCATION
NAD 83 NME
Y= 376,634.9
X= 676,439.5
LAT.= 32.034700°N
LONG.= 103.897341°W

FIRST TAKE POINT
NAD 27 NME
Y= 364,331.3
X= 635,343.9
LAT.= 32.000909°N
LONG.= 103.896730°W

BOTTOM HOLE LOCATION
NAD 27 NME
Y= 376,577.4
X= 635,253.6
LAT.= 32.034575°N
LONG.= 103.896862°W

[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 12/28/2018
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.

12-27-2018
Date of Survey

Signatue and Seal of Professional Surveyor:

MARK DILLON HARP
NEW MEXICO
23786
PROFESSIONAL SURVEYOR

MARK DILLON HARP 23786
Certificate Number JC 2018112870

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

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

NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

Section 1 – Plan Description

Effective May 25, 2021

I. Operator: _XTO Energy Incorporated_____ **OGRID:** _05380_____ **Date:** _5/24/2023_____

II. Type: ☒ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: _____

III. Well(s): Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Sophia 32-20 Fed 71H		G-32-26S-30E	257'FSL & 1595'FEL	2000	3200	3500
Sophia 32-20 Fed 72H		G-32-26S-30E	257'FSL & 1245'FEL	2000	3200	3500
Sophia 32-20 Fed 101H		G-32-26S-30E	258'FSL & 1655'FEL	2000	3200	3500
Sophia 32-20 Fed 102H		G-32-26S-30E	258'FSL & 1335'FEL	2000	3200	3500
Sophia 32-20 Fed 121H		G-32-26S-30E	258'FSL & 1685'FEL	2000	3200	3500
Sophia 32-20 Fed 123H		G-32-26S-30E	258'FSL & 1305'FEL	2000	3200	3500
Sophia 32-20 Fed 165H		G-32-26S-30E	182'FSL & 1275'FEL	2000	3200	3500

IV. Central Delivery Point Name: _Sophia 32-20 CTB_____ [See 19.15.27.9(D)(1) NMAC]

V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Sophia 32-20 Fed 71H		TBD	TBD	TBD	TBD	TBD
Sophia 32-20 Fed 72H		TBD	TBD	TBD	TBD	TBD
Sophia 32-20 Fed 101H		TBD	TBD	TBD	TBD	TBD
Sophia 32-20 Fed 102H		TBD	TBD	TBD	TBD	TBD
Sophia 32-20 Fed 121H		TBD	TBD	TBD	TBD	TBD
Sophia 32-20 Fed 123H		TBD	TBD	TBD	TBD	TBD
Sophia 32-20 Fed 165H		TBD	TBD	TBD	TBD	TBD

VI. Separation Equipment: ☒ Attach a complete description of how Operator will size separation equipment to optimize gas capture.

VII. Operational Practices: ☒ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

VIII. Best Management Practices: ☒ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

Section 2 – Enhanced Plan

EFFECTIVE APRIL 1, 2022

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

☒ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

IX. Anticipated Natural Gas Production:

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

X. Natural Gas Gathering System (NGGS):

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

XI. Map. ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

XII. Line Capacity. The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

XIII. Line Pressure. Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

XIV. Confidentiality: ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

Section 3 - Certifications

Effective May 25, 2021

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

☐ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☒ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system. ***If Operator checks this box, Operator will select one of the following:***

Well Shut-In. ☒ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

Venting and Flaring Plan. ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- **(a)** power generation on lease;
- **(b)** power generation for grid;
- **(c)** compression on lease;
- **(d)** liquids removal on lease;
- **(e)** reinjection for underground storage;
- **(f)** reinjection for temporary storage;
- **(g)** reinjection for enhanced oil recovery;
- **(h)** fuel cell production; and
- **(i)** other alternative beneficial uses approved by the division.

Section 4 - Notices

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature: Jessica Dooling
Printed Name: Jessica Dooling
Title: Regulatory Coordinator
E-mail Address: Jessica.dooling@exxonmobil.com
Date: 5/24/2023
Phone: 970-769-6048

OIL CONSERVATION DIVISION **(Only applicable when submitted as a standalone form)**
Approved By:
Title:
Approval Date:
Conditions of Approval:

VI. Separation Equipment:

XTO Permian Operating, LLC. production tank batteries include separation equipment designed to efficiently separate gas from liquid phases to optimize gas capture based on projected and estimated volumes from the targeted pool in conjunction with the total number of wells planned to or existing within the facility. Separation equipment is upgraded prior to well being drilled or completed, if determined to be undersized or needed. The separation equipment is designed and built according to the relevant industry specifications (API Specification 12J and ASME Sec VIII Div I). Other recognized industry publications such as the Gas Processors Suppliers Association (GPSA) are referenced when designing separation equipment to optimize gas capture.

VII. Operational Practices:

1. Subsection B.
    - During drilling, flare stacks will be located a minimum of 150 feet from the nearest surface hole location. All gas is captured or combusted. If an emergency or malfunction occurs, gas will be flared or vented for public health, safety and the environment and be properly reported to the NMOCD pursuant to 19.15.27.8.G.
    - Measure or estimate the volume of natural gas that is vented, flared or beneficially used during drilling, completion and production operations, regardless of the reason or authorization for such venting or flaring.
    - At any point in the well life (drilling, completion, production, inactive) an audio, visual and olfactory (AVO) inspection will be performed weekly (at minimum) to confirm that all production equipment is operating properly and there are no leaks or releases except as allowed in Subsection D of 19.15.27.8 NMAC.
2. Subsection C.
    - During completion operations, operator does not produce oil or gas but maintains adequate well control through completion operations.

    For emergencies, equipment malfunction, or if the operator decides to produce oil and gas during well completion:

    - Flowlines will be routed for flowback fluids into a completion or storage tank and, if feasible under well conditions, flare rather than vent and commence operation of a separator as soon as it is technically feasible for a separator to function.
    - Measure or estimate the volume of natural gas that is vented, flared or beneficially used during drilling, completion and production operations, regardless of the reason or authorization for such venting or flaring.
    - At any point in the well life (drilling, completion, production, inactive) an audio, visual and olfactory (AVO) inspection will be performed weekly (at minimum) to confirm that all production equipment is operating properly and there are no leaks or releases except as allowed in Subsection D of 19.15.27.8 NMAC.
3. Subsection D.
    - At any point in the well life (drilling, completion, production, inactive) an audio, visual and olfactory (AVO) inspection will be performed weekly (at minimum) to confirm that all production equipment is operating properly and there are no leaks or releases except as allowed in Subsection D of 19.15.27.8 NMAC.
    - Monitor manual liquid unloading for wells on-site or in close proximity (<30 minutes' drive time), take reasonable actions to achieve a stabilized rate and pressure at the earliest practical time, and take reasonable actions to minimize venting to the maximum extent practicable.

- Measure or estimate the volume of natural gas that is vented, flared or beneficially used during drilling, completion and production operations, regardless of the reason or authorization for such venting or flaring.

4. Subsection E.
   - All tanks and separation equipment are designed for maximum throughput and pressure to minimize waste.
   - Flare stack was installed prior to May 25, 2021 but has been designed for proper size and combustion efficiency. Flare currently has a continuous pilot and is located more than 100 feet from any known well and storage tanks.
   - At any point in the well life (drilling, completion, production, inactive) an audio, visual and olfactory (AVO) inspection will be performed weekly (at minimum) to confirm that all production equipment is operating properly and there are no leaks or releases except as allowed in Subsection D of 19.15.27.8 NMAC.
5. Subsection F.
   - Measurement equipment is installed to measure the volume of natural gas flared from process piping or a flowline piped from the equipment associated with a well and facility associated with the approved application for permit to drill that has an average daily production greater than 60 mcf of natural gas.
   - Measurement equipment installed is not designed or equipped with a manifold to allow diversion of natural gas around the metering equipment, except for the sole purpose of inspecting and servicing the measurement equipment, as noted in NMAC 19.15.27.8 Subsection G.

VIII. Best Management Practices:

1. During completion operations, operator does not produce oil or gas but maintains adequate well control through completion operations.
2. Operator does not flow well (well shut in) during initial production until all flowlines, tank batteries, and oil/gas takeaway are installed, tested, and determined operational.
3. Operator equips storage tanks with an automatic gauging system to reduce venting of natural gas.
4. Operator reduces the number of blowdowns by looking for opportunities to coordinate repair and maintenance activities.
5. Operator combusts natural gas that would otherwise be vented or flared, when feasible.
6. Operator has a flare stack designed in accordance with need and to handle sufficient volume to ensure proper combustion efficiency. Flare stacks are equipped with continuous pilots and securely anchored at least 100 feet (at minimum) from storage tanks and wells.
7. Operator minimizes venting (when feasible) through pump downs of vessels and reducing time required to purge equipment before returning equipment to service.
8. Operator will shut in wells (when feasible) in the event of a takeaway disruption, emergency situation, or other operations where venting or flaring may occur due to equipment failures.

AFMSS

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

Drilling Plan Data Report

07/26/2021

APD ID: 10400037613 **Submission Date:** 01/16/2019

Operator Name: XTO ENERGY INCORPORATED

Well Name: SOPHIA 32-20 FED **Well Number:** 123H

Well Type: CONVENTIONAL GAS 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
367393	PERMIAN	2924	0	0	OTHER : Quaternary	NONE	N
367394	RUSTLER	2518	405	405	SILTSTONE	USEABLE WATER	N
367391	TOP SALT	2292	631	631	SALT	NONE	N
367388	BASE OF SALT	-202	3125	3125	SALT	NONE	N
367395	DELAWARE	-329	3252	3252	SANDSTONE	NATURAL GAS, OIL, OTHER : Produced Water	N
367396	BONE SPRING	-4084	7007	7007	SANDSTONE	NATURAL GAS, OIL, OTHER : Produced Water	N
367392	BONE SPRING 1ST	-5048	7971	7971	SANDSTONE	NATURAL GAS, OIL, OTHER : Produced Water	N
367389	BONE SPRING 2ND	-5543	8466	8466	SANDSTONE	NATURAL GAS, OIL, OTHER : Produced Water	N
367398	WOLFCAMP	-7359	10282	10282	LIMESTONE	NATURAL GAS, OIL, OTHER, USEABLE WATER : Produced Water	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M **Rating Depth:** 10702

Equipment: The blow out preventer equipment (BOP) for this well 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.
Testing Procedure: Once the permanent WH is installed on the 13-3/8 casing, the blow out preventer equipment (BOP) will consist of a 13-5/8" minimum 5M Hydril and a 13-5/8" minimum 5M 3-Ram BOP. MASP should not exceed 3914 psi. 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). 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 5000 psi. Since a multibowl system will be used, subsequent BOP pressure tests will be performed as necessary based on required testing schedule (i.e., at least every 30 days). All BOP tests will include a low pressure test as per BLM regulations. The 5M BOP diagrams are attached.

