Duplicate 2

Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on page 2

5. Lease Serial No.
NMNM136870

6. If Indian, Allottee or Tribe Name

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

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
CORRAL CANYON 3-34 FED 128H

2. Name of Operator
XTO ENERGY INCORPORATED
Contact: KELLY KARDOS
E-Mail: kelly_kardos@xtoenergy.com

9. API Well No.
30-015-45428-00-X1

3a. Address
6401 HOLIDAY HILL ROAD BLDG 5
MIDLAND, TX 79707

3b. Phone No. (include area code)
Ph: 432-620-4374

10. Field and Pool or Exploratory Area
PURPLE SAGE-WOLFCAMP (GAS)

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 10 T25S R29E NENE 185FNL 854FEL
32.151455 N Lat, 103.966438 W Lon

11. County or Parish, State
EDDY COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Change to Original APD
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

XTO Energy Inc. requests permission to make the following changes to the approved APD:

1. Change well name from Corral Canyon Federal 12H to Corral Canyon 3-34 Fed 128H

2. Move SHL from 185'FNL & 835'FEL to 185'FNL & 854'FEL. ?No surface disturbance will occur with this change.

3. Change BHL from 200'FSL & 660'FEL in Sec. 15, T25S, R29E to 200'FNL & 330'FEL in Sec. 3, T25S, R29E. Lease number will change from NMNM136870 to NMNM015302

5. Change formation from Willow Lake, Bone Spring SE to Purple Sage Wolfcamp

RECEIVED
NOV 25 2019
DISTRICT II-ARTESIA O.C.D.

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #446306 verified by the BLM Well Information System
For XTO ENERGY INCORPORATED, sent to the Carlsbad
Committed to AFMSS for processing by MUSTAFA HAQUE on 12/04/2018 (19MH0011SE)

Name *(Printed/Typed)* KELLY KARDOS — Title REGULATORY COORDINATOR

Signature (Electronic Submission) — Date 12/04/2018

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By CODY LAYTON — Title ASSIST FIELD MANAGER LANDS MINERALS — Date 02/28/2019

Conditions of approval, if any, are attached. Approval of this notice 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.

Office Carlsbad

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.

(Instructions on page 2)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

1/27/20 KS

Additional data for EC transaction #446306 that would not fit on the form

32. Additional remarks, continued

6. Drilling Program/Directional Plan

Attachments:
1. C102 & Supplement
2. Permitted vs Sundry Sheet
3. Drilling Program
4. Directional Plan
5. BOP/CM/FH

Revisions to Operator-Submitted EC Data for Sundry Notice #446306

	Operator Submitted	BLM Revised (AFMSS)
Sundry Type:	APDCH NOI	APDCH NOI
Lease:	NMNM136870	NMNM136870
Agreement:		
Operator:	XTO ENERGY, INC 6401 HOLIDAY HILL RD BLDG 5 MIDLAND, TX 79707 Ph: 432-620-4374	XTO ENERGY INCORPORATED 6401 HOLIDAY HILL ROAD BLDG 5 MIDLAND, TX 79707 Ph: 432.683 2277
Admin Contact:	KELLY KARDOS REGULATORY COORDINATOR E-Mail: kelly_kardos@xtoenergy.com Ph: 432-620-4374	KELLY KARDOS REGULATORY COORDINATOR E-Mail: kelly_kardos@xtoenergy.com Ph: 432-620-4374
Tech Contact:	KELLY KARDOS REGULATORY COORDINATOR E-Mail: kelly_kardos@xtoenergy.com Ph: 432-620-4374	KELLY KARDOS REGULATORY COORDINATOR E-Mail: kelly_kardos@xtoenergy.com Ph: 432-620-4374
Location: State: County:	 NM EDDY	 NM EDDY
Field/Pool:	WILLOW LAKE;BONE SPRINGSE	PURPLE SAGE-WOLFCAMP (GAS)
Well/Facility:	CORRAL CANYON FEDERAL 12H Sec 10 T25S R29E Mer NMP NENE 185FNL 835FEL	CORRAL CANYON 3-34 FED 128H Sec 10 T25S R29E NENE 185FNL 854FEL 32.151455 N Lat, 103.966438 W Lon

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**XTO ENERGY INC.**
LEASE NO.:	**NMNM136870**
WELL NAME & NO.:	**CORRAL CANYON 3-34 FEDERAL 128H**
SURFACE HOLE FOOTAGE:	**185'/N & 854'/E**
BOTTOM HOLE FOOTAGE	**200'/N & 330'/E**
LOCATION:	**Section 10.,T25S., R.29E., NMP**
COUNTY:	**EDDY County, New Mexico**

COA

H2S	○ Yes	◉ No	
Potash	◉ None	○ Secretary	○ R-111-P
Cave/Karst Potential	○ Low	◉ Medium	○ High
Variance	○ None	◉ Flex Hose	○ Other
Wellhead	○ Conventional	◉ Multibowl	○ Both
Other	☐ 4 String Area	☐ Capitan Reef	☐ WIPP

A. CASING

1. The **13-3/8** inch surface casing shall be set at approximately **647** feet (a minimum of 25 feet 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.

❖ In **Medium Cave/Karst Areas** if cement does not circulate to surface on the first two casing strings , the cement on the 3rd casing string must come to surface.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:
   - Cement to surface. If cement does not circulate see A.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.**

3. 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.

B. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Carlsbad Field Office, 620 E Greene St. Carlsbad, New Mexico 88220, 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.

Well Name:

Operator must submit a sundry to add 'Com' to the well name.

MHH 12042018

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)

☒ Chaves and Roosevelt Counties
Call the Roswell Field Office, 2909 West Second St., Roswell NM 88201.
During office hours call (575) 627-0272.
After office hours call (575)

☒ Eddy County
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

☒ Lea County
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 393-3612

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

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

6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.

b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
c. Manufacturer representative shall install the test plug for the initial BOP test.
d. 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.

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

a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).

c. The tests shall be done by an independent service company utilizing a test plug. The results of the test shall be reported to the appropriate BLM office.

d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

e. 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. 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.

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: 11-30-18

☐ Original
☒ Amended - Reason for Amendment: SHL & Name Change

Operator & OGRID No.: XTO Energy, Inc [005380]

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 – Corral Canyon 10 East CTB

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

Well Name	API	Well Location	Footages	Expected MCF/D	Flared or Vented	Comments
Corral Canyo 3-34 Fed 128H	30-015-45428	A-10-25S-29E	185'FNL & 854'FEL	2500	Flared/Sold	CTB Connected to P/L

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 ENLINK and will be connected to ENLINK 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 ENERGY, INC provides (periodically) to ENLINK a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, XTO ENERGY, INC and ENLINK have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at ENLINK Processing Plant located in Block 27, Section 4, Loving County TX. 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 ENLINK's system at that time. Based on current information, it is XTO ENERGY, INC'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.

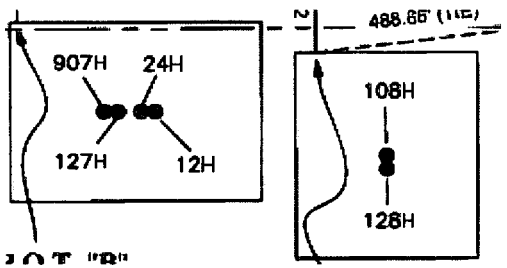
- Power Generation – On lease
  - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
  - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
  - Plants are expensive,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

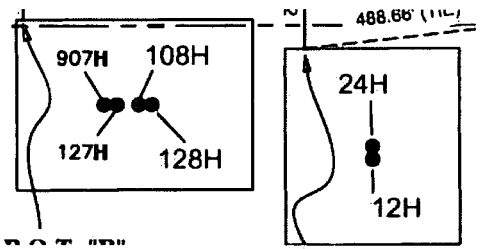
PERMITTED PLAN

Current Well Name	Formation	Permitted SHL	Permitted BHL
CORRAL CANYON 3-34 FED 907H	BONESPRING	A -10-25S-29E 185 FNL & 944 FEL	A -34-24S-29E 200 FNL & 952 FEL
CORRAL CANYON 3-34 FED 127H	WOLFCAMP	A -10-25S-29E 185 FNL & 914 FEL	A -34-24S-29E 200 FNL & 952 FEL
CORRAL CANYON 3-34 FED 108H	WOLFCAMP	A -10-25S-29E 285 FNL & 330 FEL	A -34-24S-29E 200 FNL & 330 FEL
CORRAL CANYON FEDERAL 24H	BONESPRING	A -10-25S-29E 185 FNL & 885 FEL	A -34-24S-29E 200 FNL & 660 FEL
CORRAL CANYON FEDERAL 12H	BONESPRING	A -10-25S-29E 185 FNL & 835 FEL	P -15-25S-29E 200 FSL & 660 FEL
CORRAL CANYON 3-34 FED 128H	WOLFCAMP	A -10-25S-29E 315 FNL & 330 FEL	A -34-24S-29E 200 FNL & 330 FEL

