

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Hobbs

SEP 21 2015

APPLICATION FOR PERMIT TO DRILL OR REENTER

ATS-15-279
FORM APPROVED
OMB No. 1004-0137
Expires July 31, 2010

5. Lease Serial No.
SHL:NMNM029694/BHL:NMNM113966
6. If Indian, Allottee or Tribe Name

H

1a. Type of work: ☒ DRILL ☐ REENTER

RECEIVED

1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone

2. Name of Operator XTO Energy, Incorporated (5380)

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

8. Lease Name and Well No. [315267]
Charro Federal #1H

3a. Address 500 W. Illinois St, Ste 100
Midland, TX 79701

3b. Phone No. (include area code)
432-620-6714

9. API Well No.
30-025-42794

10. Field and Pool, or Exploratory
WC-025 G-07 S243225C; Lwr Bone Spr

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

At surface 170'FSL & 660'FWL

At proposed prod. zone 200 FSL & 660'FWL

11. Sec., T. R. M. or Blk. and Survey or Area

SHL: M-23-T24S-R32E
BHL: D-23-T24S-R32E

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

12. County or Parish
Lea

13. State
NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 170'FSL

16. No. of acres in lease
SHL: 640 acres
BHL: 40 acres

17. Spacing Unit dedicated to this well
160

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 0' 1st Well on Lease

19. Proposed Depth
TVD: 15,520'
MD: 10,856'

20. BLM/BIA Bond No. on file
UTB000138

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3584'

22. Approximate date work will start*
02/01/2015

23. Estimated duration
45 Days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification
- Such other site specific information and/or plans as may be required by the BLM.

25. Signature
Stephanie Rabadue

Name (Printed/Typed)
Stephanie Rabadue

Date
09/25/2014

Title
Regulatory Analyst

Approved by (Signature)
Steve Caffey

Name (Printed/Typed)

Date
SEP 17 2015

Title
FIELD MANAGER

Office
CARLSBAD FIELD OFFICE

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

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.

(Continued on page 2)

*(Instructions on page 2)

Ka
09/26/15

Carlsbad Controlled Water Basin

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Approval Subject to General Requirements
& Special Stipulations Attached

SEP 23 2015

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

XTO Energy Inc.

Charro Federal 1H

Projected TD: 15520' MD / 10856' TVD

SHL: 170' FSL & 660' FWL, SECTION 23, T24S, R32E

1st Take Point: 870' FSL & 660' FWL, M-23-T24S-R32E

2nd Take Point: 330' FNL & 660' FWL, D-23-T24S-R32E

BHL: 200' FNL & 660' FWL, SECTION 23, T24S, R32E

Lea County, NM

1. GEOLOGIC NAME OF SURFACE FORMATION:

A. Permian

2. ESTIMATED TOPS OF GEOLOGICAL MARKERS & DEPTHS OF ANTICIPATED FRESH WATER, OIL OR GAS:

Formation	Well Depth (TVD)	Water / Oil / Gas
Rustler	1065'	Water
Top of Salt	1364'	Water
Base of Salt	4639'	Water
Delaware	4878'	Water
Brushy Canyon	7559'	Water/Oil/Gas
Bone Spring	8819'	Water/Oil/Gas
1 st Bone Spring Ss	9943'	Water/Oil/Gas
2 nd Bone Spring Ss	10461'	Water/Oil/Gas
Target/Land Curve	10856'	Water/Oil/Gas

*** Hydrocarbons @ Brushy Canyon

*** Groundwater depth 200' (per NM State Engineers Office).

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" casing @ 1115' above the salt and circulating cement back to surface. The salt will be isolated by setting 9-5/8" casing at 4850' and circulating cement to surface. An 8-3/4" curve and lateral hole will be drilled to MD/TD and 5-1/2" casing with sliding frac sleeves will be set at TD and cemented back 500' into the 9-5/8" casing shoe.