Operator Name: XTO ENERGY INCORPORATED

Well Name: SOPHIA 32-20 FED **Well Number:** 123H

Blind rams will be functioned tested each trip, pipe rams will be functioned tested each day.

Choke Diagram Attachment:

Sophia_32_Fed_5MCM_20190101094758.pdf

BOP Diagram Attachment:

Sophia_32_Fed_5MBOP_20190101094805.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	430	0	430			430	J-55	87.5	ST&C	4.18	2.3	DRY	20.04	DRY	20.04
2	INTERMEDIATE	17.5	13.375	NEW	API	N	0	3150	0	3150			3150	J-55	54.5	ST&C	1.14	1.15	DRY	5.29	DRY	5.29
3	INTERMEDIATE	12.25	9.625	NEW	API	N	0	8470	0	8470			8470	HCL-80	40	LT&C	1.76	1.47	DRY	2.47	DRY	2.47
4	PRODUCTION	8.75	5.5	NEW	API	N	0	23308	0	10702			23308	P-110	20	BUTT	1.6	1.33	DRY	2.09	DRY	2.09

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Sophia_32_Fed_123H_Csg_20190102053846.pdf

Operator Name: XTO ENERGY INCORPORATED

Well Name: SOPHIA 32-20 FED **Well Number:** 123H

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Sophia_32_Fed_123H_Csg_20190102053837.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Sophia_32_Fed_123H_Csg_20190102053827.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Sophia_32_Fed_123H_Csg_20190102053819.pdf

Section 4 - Cement

Operator Name: XTO ENERGY INCORPORATED

Well Name: SOPHIA 32-20 FED **Well Number:** 123H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	430	2110	1.87	12.9	3745.7	100	EconoCem-HLTRRC	None
SURFACE	Tail		0		300	1.35	14.8	405	100	Halcem-C	2% CaCl
INTERMEDIATE	Lead		0	3150	2110	1.87	12.9	3945.7	100	EconoCem-HLTRRC	None
INTERMEDIATE	Tail		0		300	1.35	14.8	405	100	HalCem-C	2% CaCl
INTERMEDIATE	Lead	3250	0	3250	300	1.88	12.9	564	100	Halcem-C	2% CaCl
INTERMEDIATE	Tail				400	1.33	14.8	532	100	Halcem-C	2% CaCl
INTERMEDIATE	Lead	3250	3250	8470	1570	1.88	12.9	2951.6	100	Halcem-C	2% CaCl
INTERMEDIATE	Tail				230	1.33	14.8	305.9	100	Halcem-C	2% CaCl
PRODUCTION	Lead		0	23308	2560	1.61	13.2	4121.6	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 a 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

Operator Name: XTO ENERGY INCORPORATED

Well Name: SOPHIA 32-20 FED **Well Number:** 123H

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
8470	10702	OTHER : FW/Cut Brine/Polymer	12.2	12.5							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 hrs to determine: density, viscosity, strength, filtration and pH as necessary. Solids control equipment will be used to operate as a closed loop system.
0	430	OTHER : FW/Native	8.4	8.8							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 hrs to determine: density, viscosity, strength, filtration and pH as necessary. Solids control equipment will be used to operate as a closed loop system.
430	3150	OTHER : Brine/Gel Sweeps	9.8	10.2							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 hrs to determine: density, viscosity, strength, filtration and pH as necessary. Solids control equipment will be used to operate as a closed loop system.
3150	8470	OTHER : FW/Cut Brine	8.7	10							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 hrs to determine: density, viscosity, strength, filtration and pH as necessary. Solids control equipment will be used to operate as a closed loop system.

Operator Name: XTO ENERGY INCORPORATED

Well Name: SOPHIA 32-20 FED **Well Number:** 123H

Section 6 - Test, Logging, Coring

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

Mud Logger: Mud Logging Unit (2 man) below intermediate casing. Open hole logging will include quad combo.

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

CBL,DS,GR,MUDLOG

Coring operation description for the well:

No coring will take place on this well.

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 6956 **Anticipated Surface Pressure:** 4662.5

Anticipated Bottom Hole Temperature(F): 150

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

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

Sophia_32_Fed_H2S_Dia_20190101090432.pdf

Sophia_32_Fed_H2S_Plan_20190101090439.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Sophia_32_Fed_123H_DD_20190102054026.pdf

Other proposed operations facets description:

XTO requests to utilize centralizers only in the curve after the KOP and only a minimum of one every other joint.

Other proposed operations facets attachment:

Sophia_32_Fed_123H_GCP_20190102054048.pdf

Other Variance attachment:

Sophia_32_Fed_FH_20190101091851.pdf

Sophia_32_Fed_MBS_20210427055623.pdf

Casing Design

Hole Size	Depth	OD Csg	Weight	Collar	Grade	New/Used	SF Burst	SF Collapse	SF Tension
24"	0' – 430'	18-5/8"	87.5	STC	J-55	New	2.30	4.18	20.04
17-1/2"	0' – 3150'	13-3/8"	54.5	STC	J-55	New	1.15	1.14	5.29
12-1/4"	0' – 8470'	9-5/8"	40	LTC	HCL-80	New	1.25	1.76	2.47
8-3/4"	0' – 23308'	5-1/2"	20	BTC	P-110	New	1.33	1.60	2.09

- XTO requests to utilize centralizers only in the curve after the KOP and only a minimum of one every other joint.
- 18-5/8" Collapse analyzed using 75% evacuation. Casing to be filled while running.
- 13-3/8" & 9-5/8" Collapse analyzed using 50% 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

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" 10M top flange x 13-3/8" SOW bottom

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

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

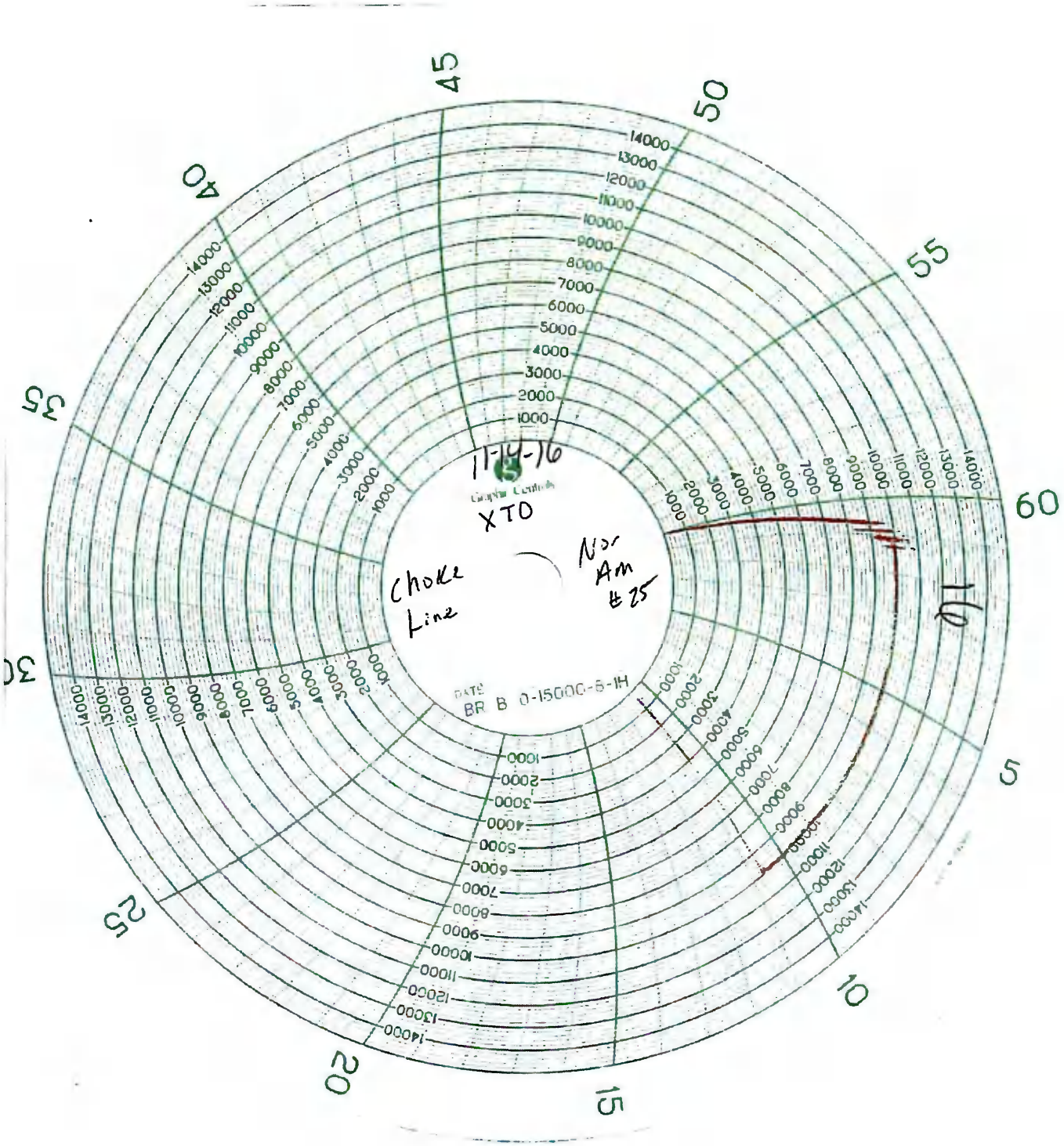
Product Description:	FD3.042.0R41/16.5KFLGE/E LE