SUNDRY CHANGES

Well Name Change	*Formation*	*Updated SHL*		*Updated BHL*
CORRAL CANYON 3-34 FED 907H	BONESPRING	A -10-25S-29E	185 FNL & 944 FEL	L1 -3-25S-29E 50 FNL & 961 FEL
CORRAL CANYON 3-34 FED 127H	WOLFCAMP	A -10-25S-29E	185 FNL & 914 FEL	L1 -3-25S-29E 200 FNL & 961 FEL
CORRAL CANYON FEDERAL 24H	BONESPRING	A -10-25S-29E	285 FNL & 330 FEL	L1 -3-25S-29E 50 FNL & 660 FEL
CORRAL CANYON 3-34 FED 108H	WOLFCAMP	A -10-25S-29E	185'FNL & 884'FEL	L1 -3-25S-29E 200 FNL & 330 FEL
CORRAL CANYON 3-34 FED 128H	WOLFCAMP	A -10-25S-29E	185'FNL & 854'FEL	L1 -3-25S-29E 200 FNL & 330 FEL
CORRAL CANYON 10-15 FED 12H	BONESPRING	A -10-25S-29E	315'FNL & 330'FEL	P -15-25S-29E 50 FSL & 660 FEL





DRILLING PLAN (SUNDRY): BLM COMPLIANCE
(Supplement to BLM 3160-3)

XTO Energy Inc.
Corral Canyon 3-34 Federal 128H
Projected TD: 15547' MD / 10419' TVD
SHL: 185' FNL & 854' FEL , Section 10, T25S, R29E
BHL: 200' FNL & 330' FEL , Section 3, T25S, R29E
Eddy County, NM

1. Geologic Name of Surface Formation

A. Quaternary

2. Estimated Tops of Geological Markers & Depths of Anticipated Fresh Water, Oil or Gas:

Formation	Well Depth (TVD)	Water/Oil/Gas
Rustler	585'	Water
Top of Salt	854'	Water
Base of Salt	2968'	Water
Delaware	3151'	Water
Bone Spring Lm	6892'	Water/Oil/Gas
1st Bone Spring Ss	7825'	Water/Oil/Gas
2nd Bone Spring Ss	8697'	Water/Oil/Gas
3rd Bone Spring Ss	9749'	Water/Oil/Gas
Target/Land Curve	10419'	Water/Oil/Gas

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The surface fresh water sands will be protected by setting 13-3/8 inch casing @ 647' (100' into the Rustler) and circulating cement back to surface. The salt will be isolated by setting 9-5/8 inch casing at 9100'. A DV tool will be set @ 697' (100' below the surface shoe). Cement will be circulated to surface. An 8-3/4 inch curve and 8-1/2 inch lateral hole will be drilled to MD/TD and 5-1/2 inch casing will be set at TD and cemented back at least 500' into the intermediate casing.

3. Casing Design

Hole Size	Depth	OD Csg	Weight	Collar	Grade	New/Used	SF Burst	SF Collapse	SF Tension
17-1/2"	0' – 647'	13-3/8"	54.5	STC	J-55	New	0.98	3.91	14.58
12-1/4"	0' – 9100'	9-5/8"	40	LTC	HCL-80	New	1.84	1.50	2.30
8-3/4" x 8-1/2"	0' – 15547'	5-1/2"	17	BTC	P-110	New	1.12	1.38	2.58

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

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.
- Manufacturer will witness installation of test plug for initial test.
- Operator will test the 9-5/8" casing per BLM Onshore Order 2

4. Cement Program

Surface Casing: 13-3/8", 54.5 New J-55, STC casing to be set at +/- 647'

Lead: 250 sxs EconoCem-HLTRRC (mixed at 12.9 ppg, 1.87 ft3/sx, 10.13 gal/sx water)
Tail: 300 sxs Halcem-C + 2% CaCl (mixed at 14.8 ppg, 1.35 ft3/sx, 6.39 gal/sx water)
Compressives: 12-hr = 900 psi 24 hr = 1500 psi

Intermediate Casing: 9-5/8", 40 New HCL-80, LTC casing to be set at +/- 9100'

First Stage

Lead: 2610 sxs Halcem-C + 2% CaCl (mixed at 12.9 ppg, 1.88 ft3/sx, 9.61 gal/sx water)

Tail: 230 sxs Halcem-C + 2% CaCl (mixed at 14.8 ppg, 1.33 ft3/sx, 6.39 gal/sx water)
Compressives: 12-hr = 900 psi 24 hr = 1500 psi

If losses are severe, a DV tool will be set @ 697' (100' below the surface shoe).

Second Stage

Lead: 230 sxs Halcem-C + 2% CaCl (mixed at 12.9 ppg, 1.88 ft3/sx, 9.61 gal/sx water)

Tail: 180 sxs Halcem-C + 2% CaCl (mixed at 14.8 ppg, 1.33 ft3/sx, 6.39 gal/sx water)
Compressives: 12-hr = 900 psi 24 hr = 1500 psi

Production Casing: 5-1/2", 17 New P-110, BTC casing to be set at +/- 15547'

Lead: 150 sxs NeoCem (mixed at 10.5 ppg, 2.69 ft3/sx, 12.26 gal/sx water)

Tail: 1160 sxs VersaCem (mixed at 13.2 ppg, 1.61 ft3/sx, 8.38 gal/sx water)
Compressives: 12-hr = 1375 psi 24 hr = 2285 psi

5. Pressure Control 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. MASP should not exceed 3126 psi.

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. When nippling up on the 9-5/8", the BOP will be tested to a minimum of 5000 psi. 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.

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.

6. Proposed Mud Circulation System

INTERVAL	Hole Size	Mud Type	MW (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
0' to 647'	17-1/2"	FW/Native	8.4-8.8	35-40	NC
647' to 9100'	12-1/4"	Brine/Gel Sweeps	9.8-10.2	30-32	NC
9100' to 15547'	8-3/4" x 8-1/2"	FW / Cut Brine / Polymer	9.7 - 10	29-32	NC - 20

The necessary mud products for weight addition and fluid loss control will be on location at all times.

Spud with fresh water/native mud. Drill out from under 13-3/8" surface casing with brine solution. A 9.8ppg-10.2ppg brine mud will be used while drilling through the salt formation. Use fibrous materials as needed to control seepage and lost circulation. Pump viscous sweeps as needed for hole cleaning. Pump speed will be recorded on a daily drilling report after mudding up. 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.

7. Auxiliary Well Control and Monitoring Equipment

A. A Kelly cock will be in the drill string at all times.
B. A full opening drill pipe stabbing valve having appropriate connections will be on the rig floor at all times.
C. H2S monitors will be on location when drilling below the 13-3/8" casing.