3. CASING PROGRAM:

Hole Size	Depth	OD Csg	Weight	Collar	Grade	New/Used	SF Burst	SF Collapse	SF Tension
17-1/2"	0' – 1115'	13-3/8"	48#	STC	H-40	New	4.33	1.45	6.02
12-1/4"	0' – 4250'	9-5/8"	40#	LTC	J-55	New	1.88	1.14	2.68
	4250' – 4850'	9-5/8"	40#	LTC	L-80	New	2.74	1.20	30.29
8-3/4"	0' – 15520'	5-1/2"	17#	BTC	P-110	New	1.12	1.47	2.15

WELLHEAD:

- A. Starting Head: 13-5/8" 3000 psi top flange x 13-3/8" SOW bottom
- B. 'B' Section/ Drilling Spool: 13-5/8" 3000psi bottom flange x 11" 5M top flange
- C. Tubing Head: 11" 5000psi bottom flange x 7-1/16" 10,000psi top flange

4. CEMENT PROGRAM:

- A. **Surface Casing:** 13-3/8", 48#, NEW H-40, STC casing to be set at $\pm 1115'$.

Lead: 20 bbls FW, then 700 sx ExtendaCem-CZ (mixed at 13.7 ppg, 1.68 ft³/sk, 8.72 gal/sx wtr) Compr Strengths 12 hr – 470 psi 24 hr – 1055 psi

Tail: 270 sx HalCem-C + 2% CaCl (mixed at 14.8 ppg, 1.35 ft³/sk, 6.39 gal/sx wtr)
Compr Strengths: 12 hr – 900 psi 24 hr – 1500 psi
***All volumes 100% excess in open hole. Cement to surface.

- B. **Intermediate Casing:** 9-5/8", 40#, NEW J-55/L-80, LTC casing to be set at $\pm 4850'$.

Lead: 20 bbls FW, then 1450 sx EconoCem-HLC + 5% salt + 5 lbm/sk Kol-Seal (mixed at 12.9 ppg, 1.88 ft³/sk, 9.61 gal/sx wtr) Compr Strengths 12 hr – 320 psi 24 hr – 623 psi

Tail: 250 sx HalCem-C (mixed at 14.8 ppg, 1.33 ft³/sk, 6.34 gal/sx wtr)
Compr Strengths: 12 hr – 900 psi 24 hr – 1500 psi
***All volumes 100% excess in open hole. Cement to surface.

- C. **Production Casing:** 5-1/2", 17#, NEW P-110, BTC casing to be set at $\pm 15520'$. Casing will be cemented and will include sliding sleeves for the completion.

Lead: 20 bbls FW, then 620 sx Tuned Light + 0.5 lbm/sk CFR-3 + 1.5 lbm/sk salt + 0.1% HR601 (mixed at 10.5 ppg, 2.69 ft³/sk, 12.26 gal/sx wtr) Compr Strengths 12 hr – 126 psi 16 hr – 500 psi 48 hr – 1106 psi

Tail: 1240 sx VersaCem PBHS2 + 0.5% LAP-1 + 0.25 lbm/sk D-air 5000 + 0.2% HR 601 + 0.4% CFR-3 + 1 pps Salt (mixed at 13.2 ppg, 1.61 ft³/sk, 8.38 gal/sx wtr)
Compr Strengths: 12 hr – 1375 psi 24 hr – 2285 psi
***All volumes 30% excess in open hole. Planned top of cement 500' into intermediate casing shoe

5. PRESSURE CONTROL EQUIPMENT:

The blow out preventer equipment (BOP) for this well consists of a 13-5/8" minimum 3M Hydril and a 13-5/8" minimum 3M Double Ram BOP. Max bottom hole pressure should not exceed 5080 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 nipping up on the 13-5/8" 3M bradenhead and flange, the BOP test will be limited to 3000psi. When nipping up on the 9-5/8", the BOP will be tested to a minimum of 3000 psi. All BOP tests will include a low pressure test as per BLM regulations. The 3M BOP diagram is attached.

6. PROPOSED MUD CIRCULATION SYSTEM:

INTERVAL	Hole Size	Mud Type	MW (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
0' to 1115'	17-1/2"	FW/Native	8.4-8.8	35-40	NC
1115' to 4850'	12-1/4"	Brine/Gel Sweeps	9.8-10.2	30-32	NC
4850' to 15520'	8-3/4"	FW / Cut Brine / Poly-Sweeps	8.6-9.0	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) on @ 4850'.
Catch 20' samples from 4850' to landing point
Catch 30' samples from landing point to TD/MD.
Send 1 set of dry samples to Midland Sample Library.