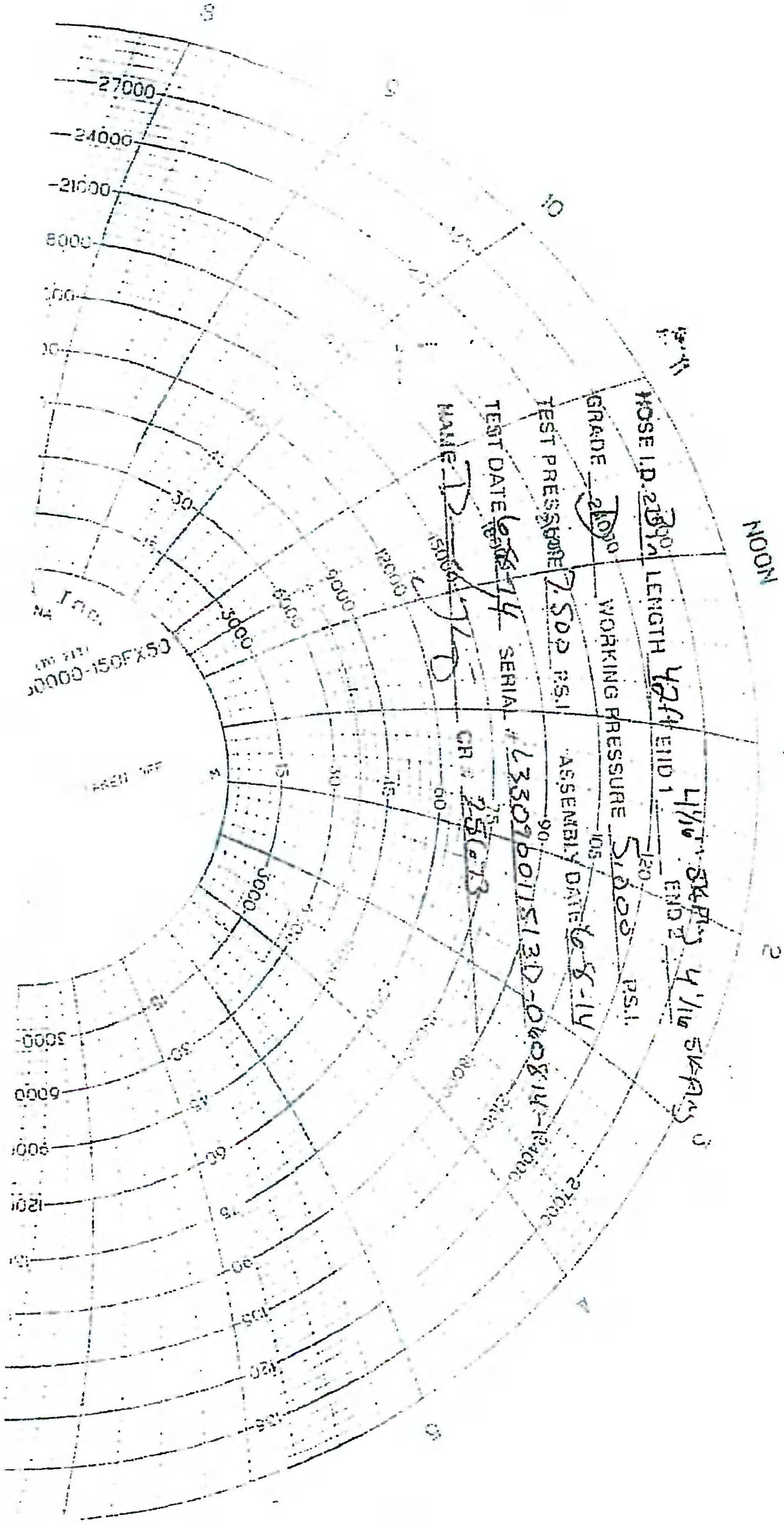
End Fitting 1 :	4 1/16 in.5K FLG	End Fitting 2 :	4 1/16 in.5K FLG
Gates Part No. :	4774-6001	Assembly Code :	L33090011513D-060814-1
Working Pressure :	5,000 PSI	Test Pressure :	7,500 PSI

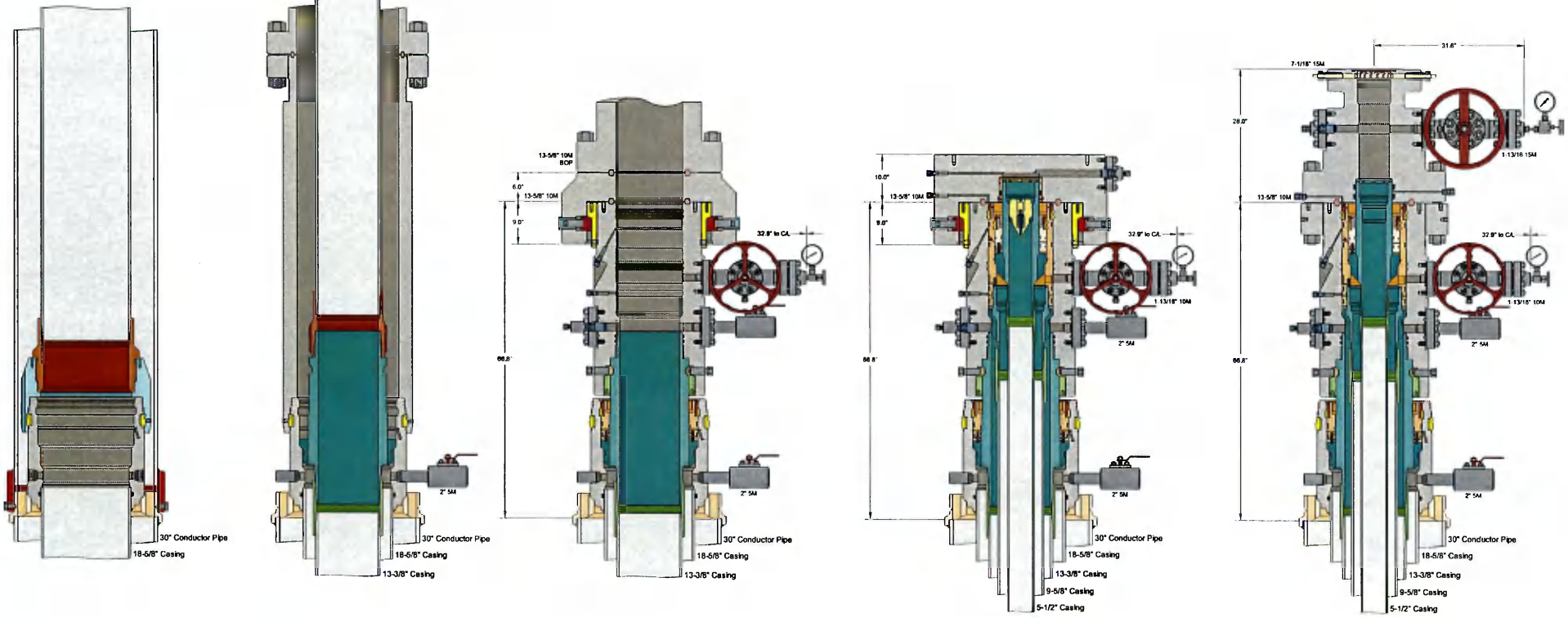
Gates E & S North America, Inc. certifies that the following hose assembly has been tested to the Gates Oilfield Roughneck Agreement/Specification requirements and passed the 15 minute hydrostatic test per API Spec 7K/Q1, Fifth Edition, June 2010, Test pressure 9.6.7 and per Table 9 to 7,500 psi in accordance 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


11-14-16
XTO
Choke Line
Nor Am #25
DATE
BR B 0-15000-8-1H


NOON
HOSE I.D. LENGTH END 1 END 2
GRADE WORKING PRESSURE P.S.I.
TEST PRESSURE P.S.I. ASSEMBLY DATE
TEST DATE SERIAL #
NAME CR #



ALL DIMENSIONS APPROXIMATE

CACTUS WELLHEAD LLC

XTO ENERGY INC
POTASH

30" x 18-5/8" x 13-3/8" x 9-5/8" x 5-1/2" CRC/MBU-3T-CFL Wellhead
With 13-5/8" 10M x 7-1/16" 15M CTH-DBLHPS-SB Tubing Head
And Drilling & Skid Configurations

DRAWN	DLE	13JUL20
APPRV		
DRAWING NO	HBE0000357	

XTO Energy

Eddy County, NM (NAD-27)
Sophia 32-20 Fed
123H

OH

Plan: PERMT

Standard Planning Report

28 December, 2018

XTO ENERGY

Project: Eddy County, NM (NAD-27)
Site: Sophia 32-20 Fed
Well: 123H
Wellbore: OH
Design: PERMT