8. Logging, Coring and Testing Program

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

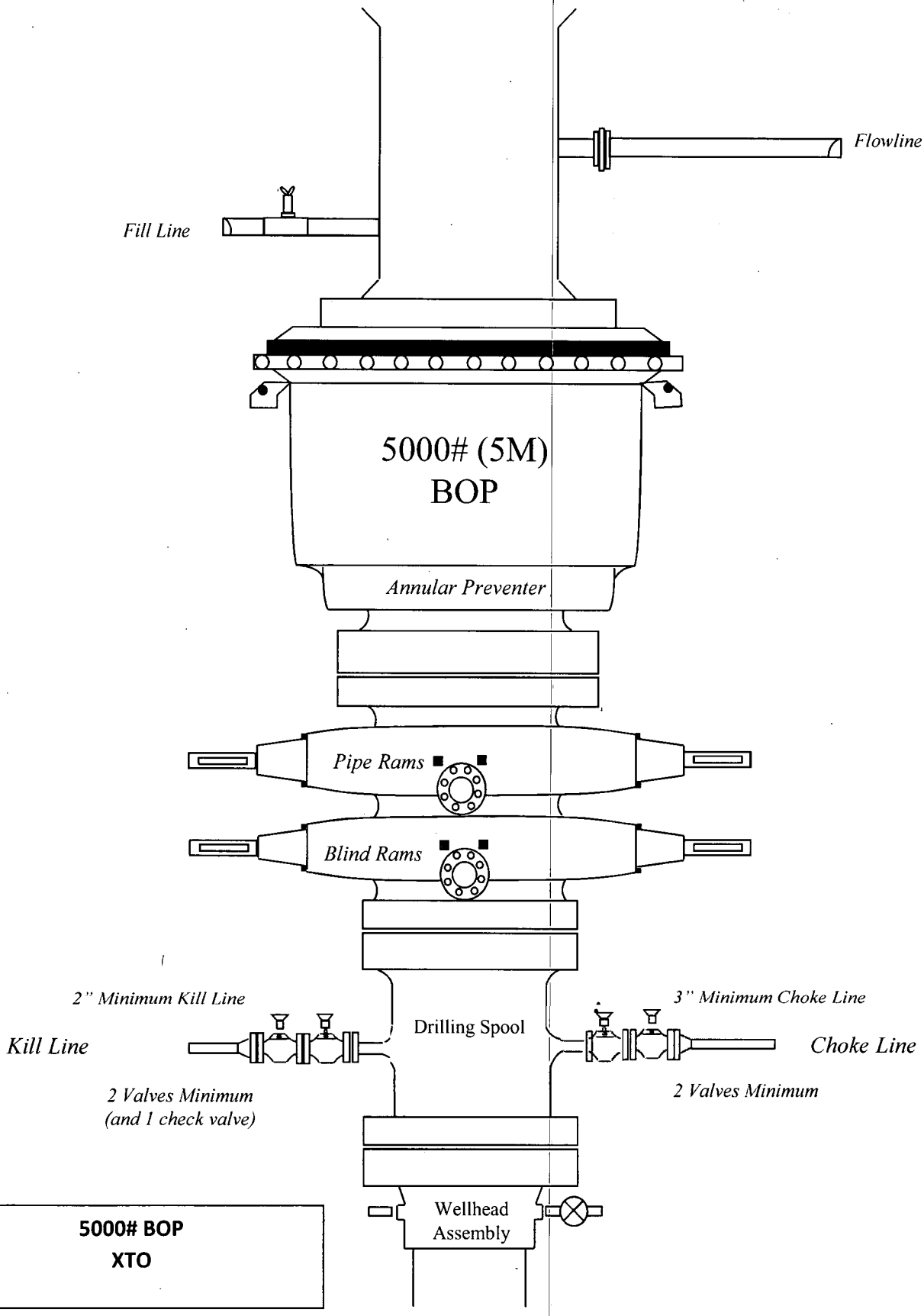
Open hole logging will not be done on this well.

9. Abnormal Pressures and Temperatures / Potential Hazards

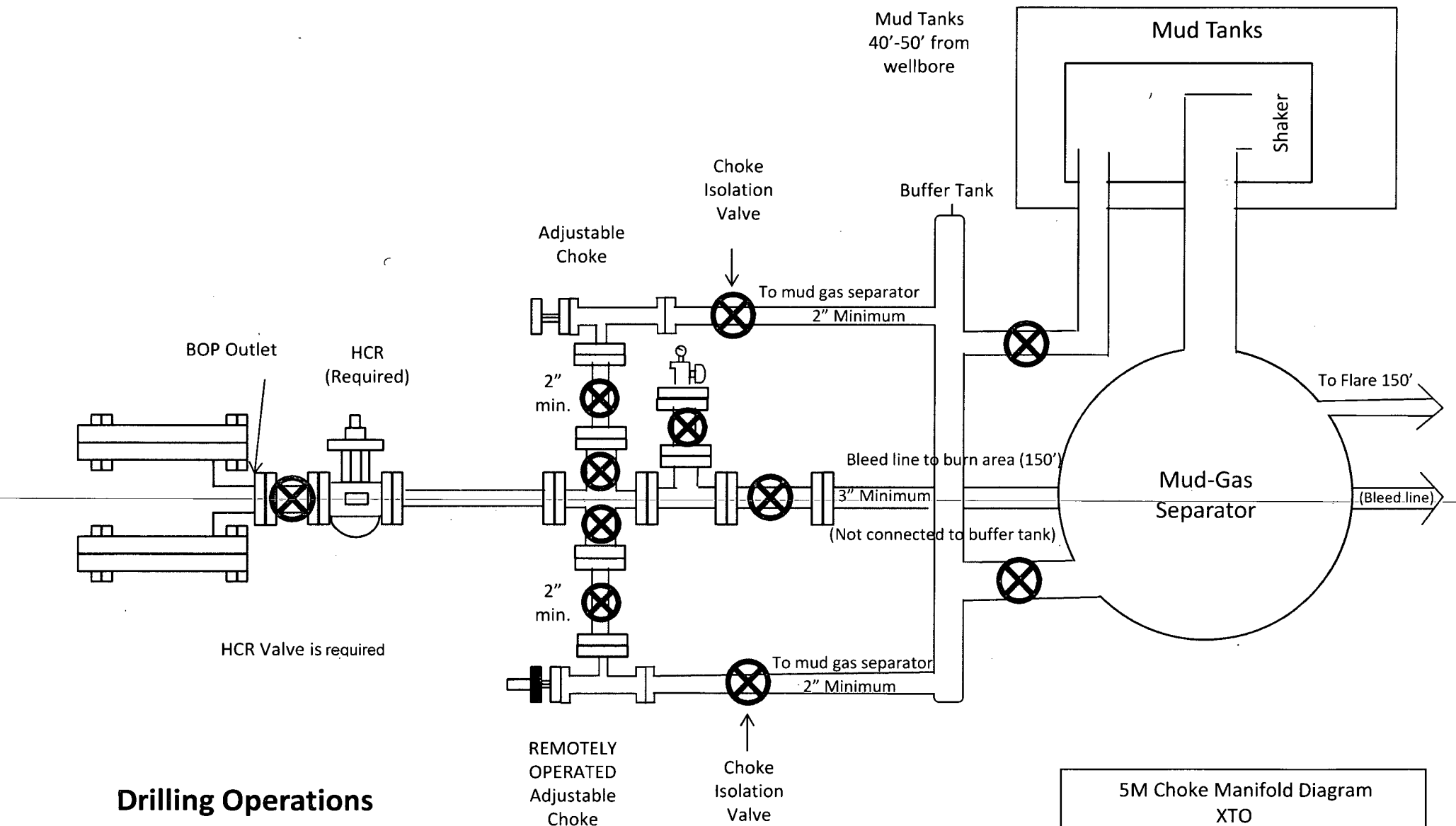
None Anticipated. BHT of 150 to 170 F is anticipated. No H2S is expected but monitors will be in place to detect any H2S occurrences. Should these circumstances be encountered the operator and drilling contractor are prepared to take all necessary steps to ensure safety of all personnel and environment. 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. The maximum anticipated bottom hole pressure for this well is 5418 psi.

10. Anticipated Starting Date and Duration of Operations

Road and location construction will begin after Santa Fe and BLM have approved the APD. Anticipated spud date will be as soon after Santa Fe and BLM approval and as soon as a rig will be available. Move in operations and drilling is expected to take 40 days. If production casing is run, an additional 30 days will be needed to complete well and construct surface facilities and/or lay flow lines in order to place well on production.