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

9. ABNORMAL PRESSURES AND TEMPERATURES / POTENTIAL HAZARDS:

None anticipated. BHT of 175 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.

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.

11. SPECIAL INSTRUCTIONS:

- A. Reports should be filled out on the XTO Drilling Report form, and the Casing/Cementing Detail Forms provided.
- B. WOC a minimum of 24 hours before drilling out shoe joint on surface and intermediate casing strings. Use minimal WOB and RPM until drill collars are below the shoe joints.
- C. Function test BOP blind rams each trip and pipe rams each day. Strap out of hole for logging and/or casing jobs.
- D. A trash trailer will be provided on each location. Keep trash picked up and the location as clean as possible. All drilling line, oil filters, etc. should be hauled away at the Drilling Contractor's expense. At the conclusion of drilling operations, the contents of the trash trailer will be disposed of into a commercial sanitary landfill.



Well: Charro Federal Well No. 1H
 Site: Charro Federal
 Project: Lea County, New Mexico
 Design: rev0
 Rig: Nabors 730

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSecl	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	10283.04	0.00	0.00	10283.04	0.00	0.00	0.00	0.00	0.00	KOP Begin 10°/100' build
3	11183.04	90.00	359.68	10856.00	572.95	-3.15	10.00	359.68	572.96	Begin 90.00° lateral
4	15519.86	90.00	359.68	10856.00	4909.70	-27.00	0.00	0.00	4909.77	PBHL/TD

RKB Elevation: RKB=3584+23 @ 3607.00usft (Nabors 730)
 US State Plane 1927 (Exact solution)
 New Mexico East 3001

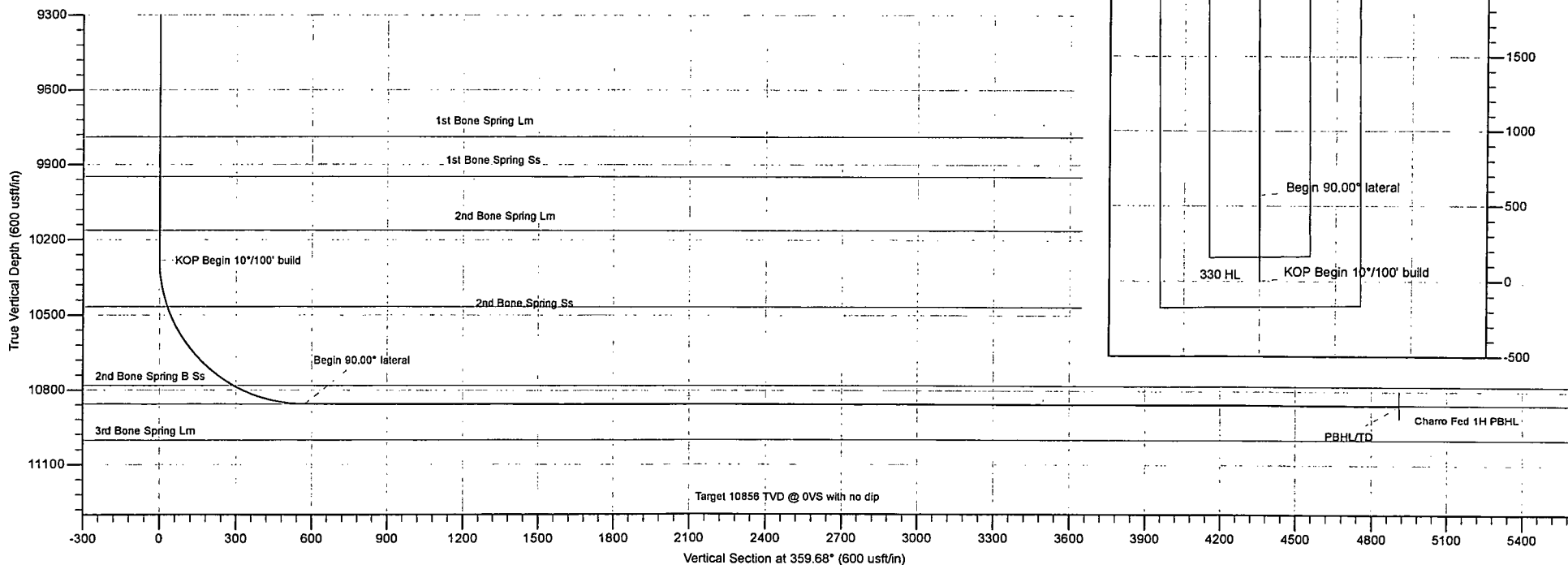
Northing 435758.30 Easting 710957.00 Latitude 32.19617768 Longitude -103.65136624