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: 123H

Rig Name:
RKB=23 @ 2947.00usft
Ground Level: 2924.00

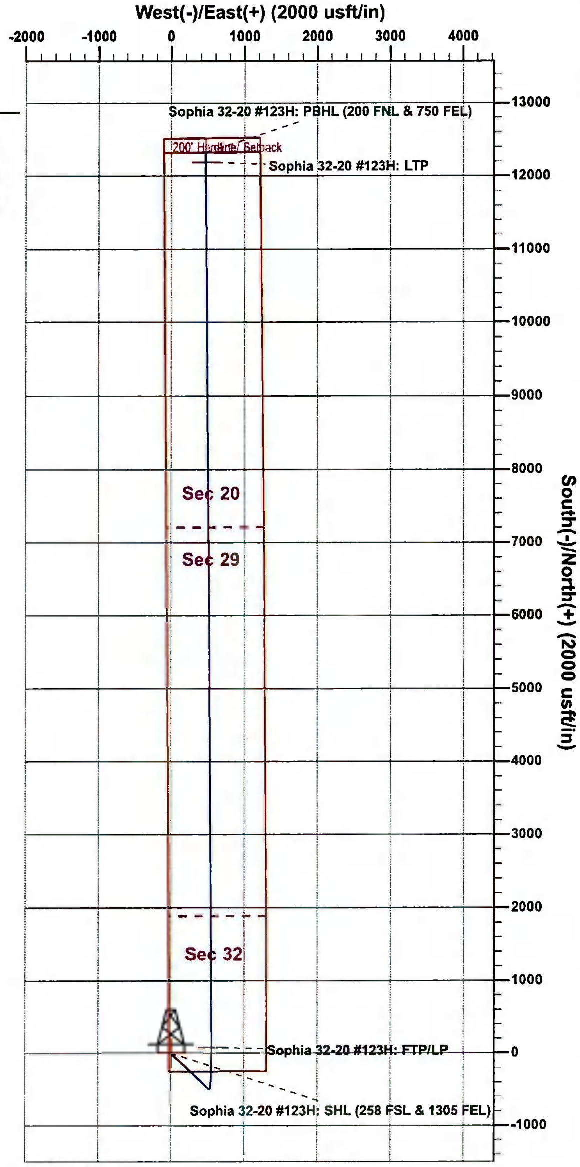
+N/-S	+E/-W	Northing	Easting	Latittude	Longitude
0.00	0.00	364256.30	634789.20	32.000709	-103.898520

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Sophia 32-20 #123H: SHL (258 FSL & 1305 FEL)	0.00	0.00	0.00	364256.30	634789.20	32.000709	-103.898520	Point
Sophia 32-20 #123H: FTP/LP	10702.00	75.00	554.70	364331.30	635343.90	32.000909	-103.896730	Point
Sophia 32-20 #123H: LTP	10702.00	12191.10	465.40	376447.40	635254.60	32.034217	-103.896860	Point
Sophia 32-20 #123H: PBHL (200 FNL & 750 FEL)	10702.00	12321.10	464.40	376577.40	635253.60	32.034575	-103.896862	Point

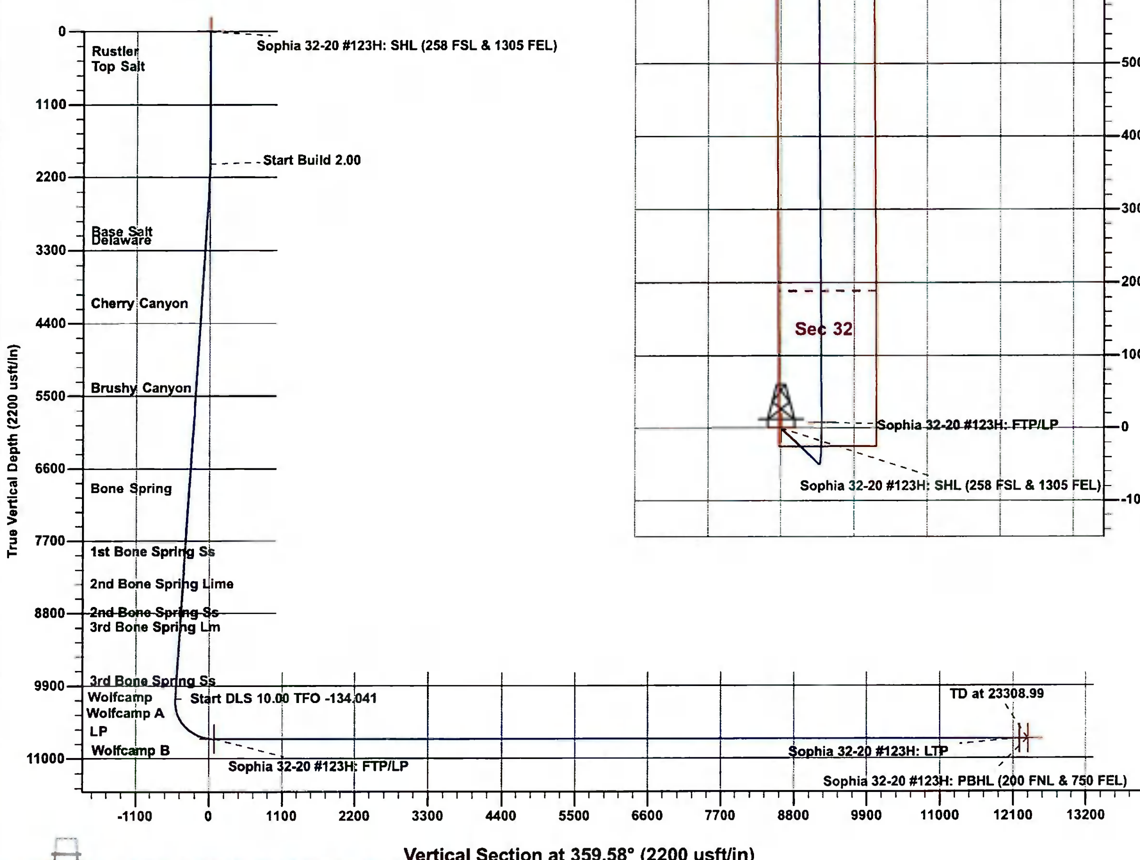
SECTION DETAILS

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	0.000	0.00
2	2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.000	0.00
3	2257.92	5.16	133.73	2257.57	-8.02	8.38	2.00	133.734	-8.08
4	10126.65	5.16	133.73	10094.43	-497.11	519.57	0.00	0.000	-500.90
5	11062.56	90.00	359.58	10702.00	75.00	554.70	10.00	-134.041	70.93
6	23178.98	90.00	359.58	10702.00	12191.10	465.36	0.00	0.000	12187.36
7	23308.99	90.00	359.58	10702.00	12321.10	464.40	0.00	0.000	12317.36



FORMATION TOP DETAILS

TVDPath	Formation
411.00	Rustler
637.00	Top Salt
3131.00	Base Salt
3258.00	Delaware
4205.00	Cherry Canyon
5488.00	Brushy Canyon
7013.00	Bone Spring
7977.00	1st Bone Spring Ss
8472.00	2nd Bone Spring Lime
8900.00	2nd Bone Spring Ss
9119.00	3rd Bone Spring Lm
9937.00	3rd Bone Spring Ss
10287.00	Wolfcamp
10322.00	Wolfcamp X
10416.00	Wolfcamp Y
10428.00	Wolfcamp A
10702.00	LP



The customer should only rely on this document after independently verifying all paths, targets, coordinates, lease and hard lines represented. ... information ... customer

Plan: PERMT (123H/OH)

Created By: Matthew May Date: 11:01, December 28 2018

XTO ENERGY

www.prototypewellplanning.com

Planning Report

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well 123H
Company:	XTO Energy	**TVD Reference:**	RKB=23 @ 2947.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB=23 @ 2947.00usft
Site:	Sophia 32-20 Fed	**North Reference:**	Grid
Well:	123H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PERMT		

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 Sophia 32-20 Fed

Site Position:		**Northing:**	364,255.00 usft	**Latitude:**	32.000709
From:	Map	**Easting:**	634,499.30 usft	**Longitude:**	-103.899456
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.230 °

Well 123H

Well Position	**+N/-S**	1.30 usft	**Northing:**	364,256.30 usft	**Latitude:**	32.000709
	+E/-W	289.90 usft	**Easting:**	634,789.20 usft	**Longitude:**	-103.898521
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	0.00 usft	**Ground Level:**	2,924.00 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	12/28/2018	6.923	59.786	47,618

Design PERMT

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	359.58

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	0.000	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.000	
2,257.92	5.16	133.73	2,257.57	-8.02	8.38	2.00	2.00	0.00	133.734	
10,126.65	5.16	133.73	10,094.43	-497.11	519.57	0.00	0.00	0.00	0.000	
11,062.56	90.00	359.58	10,702.00	75.00	554.70	10.00	9.07	-14.33	-134.041	Sophia 32-20 #123I
23,178.99	90.00	359.58	10,702.00	12,191.10	465.36	0.00	0.00	0.00	0.000	Sophia 32-20 #123I
23,308.99	90.00	359.58	10,702.00	12,321.10	464.40	0.00	0.00	0.00	0.000	Sophia 32-20 #123I

XTO ENERGY

www.prototypewellplanning.com

Planning Report

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well 123H
Company:	XTO Energy	**TVD Reference:**	RKB=23 @ 2947.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB=23 @ 2947.00usft
Site:	Sophia 32-20 Fed	**North Reference:**	Grid
Well:	123H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PERMT		

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
Sophia 32-20 #123H: SHL (258 FSL & 1305 FEL)									
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
411.00	0.00	0.00	411.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
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
637.00	0.00	0.00	637.00	0.00	0.00	0.00	0.00	0.00	0.00
Top Salt									
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	2.00	133.73	2,099.98	-1.21	1.26	-1.22	2.00	2.00	0.00
2,200.00	4.00	133.73	2,199.84	-4.82	5.04	-4.86	2.00	2.00	0.00
2,257.92	5.16	133.73	2,257.57	-8.02	8.38	-8.08	2.00	2.00	0.00
2,300.00	5.16	133.73	2,299.48	-10.64	11.12	-10.72	0.00	0.00	0.00
2,400.00	5.16	133.73	2,399.08	-16.85	17.61	-16.98	0.00	0.00	0.00
2,500.00	5.16	133.73	2,498.67	-23.07	24.11	-23.24	0.00	0.00	0.00
2,600.00	5.16	133.73	2,598.27	-29.28	30.61	-29.51	0.00	0.00	0.00
2,700.00	5.16	133.73	2,697.86	-35.50	37.10	-35.77	0.00	0.00	0.00
2,800.00	5.16	133.73	2,797.46	-41.71	43.60	-42.03	0.00	0.00	0.00
2,900.00	5.16	133.73	2,897.05	-47.93	50.10	-48.30	0.00	0.00	0.00
3,000.00	5.16	133.73	2,996.65	-54.15	56.59	-54.56	0.00	0.00	0.00
3,100.00	5.16	133.73	3,096.24	-60.36	63.09	-60.82	0.00	0.00	0.00
3,134.90	5.16	133.73	3,131.00	-62.53	65.36	-63.01	0.00	0.00	0.00
Base Salt									
3,200.00	5.16	133.73	3,195.84	-66.58	69.58	-67.09	0.00	0.00	0.00
3,262.42	5.16	133.73	3,258.00	-70.46	73.64	-70.99	0.00	0.00	0.00
Delaware									
3,300.00	5.16	133.73	3,295.43	-72.79	76.08	-73.35	0.00	0.00	0.00
3,400.00	5.16	133.73	3,395.03	-79.01	82.58	-79.61	0.00	0.00	0.00
3,500.00	5.16	133.73	3,494.62	-85.22	89.07	-85.87	0.00	0.00	0.00
3,600.00	5.16	133.73	3,594.22	-91.44	95.57	-92.14	0.00	0.00	0.00
3,700.00	5.16	133.73	3,693.81	-97.65	102.07	-98.40	0.00	0.00	0.00
3,800.00	5.16	133.73	3,793.41	-103.87	108.56	-104.66	0.00	0.00	0.00
3,900.00	5.16	133.73	3,893.00	-110.09	115.06	-110.93	0.00	0.00	0.00
4,000.00	5.16	133.73	3,992.60	-116.30	121.56	-117.19	0.00	0.00	0.00
4,100.00	5.16	133.73	4,092.19	-122.52	128.05	-123.45	0.00	0.00	0.00
4,200.00	5.16	133.73	4,191.79	-128.73	134.55	-129.72	0.00	0.00	0.00
4,213.27	5.16	133.73	4,205.00	-129.56	135.41	-130.55	0.00	0.00	0.00