Flowline
Fill Line
5000# (5M)
BOP
Annular Preventer
Pipe Rams
Blind Rams
2" Minimum Kill Line
3" Minimum Choke Line
Kill Line
Drilling Spool
Choke Line
2 Valves Minimum
(and 1 check valve)
2 Valves Minimum
Wellhead
Assembly

5000# BOP
XTO



Drilling Operations
Choke Manifold
5M Service

5M Choke Manifold Diagram
XTO

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

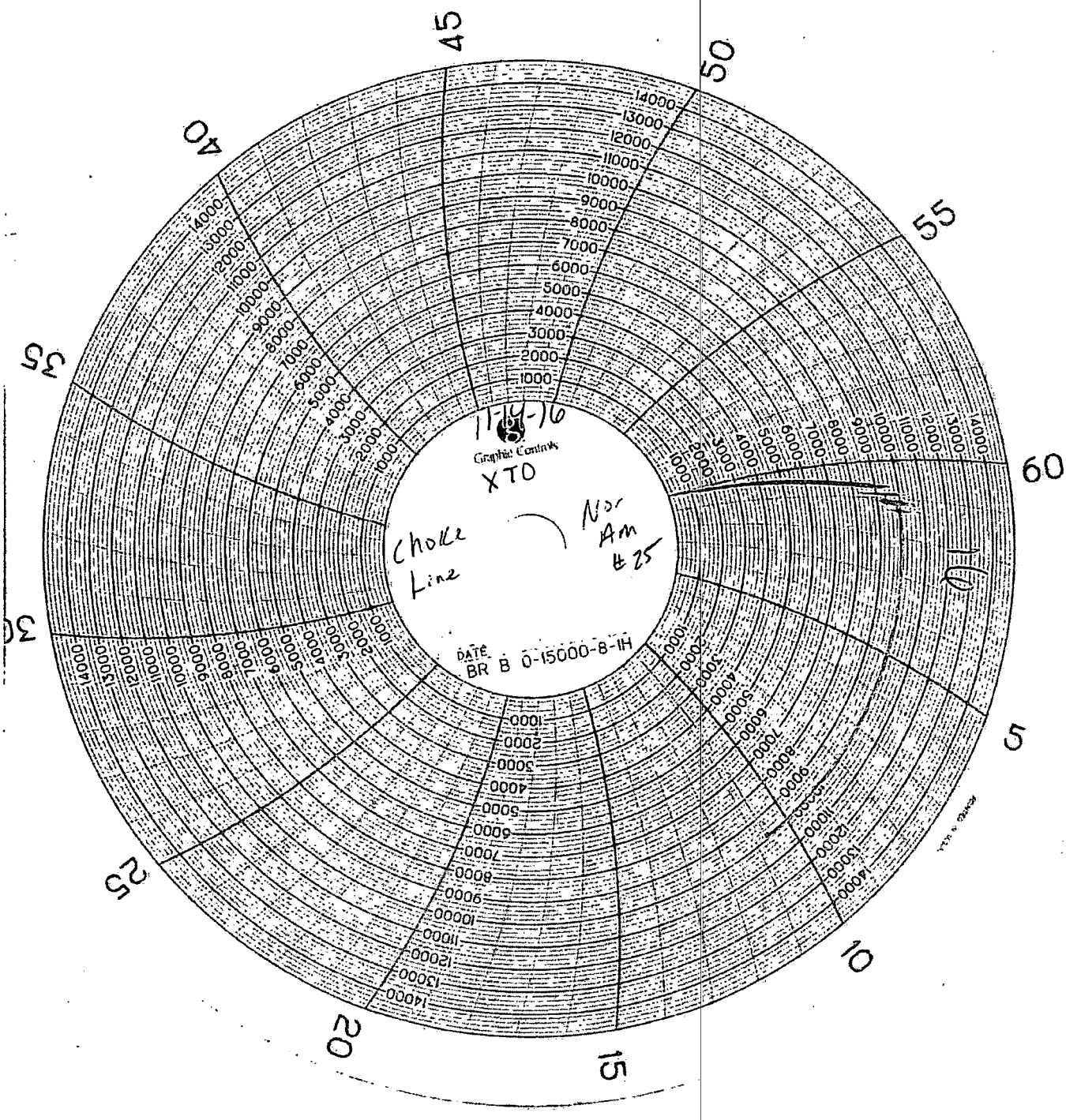
Product Description:	FD3.042.0R41/16.5KFLGE/E LE

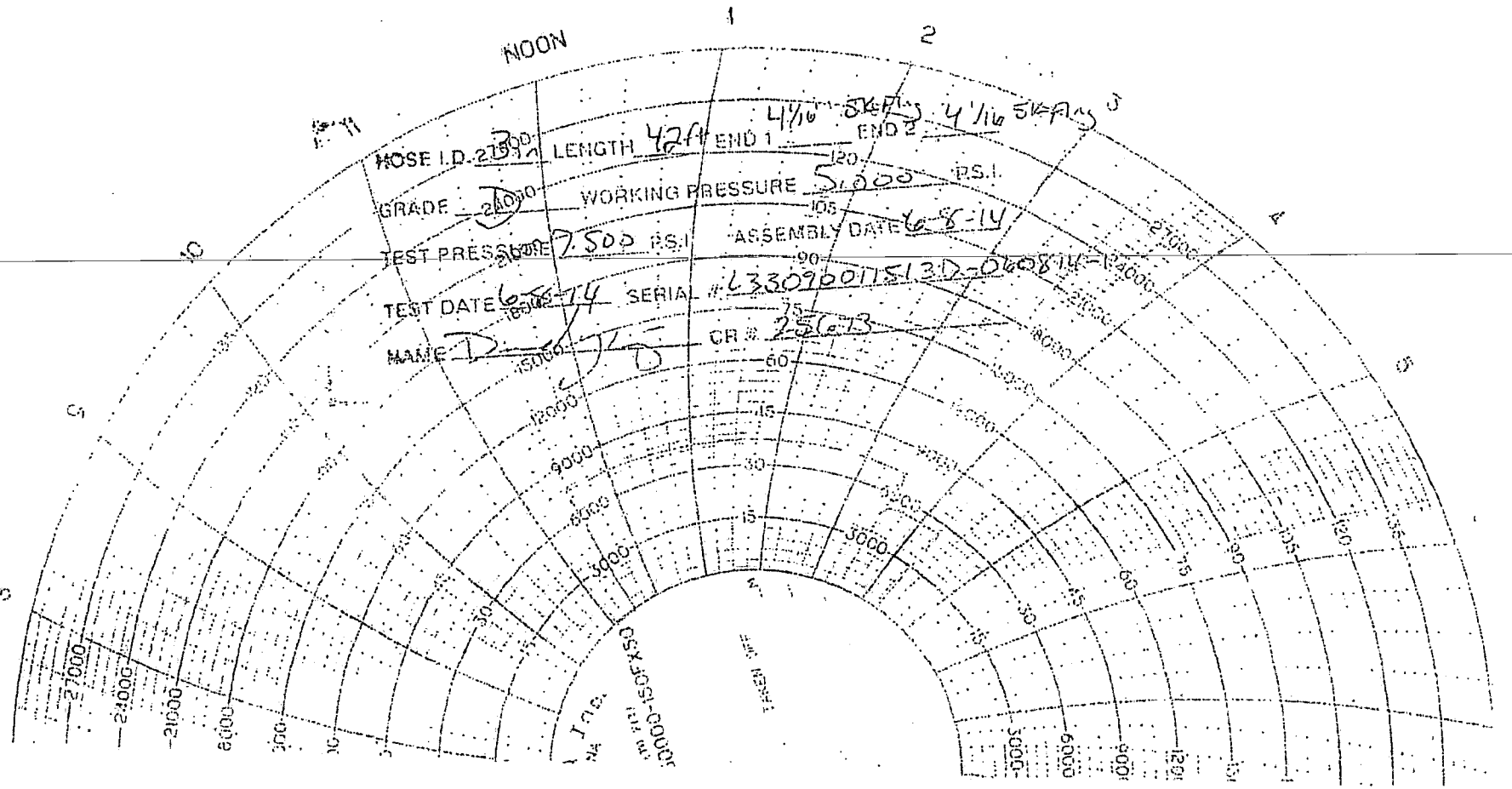
End Fitting 1 :	4 1/16 in.5K FLG	End Fitting 2 :	4 1/16 in.5K FLG
Gates Part No. :	4774-6001	Assembly Code :	L3309011513D-060814-1
Working Pressure :	5,000 PSI	Test Pressure :	7,500 PSI

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

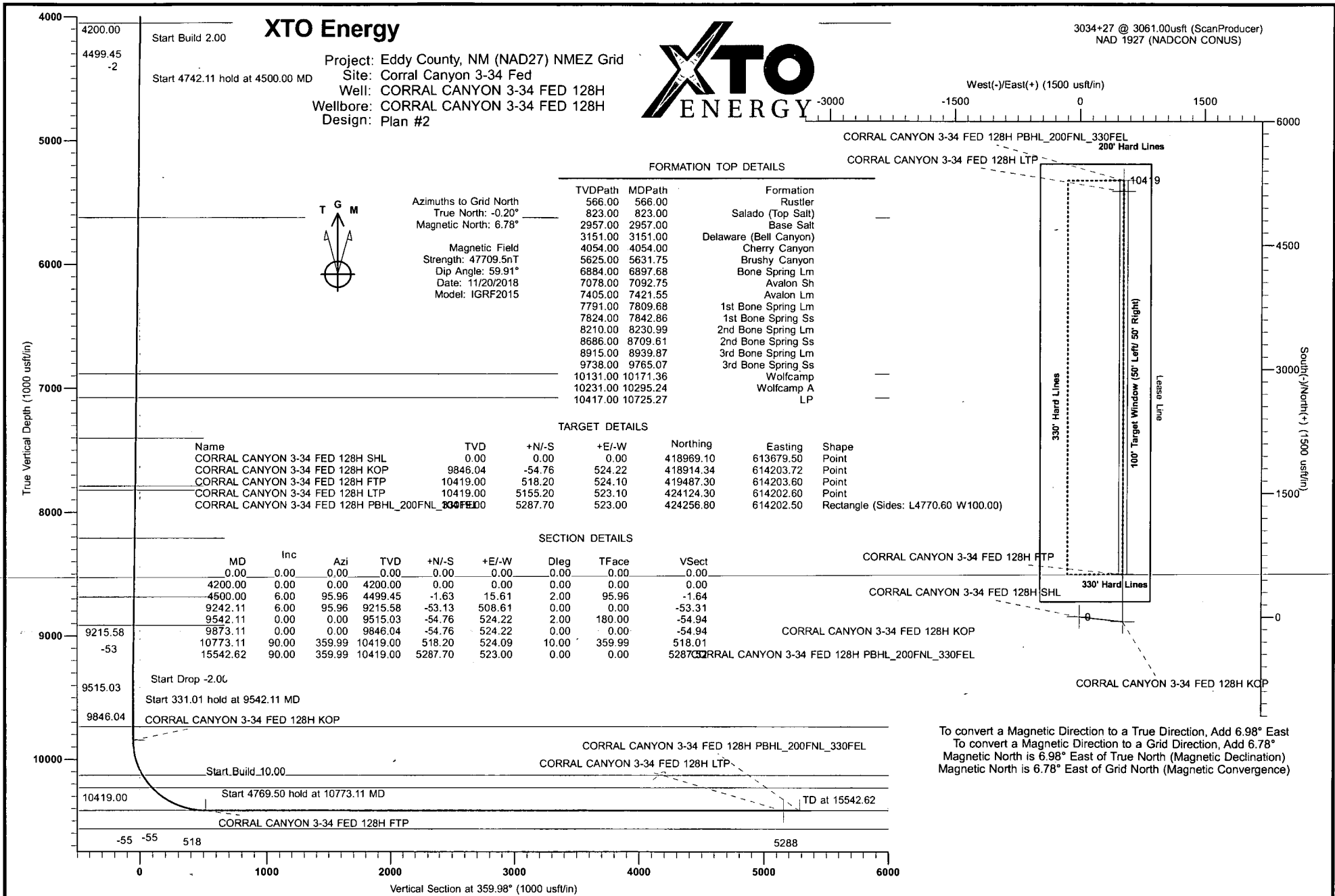

11-4-16
Graphic Controls
XTO
Choke Line
Nor Am #25
DATE
BR B 0-15000-8-IH


NOON
HOSE I.D. 3"
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 6-5-14
TEST DATE 6-6-14
SERIAL # 433090011513D-060814-124000
NAME D. [illegible]
CR # 25673

XTO Energy

Project: Eddy County, NM (NAD27) NMEZ Grid
Site: Corral Canyon 3-34 Fed
Well: CORRAL CANYON 3-34 FED 128H
Wellbore: CORRAL CANYON 3-34 FED 128H
Design: Plan #2

3034+27 @ 3061.00usft (ScanProducer)
NAD 1927 (NADCON CONUS)



Azimuths to Grid North
True North: -0.20°
Magnetic North: 6.78°

Magnetic Field
Strength: 47709.5nT
Dip Angle: 59.91°
Date: 11/20/2018
Model: IGRF2015

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
566.00	566.00	Rustler
823.00	823.00	Salado (Top Salt)
2957.00	2957.00	Base Salt
3151.00	3151.00	Delaware (Bell Canyon)
4054.00	4054.00	Cherry Canyon
5625.00	5631.75	Brushy Canyon
6884.00	6897.68	Bone Spring Lm
7078.00	7092.75	Avalon Sh
7405.00	7421.55	Avalon Lm
7791.00	7809.68	1st Bone Spring Lm
7824.00	7842.86	1st Bone Spring Ss
8210.00	8230.99	2nd Bone Spring Lm
8686.00	8709.61	2nd Bone Spring Ss
8915.00	8939.87	3rd Bone Spring Lm
9738.00	9765.07	3rd Bone Spring Ss
10131.00	10171.36	Wolfcamp
10231.00	10295.24	Wolfcamp A
10417.00	10725.27	LP

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
CORRAL CANYON 3-34 FED 128H SHL	0.00	0.00	0.00	418969.10	613679.50	Point
CORRAL CANYON 3-34 FED 128H KOP	9846.04	-54.76	524.22	418914.34	614203.72	Point
CORRAL CANYON 3-34 FED 128H FTP	10419.00	518.20	524.10	419487.30	614203.60	Point
CORRAL CANYON 3-34 FED 128H LTP	10419.00	5155.20	523.10	424124.30	614202.60	Point
CORRAL CANYON 3-34 FED 128H PBHL_200FNL_330FEL	10417.00	5287.70	523.00	424256.80	614202.50	Rectangle (Sides: L4770.60 W100.00)

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4200.00	0.00	0.00	4200.00	0.00	0.00	0.00	0.00	0.00
4500.00	6.00	95.96	4499.45	-1.63	15.61	2.00	95.96	-1.64
9242.11	6.00	95.96	9215.58	-53.13	508.61	0.00	0.00	-53.31
9542.11	0.00	0.00	9515.03	-54.76	524.22	2.00	180.00	-54.94
9873.11	0.00	0.00	9846.04	-54.76	524.22	0.00	0.00	-54.94
10773.11	90.00	359.99	10419.00	518.20	524.09	10.00	359.99	518.01
15542.62	90.00	359.99	10419.00	5287.70	523.00	0.00	0.00	5287.52

To convert a Magnetic Direction to a True Direction, Add 6.98° East
To convert a Magnetic Direction to a Grid Direction, Add 6.78°
Magnetic North is 6.98° East of True North (Magnetic Declination)
Magnetic North is 6.78° East of Grid North (Magnetic Convergence)

Plan: Plan #2 (CORRAL CANYON 3-34 FED 128H/CORRAL CANYON 3-34 FED 128H)
Created By: Mekka Williams
eSomina Well Design
mekka@esominawelldesign.com
19:37, November 30 2018

STRYKER DIRECTIONAL
6701 FM 307
Midland, Texas 79706 - 432-687-1121

Database:	STRYKER_EDM	**Local Co-ordinate Reference:**	Well CORRAL CANYON 3-34 FED 128H - Slot CORRAL CANYON 3-34 FED 128H SHL
Company:	XTO Energy	**TVD Reference:**	3034+27 @ 3061.00usft (ScanProducer)
Project:	Eddy County, NM (NAD27) NMEZ Grid	**MD Reference:**	3034+27 @ 3061.00usft (ScanProducer)
Site:	Corral Canyon 3-34 Fed	**North Reference:**	Grid
Well:	CORRAL CANYON 3-34 FED 128H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	CORRAL CANYON 3-34 FED 128H		
Design:	Plan #2		