XTO ENERGY

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Planning Report

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well 123H
Company:	XTO Energy	**TVD Reference:**	RKB=23 @ 2947.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB=23 @ 2947.00usft
Site:	Sophia 32-20 Fed	**North Reference:**	Grid
Well:	123H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PERMT		

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)
Cherry Canyon									
4,300.00	5.16	133.73	4,291.38	-134.95	141.05	-135.98	0.00	0.00	0.00
4,400.00	5.16	133.73	4,390.98	-141.16	147.54	-142.24	0.00	0.00	0.00
4,500.00	5.16	133.73	4,490.57	-147.38	154.04	-148.50	0.00	0.00	0.00
4,600.00	5.16	133.73	4,590.17	-153.59	160.53	-154.77	0.00	0.00	0.00
4,700.00	5.16	133.73	4,689.76	-159.81	167.03	-161.03	0.00	0.00	0.00
4,800.00	5.16	133.73	4,789.36	-166.03	173.53	-167.29	0.00	0.00	0.00
4,900.00	5.16	133.73	4,888.95	-172.24	180.02	-173.56	0.00	0.00	0.00
5,000.00	5.16	133.73	4,988.55	-178.46	186.52	-179.82	0.00	0.00	0.00
5,100.00	5.16	133.73	5,088.14	-184.67	193.02	-186.08	0.00	0.00	0.00
5,200.00	5.16	133.73	5,187.74	-190.89	199.51	-192.35	0.00	0.00	0.00
5,300.00	5.16	133.73	5,287.33	-197.10	206.01	-198.61	0.00	0.00	0.00
5,400.00	5.16	133.73	5,386.93	-203.32	212.51	-204.87	0.00	0.00	0.00
5,500.00	5.16	133.73	5,486.52	-209.53	219.00	-211.13	0.00	0.00	0.00
5,501.48	5.16	133.73	5,488.00	-209.63	219.10	-211.23	0.00	0.00	0.00
Brushy Canyon									
5,600.00	5.16	133.73	5,586.12	-215.75	225.50	-217.40	0.00	0.00	0.00
5,700.00	5.16	133.73	5,685.71	-221.97	231.99	-223.66	0.00	0.00	0.00
5,800.00	5.16	133.73	5,785.31	-228.18	238.49	-229.92	0.00	0.00	0.00
5,900.00	5.16	133.73	5,884.90	-234.40	244.99	-236.19	0.00	0.00	0.00
6,000.00	5.16	133.73	5,984.50	-240.61	251.48	-242.45	0.00	0.00	0.00
6,100.00	5.16	133.73	6,084.09	-246.83	257.98	-248.71	0.00	0.00	0.00
6,200.00	5.16	133.73	6,183.69	-253.04	264.48	-254.98	0.00	0.00	0.00
6,300.00	5.16	133.73	6,283.28	-259.26	270.97	-261.24	0.00	0.00	0.00
6,400.00	5.16	133.73	6,382.88	-265.48	277.47	-267.50	0.00	0.00	0.00
6,500.00	5.16	133.73	6,482.47	-271.69	283.97	-273.76	0.00	0.00	0.00
6,600.00	5.16	133.73	6,582.07	-277.91	290.46	-280.03	0.00	0.00	0.00
6,700.00	5.16	133.73	6,681.66	-284.12	296.96	-286.29	0.00	0.00	0.00
6,800.00	5.16	133.73	6,781.26	-290.34	303.46	-292.55	0.00	0.00	0.00
6,900.00	5.16	133.73	6,880.85	-296.55	309.95	-298.82	0.00	0.00	0.00
7,000.00	5.16	133.73	6,980.45	-302.77	316.45	-305.08	0.00	0.00	0.00
7,032.69	5.16	133.73	7,013.00	-304.80	318.57	-307.13	0.00	0.00	0.00
Bone Spring									
7,100.00	5.16	133.73	7,080.04	-308.98	322.94	-311.34	0.00	0.00	0.00
7,200.00	5.16	133.73	7,179.64	-315.20	329.44	-317.61	0.00	0.00	0.00
7,300.00	5.16	133.73	7,279.23	-321.42	335.94	-323.87	0.00	0.00	0.00
7,400.00	5.16	133.73	7,378.83	-327.63	342.43	-330.13	0.00	0.00	0.00
7,500.00	5.16	133.73	7,478.42	-333.85	348.93	-336.40	0.00	0.00	0.00
7,600.00	5.16	133.73	7,578.02	-340.06	355.43	-342.66	0.00	0.00	0.00
7,700.00	5.16	133.73	7,677.61	-346.28	361.92	-348.92	0.00	0.00	0.00
7,800.00	5.16	133.73	7,777.21	-352.49	368.42	-355.18	0.00	0.00	0.00
7,900.00	5.16	133.73	7,876.80	-358.71	374.92	-361.45	0.00	0.00	0.00
8,000.00	5.16	133.73	7,976.40	-364.92	381.41	-367.71	0.00	0.00	0.00
8,000.61	5.16	133.73	7,977.00	-364.96	381.45	-367.75	0.00	0.00	0.00
1st Bone Spring Ss									
8,100.00	5.16	133.73	8,075.99	-371.14	387.91	-373.97	0.00	0.00	0.00
8,200.00	5.16	133.73	8,175.59	-377.36	394.40	-380.24	0.00	0.00	0.00
8,300.00	5.16	133.73	8,275.18	-383.57	400.90	-386.50	0.00	0.00	0.00
8,400.00	5.16	133.73	8,374.78	-389.79	407.40	-392.76	0.00	0.00	0.00
8,497.62	5.16	133.73	8,472.00	-395.85	413.74	-398.88	0.00	0.00	0.00
2nd Bone Spring Lime									
8,500.00	5.16	133.73	8,474.37	-396.00	413.89	-399.03	0.00	0.00	0.00
8,600.00	5.16	133.73	8,573.97	-402.22	420.39	-405.29	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well 123H
Company:	XTO Energy	**TVD Reference:**	RKB=23 @ 2947.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB=23 @ 2947.00usft
Site:	Sophia 32-20 Fed	**North Reference:**	Grid
Well:	123H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PERMT		