Project Eddy County, NM (NAD27) NMEZ Grid

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 Corral Canyon 3-34 Fed

Site Position:		**Northing:**	418,968.80 usft	**Latitude:**	32° 9' 4.787 N
From:	Map	**Easting:**	613,589.50 usft	**Longitude:**	103° 57' 58.703 W
Position Uncertainty:	0.00 usft	**Slot Radius:**	13.20 in	**Grid Convergence:**	0.20 °

Well CORRAL CANYON 3-34 FED 128H - Slot CORRAL CANYON 3-34 FED 128H SHL

Well Position	**+N/-S**	0.30 usft	**Northing:**	418,969.10 usft	**Latitude:**	32° 9' 4.787 N
	+E/-W	90.00 usft	**Easting:**	613,679.50 usft	**Longitude:**	103° 57' 57.656 W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**		**Ground Level:**	3,034.00 usft

Wellbore CORRAL CANYON 3-34 FED 128H

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	11/20/18	6.98	59.91	47,709.45083817

Design Plan #2

Audit Notes:

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

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	359.98

Plan Survey Tool Program **Date** 11/30/18

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	15,542.62	Plan #2 (CORRAL CANYON 3-34	MWD+IFR1+MS OWSG MWD + IFR1 + Multi-SI	

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	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	
4,500.00	6.00	95.96	4,499.45	-1.63	15.61	2.00	2.00	0.00	95.96	
9,242.11	6.00	95.96	9,215.58	-53.13	508.61	0.00	0.00	0.00	0.00	
9,542.11	0.00	0.00	9,515.03	-54.76	524.22	2.00	-2.00	0.00	180.00	
9,873.11	0.00	0.00	9,846.04	-54.76	524.22	0.00	0.00	0.00	0.00	CORRAL CANYON 3
10,773.11	90.00	359.99	10,419.00	518.20	524.09	10.00	10.00	0.00	359.99	
15,542.62	90.00	359.99	10,419.00	5,287.70	523.00	0.00	0.00	0.00	0.00	CORRAL CANYON 3

Database:	STRYKER_EDM	**Local Co-ordinate Reference:**	Well CORRAL CANYON 3-34 FED 128H - Slot CORRAL CANYON 3-34 FED 128H SHL
Company:	XTO Energy	**TVD Reference:**	3034+27 @ 3061.00usft (ScanProducer)
Project:	Eddy County, NM (NAD27) NMEZ Grid	**MD Reference:**	3034+27 @ 3061.00usft (ScanProducer)
Site:	Corral Canyon 3-34 Fed	**North Reference:**	Grid
Well:	CORRAL CANYON 3-34 FED 128H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	CORRAL CANYON 3-34 FED 128H		
Design:	Plan #2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
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
566.00	0.00	0.00	566.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
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
823.00	0.00	0.00	823.00	0.00	0.00	0.00	0.00	0.00	0.00
Salado (Top Salt)									
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
2,957.00	0.00	0.00	2,957.00	0.00	0.00	0.00	0.00	0.00	0.00
Base Salt									
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
3,151.00	0.00	0.00	3,151.00	0.00	0.00	0.00	0.00	0.00	0.00
Delaware (Bell Canyon)									
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
4,054.00	0.00	0.00	4,054.00	0.00	0.00	0.00	0.00	0.00	0.00
Cherry Canyon									
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00

Database:	STRYKER_EDM	**Local Co-ordinate Reference:**	Well CORRAL CANYON 3-34 FED 128H - Slot CORRAL CANYON 3-34 FED 128H SHL
Company:	XTO Energy	**TVD Reference:**	3034+27 @ 3061.00usft (ScanProducer)
Project:	Eddy County, NM (NAD27) NMEZ Grid	**MD Reference:**	3034+27 @ 3061.00usft (ScanProducer)
Site:	Corral Canyon 3-34 Fed	**North Reference:**	Grid
Well:	CORRAL CANYON 3-34 FED 128H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	CORRAL CANYON 3-34 FED 128H		
Design:	Plan #2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
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	2.00	95.96	4,299.98	-0.18	1.74	-0.18	2.00	2.00	0.00
4,400.00	4.00	95.96	4,399.84	-0.73	6.94	-0.73	2.00	2.00	0.00
4,500.00	6.00	95.96	4,499.45	-1.63	15.61	-1.64	2.00	2.00	0.00
4,600.00	6.00	95.96	4,598.90	-2.72	26.00	-2.73	0.00	0.00	0.00
4,700.00	6.00	95.96	4,698.36	-3.80	36.40	-3.82	0.00	0.00	0.00
4,800.00	6.00	95.96	4,797.81	-4.89	46.80	-4.90	0.00	0.00	0.00
4,900.00	6.00	95.96	4,897.26	-5.97	57.19	-5.99	0.00	0.00	0.00
5,000.00	6.00	95.96	4,996.71	-7.06	67.59	-7.08	0.00	0.00	0.00
5,100.00	6.00	95.96	5,096.17	-8.15	77.99	-8.17	0.00	0.00	0.00
5,200.00	6.00	95.96	5,195.62	-9.23	88.38	-9.26	0.00	0.00	0.00
5,300.00	6.00	95.96	5,295.07	-10.32	98.78	-10.35	0.00	0.00	0.00
5,400.00	6.00	95.96	5,394.52	-11.40	109.18	-11.44	0.00	0.00	0.00
5,500.00	6.00	95.96	5,493.97	-12.49	119.57	-12.53	0.00	0.00	0.00
5,600.00	6.00	95.96	5,593.43	-13.58	129.97	-13.62	0.00	0.00	0.00
5,631.75	6.00	95.96	5,625.00	-13.92	133.27	-13.97	0.00	0.00	0.00
Brushy Canyon									
5,700.00	6.00	95.96	5,692.88	-14.66	140.36	-14.71	0.00	0.00	0.00
5,800.00	6.00	95.96	5,792.33	-15.75	150.76	-15.80	0.00	0.00	0.00
5,900.00	6.00	95.96	5,891.78	-16.83	161.16	-16.89	0.00	0.00	0.00
6,000.00	6.00	95.96	5,991.23	-17.92	171.55	-17.98	0.00	0.00	0.00
6,100.00	6.00	95.96	6,090.69	-19.01	181.95	-19.07	0.00	0.00	0.00
6,200.00	6.00	95.96	6,190.14	-20.09	192.35	-20.16	0.00	0.00	0.00
6,300.00	6.00	95.96	6,289.59	-21.18	202.74	-21.25	0.00	0.00	0.00
6,400.00	6.00	95.96	6,389.04	-22.26	213.14	-22.34	0.00	0.00	0.00
6,500.00	6.00	95.96	6,488.50	-23.35	223.53	-23.43	0.00	0.00	0.00
6,600.00	6.00	95.96	6,587.95	-24.44	233.93	-24.52	0.00	0.00	0.00
6,700.00	6.00	95.96	6,687.40	-25.52	244.33	-25.61	0.00	0.00	0.00
6,800.00	6.00	95.96	6,786.85	-26.61	254.72	-26.70	0.00	0.00	0.00
6,897.68	6.00	95.96	6,884.00	-27.67	264.88	-27.76	0.00	0.00	0.00
Bone Spring Lm									
6,900.00	6.00	95.96	6,886.30	-27.69	265.12	-27.79	0.00	0.00	0.00
7,000.00	6.00	95.96	6,985.76	-28.78	275.52	-28.88	0.00	0.00	0.00
7,092.75	6.00	95.96	7,078.00	-29.79	285.16	-29.89	0.00	0.00	0.00
Avalon Sh									
7,100.00	6.00	95.96	7,085.21	-29.87	285.91	-29.97	0.00	0.00	0.00
7,200.00	6.00	95.96	7,184.66	-30.95	296.31	-31.06	0.00	0.00	0.00
7,300.00	6.00	95.96	7,284.11	-32.04	306.70	-32.15	0.00	0.00	0.00
7,400.00	6.00	95.96	7,383.57	-33.12	317.10	-33.24	0.00	0.00	0.00
7,421.55	6.00	95.96	7,405.00	-33.36	319.34	-33.47	0.00	0.00	0.00
Avalon Lm									
7,500.00	6.00	95.96	7,483.02	-34.21	327.50	-34.32	0.00	0.00	0.00
7,600.00	6.00	95.96	7,582.47	-35.30	337.89	-35.41	0.00	0.00	0.00
7,700.00	6.00	95.96	7,681.92	-36.38	348.29	-36.50	0.00	0.00	0.00
7,800.00	6.00	95.96	7,781.37	-37.47	358.69	-37.59	0.00	0.00	0.00
7,809.68	6.00	95.96	7,791.00	-37.57	359.69	-37.70	0.00	0.00	0.00
1st Bone Spring Lm									
7,842.86	6.00	95.96	7,824.00	-37.93	363.14	-38.06	0.00	0.00	0.00
1st Bone Spring Ss									
7,900.00	6.00	95.96	7,880.83	-38.55	369.08	-38.68	0.00	0.00	0.00
8,000.00	6.00	95.96	7,980.28	-39.64	379.48	-39.77	0.00	0.00	0.00
8,100.00	6.00	95.96	8,079.73	-40.73	389.87	-40.86	0.00	0.00	0.00