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)
8,700.00	5.16	133.73	8,673.56	-408.43	426.89	-411.55	0.00	0.00	0.00
8,800.00	5.16	133.73	8,773.16	-414.65	433.38	-417.81	0.00	0.00	0.00
8,900.00	5.16	133.73	8,872.75	-420.86	439.88	-424.08	0.00	0.00	0.00
8,927.36	5.16	133.73	8,900.00	-422.56	441.66	-425.79	0.00	0.00	0.00
2nd Bone Spring Ss									
9,000.00	5.16	133.73	8,972.35	-427.08	446.38	-430.34	0.00	0.00	0.00
9,100.00	5.16	133.73	9,071.94	-433.30	452.87	-436.60	0.00	0.00	0.00
9,147.25	5.16	133.73	9,119.00	-436.23	455.94	-439.56	0.00	0.00	0.00
3rd Bone Spring Lm									
9,200.00	5.16	133.73	9,171.54	-439.51	459.37	-442.87	0.00	0.00	0.00
9,300.00	5.16	133.73	9,271.13	-445.73	465.87	-449.13	0.00	0.00	0.00
9,400.00	5.16	133.73	9,370.73	-451.94	472.36	-455.39	0.00	0.00	0.00
9,500.00	5.16	133.73	9,470.32	-458.16	478.86	-461.66	0.00	0.00	0.00
9,600.00	5.16	133.73	9,569.92	-464.37	485.35	-467.92	0.00	0.00	0.00
9,700.00	5.16	133.73	9,669.51	-470.59	491.85	-474.18	0.00	0.00	0.00
9,800.00	5.16	133.73	9,769.11	-476.80	498.35	-480.44	0.00	0.00	0.00
9,900.00	5.16	133.73	9,868.70	-483.02	504.84	-486.71	0.00	0.00	0.00
9,968.58	5.16	133.73	9,937.00	-487.28	509.30	-491.00	0.00	0.00	0.00
3rd Bone Spring Ss									
10,000.00	5.16	133.73	9,968.30	-489.24	511.34	-492.97	0.00	0.00	0.00
10,100.00	5.16	133.73	10,067.89	-495.45	517.84	-499.23	0.00	0.00	0.00
10,126.65	5.16	133.73	10,094.43	-497.11	519.57	-500.90	0.00	0.00	0.00
10,150.00	3.91	108.31	10,117.71	-498.08	521.08	-501.89	10.00	-5.34	-108.87
10,200.00	5.27	44.22	10,167.58	-496.97	524.30	-500.80	10.00	2.71	-128.18
10,250.00	9.49	22.37	10,217.16	-491.51	527.48	-495.37	10.00	8.45	-43.70
10,300.00	14.23	14.38	10,266.09	-481.74	530.57	-485.62	10.00	9.47	-15.98
10,321.68	16.33	12.35	10,287.00	-476.19	531.89	-480.07	10.00	9.69	-9.35
Wolfcamp									
10,350.00	19.09	10.36	10,313.97	-467.74	533.57	-471.64	10.00	9.77	-7.03
10,358.52	19.93	9.87	10,322.00	-464.94	534.07	-468.84	10.00	9.81	-5.80
Wolfcamp X									
10,400.00	24.02	7.94	10,360.46	-449.61	536.45	-453.53	10.00	9.85	-4.66
10,450.00	28.96	6.30	10,405.20	-427.48	539.18	-431.42	10.00	9.89	-3.28
10,462.42	30.19	5.97	10,416.00	-421.39	539.84	-425.33	10.00	9.91	-2.65
Wolfcamp Y									
10,476.40	31.58	5.63	10,428.00	-414.25	540.56	-418.20	10.00	9.92	-2.45
Wolfcamp A									
10,500.00	33.92	5.10	10,447.85	-401.54	541.75	-405.50	10.00	9.93	-2.21
10,550.00	38.89	4.18	10,488.08	-371.97	544.14	-375.94	10.00	9.94	-1.84
10,600.00	43.87	3.44	10,525.58	-339.00	546.33	-342.99	10.00	9.95	-1.48
10,650.00	48.85	2.82	10,560.08	-302.88	548.29	-306.89	10.00	9.96	-1.24
10,700.00	53.83	2.29	10,591.30	-263.88	550.03	-267.91	10.00	9.97	-1.06
10,750.00	58.82	1.82	10,619.02	-222.31	551.52	-226.35	10.00	9.97	-0.93
10,800.00	63.80	1.40	10,643.01	-178.48	552.75	-182.53	10.00	9.97	-0.84
10,850.00	68.79	1.02	10,663.10	-132.73	553.71	-136.78	10.00	9.98	-0.77
10,900.00	73.78	0.66	10,679.14	-85.39	554.40	-89.45	10.00	9.98	-0.72
10,950.00	78.77	0.31	10,691.00	-36.84	554.81	-40.90	10.00	9.98	-0.69
11,000.00	83.76	359.98	10,698.60	12.57	554.94	8.50	10.00	9.98	-0.66
11,050.00	88.75	359.66	10,701.86	62.45	554.78	58.38	10.00	9.98	-0.65
11,062.56	90.00	359.58	10,702.00	75.00	554.70	70.93	10.00	9.98	-0.65
LP - Sophia 32-20 #123H: FTP/LP									
11,100.00	90.00	359.58	10,702.00	112.44	554.42	108.38	0.00	0.00	0.00
11,200.00	90.00	359.58	10,702.00	212.44	553.69	208.38	0.00	0.00	0.00

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Planning Report

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well 123H
Company:	XTO Energy	**TVD Reference:**	RKB=23 @ 2947.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB=23 @ 2947.00usft
Site:	Sophia 32-20 Fed	**North Reference:**	Grid
Well:	123H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PERMT		

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)
11,300.00	90.00	359.58	10,702.00	312.44	552.95	308.38	0.00	0.00	0.00
11,400.00	90.00	359.58	10,702.00	412.44	552.21	408.38	0.00	0.00	0.00
11,500.00	90.00	359.58	10,702.00	512.43	551.47	508.38	0.00	0.00	0.00
11,600.00	90.00	359.58	10,702.00	612.43	550.74	608.38	0.00	0.00	0.00
11,700.00	90.00	359.58	10,702.00	712.43	550.00	708.38	0.00	0.00	0.00
11,800.00	90.00	359.58	10,702.00	812.42	549.26	808.38	0.00	0.00	0.00
11,900.00	90.00	359.58	10,702.00	912.42	548.53	908.38	0.00	0.00	0.00
12,000.00	90.00	359.58	10,702.00	1,012.42	547.79	1,008.38	0.00	0.00	0.00
12,100.00	90.00	359.58	10,702.00	1,112.42	547.05	1,108.38	0.00	0.00	0.00
12,200.00	90.00	359.58	10,702.00	1,212.41	546.31	1,208.38	0.00	0.00	0.00
12,300.00	90.00	359.58	10,702.00	1,312.41	545.58	1,308.38	0.00	0.00	0.00
12,400.00	90.00	359.58	10,702.00	1,412.41	544.84	1,408.38	0.00	0.00	0.00
12,500.00	90.00	359.58	10,702.00	1,512.41	544.10	1,508.38	0.00	0.00	0.00
12,600.00	90.00	359.58	10,702.00	1,612.40	543.36	1,608.38	0.00	0.00	0.00
12,700.00	90.00	359.58	10,702.00	1,712.40	542.63	1,708.38	0.00	0.00	0.00
12,800.00	90.00	359.58	10,702.00	1,812.40	541.89	1,808.38	0.00	0.00	0.00
12,900.00	90.00	359.58	10,702.00	1,912.39	541.15	1,908.38	0.00	0.00	0.00
13,000.00	90.00	359.58	10,702.00	2,012.39	540.41	2,008.38	0.00	0.00	0.00
13,100.00	90.00	359.58	10,702.00	2,112.39	539.68	2,108.38	0.00	0.00	0.00
13,200.00	90.00	359.58	10,702.00	2,212.39	538.94	2,208.38	0.00	0.00	0.00
13,300.00	90.00	359.58	10,702.00	2,312.38	538.20	2,308.38	0.00	0.00	0.00
13,400.00	90.00	359.58	10,702.00	2,412.38	537.46	2,408.38	0.00	0.00	0.00
13,500.00	90.00	359.58	10,702.00	2,512.38	536.73	2,508.38	0.00	0.00	0.00
13,600.00	90.00	359.58	10,702.00	2,612.38	535.99	2,608.38	0.00	0.00	0.00
13,700.00	90.00	359.58	10,702.00	2,712.37	535.25	2,708.38	0.00	0.00	0.00
13,800.00	90.00	359.58	10,702.00	2,812.37	534.52	2,808.38	0.00	0.00	0.00
13,900.00	90.00	359.58	10,702.00	2,912.37	533.78	2,908.38	0.00	0.00	0.00
14,000.00	90.00	359.58	10,702.00	3,012.36	533.04	3,008.38	0.00	0.00	0.00
14,100.00	90.00	359.58	10,702.00	3,112.36	532.30	3,108.38	0.00	0.00	0.00
14,200.00	90.00	359.58	10,702.00	3,212.36	531.57	3,208.38	0.00	0.00	0.00
14,300.00	90.00	359.58	10,702.00	3,312.36	530.83	3,308.38	0.00	0.00	0.00
14,400.00	90.00	359.58	10,702.00	3,412.35	530.09	3,408.38	0.00	0.00	0.00
14,500.00	90.00	359.58	10,702.00	3,512.35	529.35	3,508.38	0.00	0.00	0.00
14,600.00	90.00	359.58	10,702.00	3,612.35	528.62	3,608.38	0.00	0.00	0.00
14,700.00	90.00	359.58	10,702.00	3,712.35	527.88	3,708.38	0.00	0.00	0.00
14,800.00	90.00	359.58	10,702.00	3,812.34	527.14	3,808.38	0.00	0.00	0.00
14,900.00	90.00	359.58	10,702.00	3,912.34	526.40	3,908.38	0.00	0.00	0.00
15,000.00	90.00	359.58	10,702.00	4,012.34	525.67	4,008.38	0.00	0.00	0.00
15,100.00	90.00	359.58	10,702.00	4,112.33	524.93	4,108.38	0.00	0.00	0.00
15,200.00	90.00	359.58	10,702.00	4,212.33	524.19	4,208.38	0.00	0.00	0.00
15,300.00	90.00	359.58	10,702.00	4,312.33	523.45	4,308.38	0.00	0.00	0.00
15,400.00	90.00	359.58	10,702.00	4,412.33	522.72	4,408.38	0.00	0.00	0.00
15,500.00	90.00	359.58	10,702.00	4,512.32	521.98	4,508.38	0.00	0.00	0.00
15,600.00	90.00	359.58	10,702.00	4,612.32	521.24	4,608.38	0.00	0.00	0.00
15,700.00	90.00	359.58	10,702.00	4,712.32	520.51	4,708.38	0.00	0.00	0.00
15,800.00	90.00	359.58	10,702.00	4,812.32	519.77	4,808.38	0.00	0.00	0.00
15,900.00	90.00	359.58	10,702.00	4,912.31	519.03	4,908.38	0.00	0.00	0.00
16,000.00	90.00	359.58	10,702.00	5,012.31	518.29	5,008.38	0.00	0.00	0.00
16,100.00	90.00	359.58	10,702.00	5,112.31	517.56	5,108.38	0.00	0.00	0.00
16,200.00	90.00	359.58	10,702.00	5,212.30	516.82	5,208.38	0.00	0.00	0.00
16,300.00	90.00	359.58	10,702.00	5,312.30	516.08	5,308.38	0.00	0.00	0.00
16,400.00	90.00	359.58	10,702.00	5,412.30	515.34	5,408.38	0.00	0.00	0.00
16,500.00	90.00	359.58	10,702.00	5,512.30	514.61	5,508.38	0.00	0.00	0.00
16,600.00	90.00	359.58	10,702.00	5,612.29	513.87	5,608.38	0.00	0.00	0.00

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Planning Report

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well 123H
Company:	XTO Energy	**TVD Reference:**	RKB=23 @ 2947.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB=23 @ 2947.00usft
Site:	Sophia 32-20 Fed	**North Reference:**	Grid
Well:	123H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PERMT		