Database:	STRYKER_EDM	**Local Co-ordinate Reference:**	Well CORRAL CANYON 3-34 FED 128H - Slot CORRAL CANYON 3-34 FED 128H SHL
Company:	XTO Energy	**TVD Reference:**	3034+27 @ 3061.00usft (ScanProducer)
Project:	Eddy County, NM (NAD27) NMEZ Grid	**MD Reference:**	3034+27 @ 3061.00usft (ScanProducer)
Site:	Corral Canyon 3-34 Fed	**North Reference:**	Grid
Well:	CORRAL CANYON 3-34 FED 128H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	CORRAL CANYON 3-34 FED 128H		
Design:	Plan #2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,200.00	6.00	95.96	8,179.18	-41.81	400.27	-41.95	0.00	0.00	0.00
8,230.99	6.00	95.96	8,210.00	-42.15	403.49	-42.29	0.00	0.00	0.00
2nd Bone Spring Lm									
8,300.00	6.00	95.96	8,278.64	-42.90	410.67	-43.04	0.00	0.00	0.00
8,400.00	6.00	95.96	8,378.09	-43.98	421.06	-44.13	0.00	0.00	0.00
8,500.00	6.00	95.96	8,477.54	-45.07	431.46	-45.22	0.00	0.00	0.00
8,600.00	6.00	95.96	8,576.99	-46.16	441.86	-46.31	0.00	0.00	0.00
8,700.00	6.00	95.96	8,676.44	-47.24	452.25	-47.40	0.00	0.00	0.00
8,709.61	6.00	95.96	8,686.00	-47.35	453.25	-47.50	0.00	0.00	0.00
2nd Bone Spring Ss									
8,800.00	6.00	95.96	8,775.90	-48.33	462.65	-48.49	0.00	0.00	0.00
8,900.00	6.00	95.96	8,875.35	-49.41	473.04	-49.58	0.00	0.00	0.00
8,939.87	6.00	95.96	8,915.00	-49.85	477.19	-50.01	0.00	0.00	0.00
3rd Bone Spring Lm									
9,000.00	6.00	95.96	8,974.80	-50.50	483.44	-50.67	0.00	0.00	0.00
9,100.00	6.00	95.96	9,074.25	-51.59	493.84	-51.76	0.00	0.00	0.00
9,200.00	6.00	95.96	9,173.71	-52.67	504.23	-52.85	0.00	0.00	0.00
9,242.11	6.00	95.96	9,215.58	-53.13	508.61	-53.31	0.00	0.00	0.00
9,300.00	4.84	95.96	9,273.21	-53.70	514.05	-53.88	2.00	-2.00	0.00
9,400.00	2.84	95.96	9,372.98	-54.39	520.72	-54.58	2.00	-2.00	0.00
9,500.00	0.84	95.96	9,472.93	-54.73	523.91	-54.91	2.00	-2.00	0.00
9,542.11	0.00	0.00	9,515.03	-54.76	524.22	-54.94	2.00	-2.00	0.00
9,600.00	0.00	0.00	9,572.93	-54.76	524.22	-54.94	0.00	0.00	0.00
9,700.00	0.00	0.00	9,672.93	-54.76	524.22	-54.94	0.00	0.00	0.00
9,765.07	0.00	0.00	9,738.00	-54.76	524.22	-54.94	0.00	0.00	0.00
3rd Bone Spring Ss									
9,800.00	0.00	0.00	9,772.93	-54.76	524.22	-54.94	0.00	0.00	0.00
9,873.11	0.00	0.00	9,846.04	-54.76	524.22	-54.94	0.00	0.00	0.00
9,900.00	2.69	359.99	9,872.92	-54.13	524.22	-54.31	10.00	10.00	0.00
9,950.00	7.69	359.99	9,922.70	-49.61	524.22	-49.79	10.00	10.00	0.00
10,000.00	12.69	359.99	9,971.89	-40.77	524.22	-40.95	10.00	10.00	0.00
10,050.00	17.69	359.99	10,020.13	-27.67	524.21	-27.85	10.00	10.00	0.00
10,100.00	22.69	359.99	10,067.04	-10.42	524.21	-10.60	10.00	10.00	0.00
10,150.00	27.69	359.99	10,112.27	10.85	524.21	10.67	10.00	10.00	0.00
10,171.36	29.82	359.99	10,131.00	21.13	524.20	20.95	10.00	10.00	0.00
Wolfcamp									
10,200.00	32.69	359.99	10,155.48	35.99	524.20	35.80	10.00	10.00	0.00
10,250.00	37.69	359.99	10,196.33	64.79	524.19	64.61	10.00	10.00	0.00
10,295.24	42.21	359.99	10,231.00	93.83	524.19	93.65	10.00	10.00	0.00
Wolfcamp A									
10,300.00	42.69	359.99	10,234.51	97.05	524.19	96.86	10.00	10.00	0.00
10,350.00	47.69	359.99	10,269.74	132.51	524.18	132.32	10.00	10.00	0.00
10,400.00	52.69	359.99	10,301.74	170.90	524.17	170.72	10.00	10.00	0.00
10,450.00	57.69	359.99	10,330.28	211.94	524.16	211.76	10.00	10.00	0.00
10,500.00	62.69	359.99	10,355.13	255.31	524.15	255.13	10.00	10.00	0.00
10,550.00	67.69	359.99	10,376.10	300.68	524.14	300.50	10.00	10.00	0.00
10,600.00	72.69	359.99	10,393.04	347.71	524.13	347.52	10.00	10.00	0.00
10,650.00	77.69	359.99	10,405.82	396.03	524.12	395.85	10.00	10.00	0.00
10,700.00	82.69	359.99	10,414.34	445.28	524.11	445.10	10.00	10.00	0.00
10,725.27	85.22	359.99	10,417.00	470.41	524.10	470.22	10.00	10.00	0.00
LP									
10,750.00	87.69	359.99	10,418.53	495.09	524.09	494.91	10.00	10.00	0.00

Database:	STRYKER_EDM	**Local Co-ordinate Reference:**	Well CORRAL CANYON 3-34 FED 128H - Slot CORRAL CANYON 3-34 FED 128H SHL
Company:	XTO Energy	**TVD Reference:**	3034+27 @ 3061.00usft (ScanProducer)
Project:	Eddy County, NM (NAD27) NMEZ Grid	**MD Reference:**	3034+27 @ 3061.00usft (ScanProducer)
Site:	Corral Canyon 3-34 Fed	**North Reference:**	Grid
Well:	CORRAL CANYON 3-34 FED 128H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	CORRAL CANYON 3-34 FED 128H		
Design:	Plan #2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
10,773.11	90.00	359.99	10,419.00	518.20	524.09	518.01	10.00	10.00	0.00
10,800.00	90.00	359.99	10,419.00	545.08	524.08	544.90	0.00	0.00	0.00
10,900.00	90.00	359.99	10,419.00	645.08	524.06	644.90	0.00	0.00	0.00
11,000.00	90.00	359.99	10,419.00	745.08	524.04	744.90	0.00	0.00	0.00
11,100.00	90.00	359.99	10,419.00	845.08	524.01	844.90	0.00	0.00	0.00
11,200.00	90.00	359.99	10,419.00	945.08	523.99	944.90	0.00	0.00	0.00
11,300.00	90.00	359.99	10,419.00	1,045.08	523.97	1,044.90	0.00	0.00	0.00
11,400.00	90.00	359.99	10,419.00	1,145.08	523.95	1,144.90	0.00	0.00	0.00
11,500.00	90.00	359.99	10,419.00	1,245.08	523.92	1,244.90	0.00	0.00	0.00
11,600.00	90.00	359.99	10,419.00	1,345.08	523.90	1,344.90	0.00	0.00	0.00
11,700.00	90.00	359.99	10,419.00	1,445.08	523.88	1,444.90	0.00	0.00	0.00
11,800.00	90.00	359.99	10,419.00	1,545.08	523.85	1,544.90	0.00	0.00	0.00
11,900.00	90.00	359.99	10,419.00	1,645.08	523.83	1,644.90	0.00	0.00	0.00
12,000.00	90.00	359.99	10,419.00	1,745.08	523.81	1,744.90	0.00	0.00	0.00
12,100.00	90.00	359.99	10,419.00	1,845.08	523.79	1,844.90	0.00	0.00	0.00
12,200.00	90.00	359.99	10,419.00	1,945.08	523.76	1,944.90	0.00	0.00	0.00
12,300.00	90.00	359.99	10,419.00	2,045.08	523.74	2,044.90	0.00	0.00	0.00
12,400.00	90.00	359.99	10,419.00	2,145.08	523.72	2,144.90	0.00	0.00	0.00
12,500.00	90.00	359.99	10,419.00	2,245.08	523.69	2,244.90	0.00	0.00	0.00
12,600.00	90.00	359.99	10,419.00	2,345.08	523.67	2,344.90	0.00	0.00	0.00
12,700.00	90.00	359.99	10,419.00	2,445.08	523.65	2,444.90	0.00	0.00	0.00
12,800.00	90.00	359.99	10,419.00	2,545.08	523.63	2,544.90	0.00	0.00	0.00
12,900.00	90.00	359.99	10,419.00	2,645.08	523.60	2,644.90	0.00	0.00	0.00
13,000.00	90.00	359.99	10,419.00	2,745.08	523.58	2,744.90	0.00	0.00	0.00
13,100.00	90.00	359.99	10,419.00	2,845.08	523.56	2,844.90	0.00	0.00	0.00
13,200.00	90.00	359.99	10,419.00	2,945.08	523.53	2,944.90	0.00	0.00	0.00
13,300.00	90.00	359.99	10,419.00	3,045.08	523.51	3,044.90	0.00	0.00	0.00
13,400.00	90.00	359.99	10,419.00	3,145.08	523.49	3,144.90	0.00	0.00	0.00
13,500.00	90.00	359.99	10,419.00	3,245.08	523.47	3,244.90	0.00	0.00	0.00
13,600.00	90.00	359.99	10,419.00	3,345.08	523.44	3,344.90	0.00	0.00	0.00
13,700.00	90.00	359.99	10,419.00	3,445.08	523.42	3,444.90	0.00	0.00	0.00
13,800.00	90.00	359.99	10,419.00	3,545.08	523.40	3,544.90	0.00	0.00	0.00
13,900.00	90.00	359.99	10,419.00	3,645.08	523.38	3,644.90	0.00	0.00	0.00
14,000.00	90.00	359.99	10,419.00	3,745.08	523.35	3,744.90	0.00	0.00	0.00
14,100.00	90.00	359.99	10,419.00	3,845.08	523.33	3,844.90	0.00	0.00	0.00
14,200.00	90.00	359.99	10,419.00	3,945.08	523.31	3,944.90	0.00	0.00	0.00
14,300.00	90.00	359.99	10,419.00	4,045.08	523.28	4,044.90	0.00	0.00	0.00
14,400.00	90.00	359.99	10,419.00	4,145.08	523.26	4,144.90	0.00	0.00	0.00
14,500.00	90.00	359.99	10,419.00	4,245.08	523.24	4,244.90	0.00	0.00	0.00
14,600.00	90.00	359.99	10,419.00	4,345.08	523.22	4,344.90	0.00	0.00	0.00
14,700.00	90.00	359.99	10,419.00	4,445.08	523.19	4,444.90	0.00	0.00	0.00
14,800.00	90.00	359.99	10,419.00	4,545.08	523.17	4,544.90	0.00	0.00	0.00
14,900.00	90.00	359.99	10,419.00	4,645.08	523.15	4,644.90	0.00	0.00	0.00
15,000.00	90.00	359.99	10,419.00	4,745.08	523.12	4,744.90	0.00	0.00	0.00
15,100.00	90.00	359.99	10,419.00	4,845.08	523.10	4,844.90	0.00	0.00	0.00
15,200.00	90.00	359.99	10,419.00	4,945.08	523.08	4,944.90	0.00	0.00	0.00
15,300.00	90.00	359.99	10,419.00	5,045.08	523.06	5,044.90	0.00	0.00	0.00
15,400.00	90.00	359.99	10,419.00	5,145.08	523.03	5,144.90	0.00	0.00	0.00
15,500.00	90.00	359.99	10,419.00	5,245.08	523.01	5,244.90	0.00	0.00	0.00
15,542.62	90.00	359.99	10,419.00	5,287.70	523.00	5,287.52	0.00	0.00	0.00

Database:	STRYKER_EDM	**Local Co-ordinate Reference:**	Well CORRAL CANYON 3-34 FED 128H - Slot CORRAL CANYON 3-34 FED 128H SHL
Company:	XTO Energy	**TVD Reference:**	3034+27 @ 3061.00usft (ScanProducer)
Project:	Eddy County, NM (NAD27) NMEZ Grid	**MD Reference:**	3034+27 @ 3061.00usft (ScanProducer)
Site:	Corral Canyon 3-34 Fed	**North Reference:**	Grid
Well:	CORRAL CANYON 3-34 FED 128H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	CORRAL CANYON 3-34 FED 128H		
Design:	Plan #2		

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
CORRAL CANYON 3-34 - plan hits target center - Point	0.00	0.01	0.00	0.00	0.00	418,969.10	613,679.50	32° 9' 4.787 N	103° 57' 57.656 W
CORRAL CANYON 3-34 - plan hits target center - Point	0.00	0.00	9,846.04	-54.76	524.22	418,914.34	614,203.72	32° 9' 4.227 N	103° 57' 51.560 W
CORRAL CANYON 3-34 - plan misses target center by 0.07usft at 15410.12usft MD (10419.00 TVD, 5155.20 N, 523.03 E) - Point	0.00	0.01	10,419.00	5,155.20	523.10	424,124.30	614,202.60	32° 9' 55.787 N	103° 57' 51.366 W
CORRAL CANYON 3-34 - plan misses target center by 0.01usft at 10773.12usft MD (10419.00 TVD, 518.20 N, 524.09 E) - Point	0.00	0.00	10,419.00	518.20	524.10	419,487.30	614,203.60	32° 9' 9.898 N	103° 57' 51.539 W
CORRAL CANYON 3-34 - plan hits target center - Rectangle (sides W100.00 H4,770.60 D0.00)	0.00	0.00	10,419.00	5,287.70	523.00	424,256.80	614,202.50	32° 9' 57.098 N	103° 57' 51.361 W

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
566.00	566.00	Rustler			
823.00	823.00	Salado (Top Salt)			
2,957.00	2,957.00	Base Salt			
3,151.00	3,151.00	Delaware (Bell Canyon)			
4,054.00	4,054.00	Cherry Canyon			
5,631.75	5,625.00	Brushy Canyon			
6,897.68	6,884.00	Bone Spring Lm			
7,092.75	7,078.00	Avalon Sh			
7,421.55	7,405.00	Avalon Lm			
7,809.68	7,791.00	1st Bone Spring Lm			
7,842.86	7,824.00	1st Bone Spring Ss			
8,230.99	8,210.00	2nd Bone Spring Lm			
8,709.61	8,686.00	2nd Bone Spring Ss			
8,939.87	8,915.00	3rd Bone Spring Lm			
9,765.07	9,738.00	3rd Bone Spring Ss			
10,171.36	10,131.00	Wolfcamp			
10,295.24	10,231.00	Wolfcamp A			
10,725.27	10,417.00	LP			