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)
16,700.00	90.00	359.58	10,702.00	5,712.29	513.13	5,708.38	0.00	0.00	0.00
16,800.00	90.00	359.58	10,702.00	5,812.29	512.39	5,808.38	0.00	0.00	0.00
16,900.00	90.00	359.58	10,702.00	5,912.29	511.66	5,908.38	0.00	0.00	0.00
17,000.00	90.00	359.58	10,702.00	6,012.28	510.92	6,008.38	0.00	0.00	0.00
17,100.00	90.00	359.58	10,702.00	6,112.28	510.18	6,108.38	0.00	0.00	0.00
17,200.00	90.00	359.58	10,702.00	6,212.28	509.45	6,208.38	0.00	0.00	0.00
17,300.00	90.00	359.58	10,702.00	6,312.28	508.71	6,308.38	0.00	0.00	0.00
17,400.00	90.00	359.58	10,702.00	6,412.27	507.97	6,408.38	0.00	0.00	0.00
17,500.00	90.00	359.58	10,702.00	6,512.27	507.23	6,508.38	0.00	0.00	0.00
17,600.00	90.00	359.58	10,702.00	6,612.27	506.50	6,608.38	0.00	0.00	0.00
17,700.00	90.00	359.58	10,702.00	6,712.26	505.76	6,708.38	0.00	0.00	0.00
17,800.00	90.00	359.58	10,702.00	6,812.26	505.02	6,808.38	0.00	0.00	0.00
17,900.00	90.00	359.58	10,702.00	6,912.26	504.28	6,908.38	0.00	0.00	0.00
18,000.00	90.00	359.58	10,702.00	7,012.26	503.55	7,008.38	0.00	0.00	0.00
18,100.00	90.00	359.58	10,702.00	7,112.25	502.81	7,108.38	0.00	0.00	0.00
18,200.00	90.00	359.58	10,702.00	7,212.25	502.07	7,208.38	0.00	0.00	0.00
18,300.00	90.00	359.58	10,702.00	7,312.25	501.33	7,308.38	0.00	0.00	0.00
18,400.00	90.00	359.58	10,702.00	7,412.25	500.60	7,408.38	0.00	0.00	0.00
18,500.00	90.00	359.58	10,702.00	7,512.24	499.86	7,508.38	0.00	0.00	0.00
18,600.00	90.00	359.58	10,702.00	7,612.24	499.12	7,608.38	0.00	0.00	0.00
18,700.00	90.00	359.58	10,702.00	7,712.24	498.38	7,708.38	0.00	0.00	0.00
18,800.00	90.00	359.58	10,702.00	7,812.23	497.65	7,808.38	0.00	0.00	0.00
18,900.00	90.00	359.58	10,702.00	7,912.23	496.91	7,908.38	0.00	0.00	0.00
19,000.00	90.00	359.58	10,702.00	8,012.23	496.17	8,008.38	0.00	0.00	0.00
19,100.00	90.00	359.58	10,702.00	8,112.23	495.44	8,108.38	0.00	0.00	0.00
19,200.00	90.00	359.58	10,702.00	8,212.22	494.70	8,208.38	0.00	0.00	0.00
19,300.00	90.00	359.58	10,702.00	8,312.22	493.96	8,308.38	0.00	0.00	0.00
19,400.00	90.00	359.58	10,702.00	8,412.22	493.22	8,408.38	0.00	0.00	0.00
19,500.00	90.00	359.58	10,702.00	8,512.22	492.49	8,508.38	0.00	0.00	0.00
19,600.00	90.00	359.58	10,702.00	8,612.21	491.75	8,608.38	0.00	0.00	0.00
19,700.00	90.00	359.58	10,702.00	8,712.21	491.01	8,708.38	0.00	0.00	0.00
19,800.00	90.00	359.58	10,702.00	8,812.21	490.27	8,808.38	0.00	0.00	0.00
19,900.00	90.00	359.58	10,702.00	8,912.20	489.54	8,908.38	0.00	0.00	0.00
20,000.00	90.00	359.58	10,702.00	9,012.20	488.80	9,008.38	0.00	0.00	0.00
20,100.00	90.00	359.58	10,702.00	9,112.20	488.06	9,108.38	0.00	0.00	0.00
20,200.00	90.00	359.58	10,702.00	9,212.20	487.32	9,208.38	0.00	0.00	0.00
20,300.00	90.00	359.58	10,702.00	9,312.19	486.59	9,308.38	0.00	0.00	0.00
20,400.00	90.00	359.58	10,702.00	9,412.19	485.85	9,408.38	0.00	0.00	0.00
20,500.00	90.00	359.58	10,702.00	9,512.19	485.11	9,508.38	0.00	0.00	0.00
20,600.00	90.00	359.58	10,702.00	9,612.19	484.37	9,608.38	0.00	0.00	0.00
20,700.00	90.00	359.58	10,702.00	9,712.18	483.64	9,708.38	0.00	0.00	0.00
20,800.00	90.00	359.58	10,702.00	9,812.18	482.90	9,808.38	0.00	0.00	0.00
20,900.00	90.00	359.58	10,702.00	9,912.18	482.16	9,908.38	0.00	0.00	0.00
21,000.00	90.00	359.58	10,702.00	10,012.17	481.43	10,008.38	0.00	0.00	0.00
21,100.00	90.00	359.58	10,702.00	10,112.17	480.69	10,108.38	0.00	0.00	0.00
21,200.00	90.00	359.58	10,702.00	10,212.17	479.95	10,208.38	0.00	0.00	0.00
21,300.00	90.00	359.58	10,702.00	10,312.17	479.21	10,308.38	0.00	0.00	0.00
21,400.00	90.00	359.58	10,702.00	10,412.16	478.48	10,408.38	0.00	0.00	0.00
21,500.00	90.00	359.58	10,702.00	10,512.16	477.74	10,508.38	0.00	0.00	0.00
21,600.00	90.00	359.58	10,702.00	10,612.16	477.00	10,608.38	0.00	0.00	0.00
21,700.00	90.00	359.58	10,702.00	10,712.16	476.26	10,708.38	0.00	0.00	0.00
21,800.00	90.00	359.58	10,702.00	10,812.15	475.53	10,808.38	0.00	0.00	0.00
21,900.00	90.00	359.58	10,702.00	10,912.15	474.79	10,908.38	0.00	0.00	0.00
22,000.00	90.00	359.58	10,702.00	11,012.15	474.05	11,008.38	0.00	0.00	0.00

XTO ENERGY

www.prototypewellplanning.com

Planning Report

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well 123H
Company:	XTO Energy	**TVD Reference:**	RKB=23 @ 2947.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB=23 @ 2947.00usft
Site:	Sophia 32-20 Fed	**North Reference:**	Grid
Well:	123H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PERMT		

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)
22,100.00	90.00	359.58	10,702.00	11,112.14	473.31	11,108.38	0.00	0.00	0.00
22,200.00	90.00	359.58	10,702.00	11,212.14	472.58	11,208.38	0.00	0.00	0.00
22,300.00	90.00	359.58	10,702.00	11,312.14	471.84	11,308.38	0.00	0.00	0.00
22,400.00	90.00	359.58	10,702.00	11,412.14	471.10	11,408.38	0.00	0.00	0.00
22,500.00	90.00	359.58	10,702.00	11,512.13	470.37	11,508.38	0.00	0.00	0.00
22,600.00	90.00	359.58	10,702.00	11,612.13	469.63	11,608.38	0.00	0.00	0.00
22,700.00	90.00	359.58	10,702.00	11,712.13	468.89	11,708.38	0.00	0.00	0.00
22,800.00	90.00	359.58	10,702.00	11,812.13	468.15	11,808.38	0.00	0.00	0.00
22,900.00	90.00	359.58	10,702.00	11,912.12	467.42	11,908.38	0.00	0.00	0.00
23,000.00	90.00	359.58	10,702.00	12,012.12	466.68	12,008.38	0.00	0.00	0.00
23,100.00	90.00	359.58	10,702.00	12,112.12	465.94	12,108.38	0.00	0.00	0.00
23,178.99	90.00	359.58	10,702.00	12,191.10	465.36	12,187.36	0.00	0.00	0.00
Sophia 32-20 #123H: LTP									
23,200.00	90.00	359.58	10,702.00	12,212.11	465.20	12,208.38	0.00	0.00	0.00
23,308.99	90.00	359.58	10,702.00	12,321.10	464.40	12,317.37	0.00	0.00	0.00
Sophia 32-20 #123H: PBHL (200 FNL & 750 FEL)									

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
Sophia 32-20 #123H: - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	364,256.30	634,789.20	32.000709	-103.898521
Sophia 32-20 #123H: - plan hits target center - Point	0.00	0.00	10,702.00	12,321.10	464.40	376,577.40	635,253.60	32.034575	-103.896862
Sophia 32-20 #123H: - plan misses target center by 0.04usft at 23178.98usft MD (10702.00 TVD, 12191.10 N, 465.36 E) - Point	0.00	0.00	10,702.00	12,191.10	465.40	376,447.40	635,254.60	32.034217	-103.896861
Sophia 32-20 #123H: - plan hits target center - Point	0.00	0.00	10,702.00	75.00	554.70	364,331.30	635,343.90	32.000909	-103.896730

XTO ENERGY

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Planning Report

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well 123H
Company:	XTO Energy	**TVD Reference:**	RKB=23 @ 2947.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB=23 @ 2947.00usft
Site:	Sophia 32-20 Fed	**North Reference:**	Grid
Well:	123H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PERMT		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
411.00	411.00	Rustler			
637.00	637.00	Top Salt			
3,134.90	3,131.00	Base Salt			
3,262.42	3,258.00	Delaware			
4,213.27	4,205.00	Cherry Canyon			
5,501.48	5,488.00	Brushy Canyon			
7,032.69	7,013.00	Bone Spring			
8,000.61	7,977.00	1st Bone Spring Ss			
8,497.62	8,472.00	2nd Bone Spring Lime			
8,927.36	8,900.00	2nd Bone Spring Ss			
9,147.25	9,119.00	3rd Bone Spring Lm			
9,968.58	9,937.00	3rd Bone Spring Ss			
10,321.68	10,287.00	Wolfcamp			
10,358.52	10,322.00	Wolfcamp X			
10,462.42	10,416.00	Wolfcamp Y			
10,476.40	10,428.00	Wolfcamp A			
11,062.56	10,702.00	LP			

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**XTO Energy, Inc.**
LEASE NO.:	**NMNM-121477**
WELL NAME & NO.:	**Sophia 32-20 Fed 123H**
SURFACE HOLE FOOTAGE:	**0258' FSL & 1305' FEL**
BOTTOM HOLE FOOTAGE	**0200' FNL & 0750' FEL Sec. 20, T.26 S., R.30 E.**
LOCATION:	**Section 32, T.26 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	☐ WIPP
Other	☑ Fluid Filled	☐ Cement Squeeze	☐ Pilot Hole
Special Requirements	☐ Water Disposal	☑ COM	☐ Unit

High Cave/Karst
Possibility of water flows in the Salado and Castile.
Possibility of lost circulation in the Rustler, Red Beds, and Delaware.
Abnormal pressure is possible in the 3rd Bone Spring and all subsequent formations.

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.

Approval Date: 07/23/2021

B. CASING

1. The **18-5/8** inch surface casing shall be set at approximately **430** 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.

    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 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.**

    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 intermediate casing is:

    Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

    a. 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.

b. 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 cave/karst. Excess calculates to negative 34% - Additional cement will be required.**

❖ In High 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.

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

- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification. **Excess calculates to 16% - Additional cement may be required.**

C. PRESSURE CONTROL

1. 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.

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)

Operator to add "COM" to the wellname via sundry notice.

Communitization Agreement

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

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.

   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 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.

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.

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 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. 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).

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 05182021

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

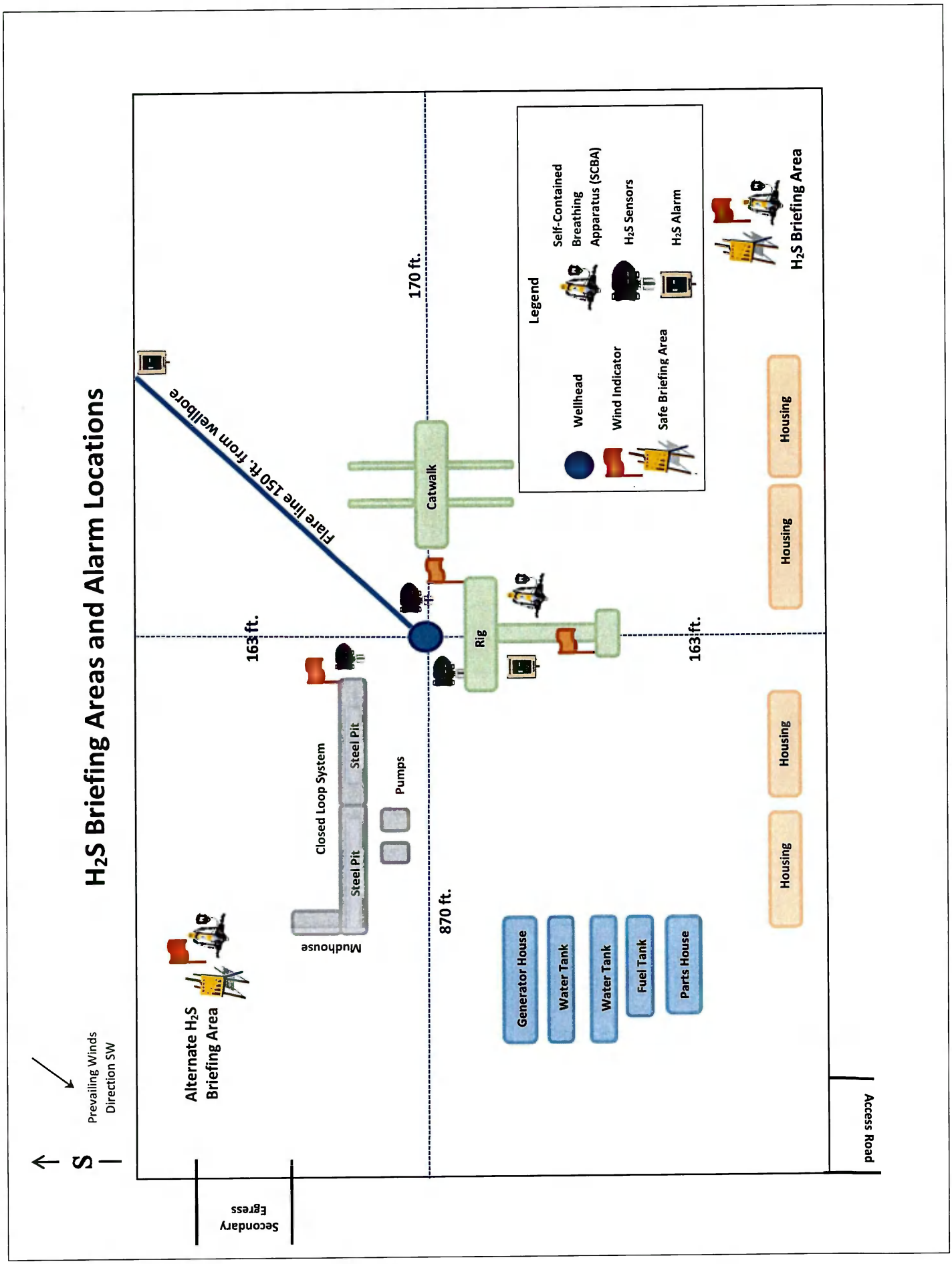
Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H_2S	1.189 Air = I	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO_2	2.21 Air = I	2 ppm	N/A	1000 ppm

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


H2S Briefing Areas and Alarm Locations
Prevailing Winds Direction SW
S
Secondary Egress
Alternate H2S Briefing Area
Mudhouse
Closed Loop System
Steel Pit
Steel Pit
Pumps
163 ft.
Flare line 150 ft. from wellbore
170 ft.
Catwalk
Rig
163ft.
870 ft.
Legend
Wellhead
Wind Indicator
Safe Briefing Area
Self-Contained Breathing Apparatus (SCBA)
H2S Sensors
H2S Alarm
H2S Briefing Area
Housing
Housing
Housing
Housing
Generator House
Water Tank
Water Tank
Fuel Tank
Parts House
Access Road

Operator Name: XTO ENERGY INCORPORATED

Well Name: SOPHIA 32-20 FED **Well Number:** 123H

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL
Disposal type description:

Disposal location description: A licensed 3rd party contractor will be used to haul and dispose human waste

Waste type: GARBAGE

Waste content description: Garbage, junk and non-flammable waste materials

Amount of waste: 250 pounds

Waste disposal frequency : Weekly

Safe containment description: All garbage, junk and non-flammable waste materials will be contained in a self-contained, portable dumpster or trash cage, to prevent scattering and will be removed and deposited in an approve sanitary landfill. Immediately after drilling all debris and other waste materials on and around the well location not contained in the trash cage will be cleaned up and removed from the location. No potentially adverse materials or substances will be left on the location.
Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL
Disposal type description:

Disposal location description: A licensed 3rd party contractor will be used to haul and safely dispose garbage, junk and non-flammable waste materials.

Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit?

Reserve pit length (ft.) **Reserve pit width (ft.)**

Reserve pit depth (ft.) **Reserve pit volume (cu. yd.)**

Is at least 50% of the reserve pit in cut?

Reserve pit liner

Reserve pit liner specifications and installation description

Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? YES

Description of cuttings location Drill cuttings will be held in roll-off style mud boxes and taken to a New Mexico Oil Conservation Division (NMOCD) approved disposal site.
Cuttings area length (ft.) **Cuttings area width (ft.)**

Cuttings area depth (ft.) **Cuttings area volume (cu. yd.)**

Is at least 50% of the cuttings area in cut?

Operator Name: XTO ENERGY INCORPORATED

Well Name: SOPHIA 32-20 FED **Well Number:** 123H

WCuttings area liner

Cuttings area liner specifications and installation description

Section 8 - Ancillary Facilities

Are you requesting any Ancillary Facilities?: NO

Ancillary Facilities attachment:

Comments:

Section 9 - Well Site Layout

Well Site Layout Diagram:

Sophia_32_Fed_123H_Well_20190102053708.pdf

Comments: Multi-Well Pad

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance **Multiple Well Pad Name:** SOPHIA

Multiple Well Pad Number: 2

Recontouring attachment:

Sophia_32_Fed_Int_Rec_20190101084715.pdf

Drainage/Erosion control construction: All compacted areas to be seeded will be ripped to a minimum depth of 18 inches with a minimum furrow spacing of 2 feet, followed by recontouring the surface and then evenly spreading the stockpiled topsoil. Prior to seeding, the seedbed will be scarified to a depth of no less than 4-6 inches.

Drainage/Erosion control reclamation: Erosion features are equal to or less than surrounding area and erosion control is sufficient so that water naturally infiltrates into the soil and gullying, headcutting, slumping, and deep or excessive rills (greater than 3 inches) are not observed.

Well pad proposed disturbance (acres): 7.44
Road proposed disturbance (acres): 1.21
Powerline proposed disturbance (acres): 0
Pipeline proposed disturbance (acres): 2.67
Other proposed disturbance (acres): 0
Total proposed disturbance: 11.32

Well pad interim reclamation (acres): 0.36
Road interim reclamation (acres): 0
Powerline interim reclamation (acres): 0
Pipeline interim reclamation (acres): 2.67
Other interim reclamation (acres): 0
Total interim reclamation: 3.03

Well pad long term disturbance (acres): 7.08
Road long term disturbance (acres): 1.21
Powerline long term disturbance (acres): 0
Pipeline long term disturbance (acres): 0
Other long term disturbance (acres): 31.44
Total long term disturbance: 39.73

Disturbance Comments:

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 Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 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 220374

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 220374
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	Notify OCD 24 hours prior to casing & cement	5/30/2023
ward.rikala	Will require a File As Drilled C-102 and a Directional Survey with the C-104	5/30/2023
ward.rikala	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	5/30/2023
ward.rikala	Cement is required to circulate on both surface and intermediate1 strings of casing	5/30/2023
ward.rikala	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	5/30/2023