Total Correction (M => G) To convert a Magnetic Direction to a Grid Direction, Add 6.89°



Azimuths to Grid North
 True North: -0.36°
 Magnetic North: 6.89°

Magnetic Field
 Strength: 48287.2snT
 Dip Angle: 60.07°
 Date: 6/24/2014
 Model: IGRF2010





Standard_report

Company: XTO Energy Inc
Project: Lea County, New Mexico
Site: Charro Federal
Well: Charro Federal Well No. 1H
Wellbore: Original hole
Design: rev0

Local Co-ordinate Reference: Well Charro Federal Well No. 1H
TVD Reference: RKB=3584+23 @ 3607.00usft (Nabors 730)
MD Reference: RKB=3584+23 @ 3607.00usft (Nabors 730)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Ddatabase

Project: Lea County, New Mexico

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

System Datum: Mean Sea Level

Site: Charro Federal

Site Position:	Northing:	435,758.30 usft	Latitude:	32.19617768
From: Map	Easting:	710,957.00 usft	Longitude:	-103.65136624
Position Uncertainty: 0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.36 °

Well: Charro Federal Well No. 1H, Surf Loc 170 FSL 660 FWL Sect 23

Well Position	+N-S	0.00 usft	Northing:	435,758.30 usft	Latitude:	32.19617768
	+E-W	0.00 usft	Easting:	710,957.00 usft	Longitude:	-103.65136624
Position Uncertainty	0.00 usft		Wellhead Elevation:	usft	Ground Level:	3,584.00 usft

Wellbore: Original hole

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	6/24/2014	7.25	60.07	48,287

Design: rev0

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	359.68

Survey Tool Program Date 6/24/2014

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	15,519.82	rev0 (Original hole)	MWD	MWD - Standard



Standard_report

Company: XTO Energy Inc
Project: Lea County, New Mexico
Site: Charro Federal
Well: Charro Federal Well No. 1H
Wellbore: Original hole
Design: rev0

Local Co-ordinate Reference: Well Charro Federal Well No. 1H
TVD Reference: RKB=3584+23 @ 3607.00usft (Nabors 730)
MD Reference: RKB=3584+23 @ 3607.00usft (Nabors 730)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Ddatabase

Planned Survey

MD (usft)	Inc (°)	Azi. (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100ft)	V. Sec (usft)	Northing (usft)	Easting (usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
1,071.00	0.00	0.00	1,071.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
Rustler									
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
1,370.00	0.00	0.00	1,370.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
Top Salt									
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00



Standard_report

Company: XTO Energy Inc
Project: Lea County, New Mexico
Site: Charro Federal
Well: Charro Federal Well No. 1H
Wellbore: Original hole
Design: rev0

Local Co-ordinate Reference: Well Charro Federal Well No. 1H
TVD Reference: RKB=3584+23 @ 3607.00usft (Nabors 730)
MD Reference: RKB=3584+23 @ 3607.00usft (Nabors 730)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Ddatabase

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100ft)	V. Sec (usft)	Northing (usft)	Easting (usft)
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
4,645.00	0.00	0.00	4,645.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
Base Salt									
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00



Standard_report

Company: XTO Energy Inc
 Project: Lea County, New Mexico
 Site: Charro Federal
 Well: Charro Federal Well No. 1H
 Wellbore: Original hole
 Design: rev0

Local Co-ordinate Reference: Well Charro Federal Well No. 1H
 TVD Reference: RKB=3584+23 @ 3607.00usft (Nabors 730)
 MD Reference: RKB=3584+23 @ 3607.00usft (Nabors 730)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.1 Ddatabase

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100ft)	V. Sec (usft)	Northing (usft)	Easting (usft)
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
4,884.00	0.00	0.00	4,884.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
Delaware									
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
5,821.00	0.00	0.00	5,821.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
Cherry Canyon									
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00



Standard_report

Company: XTO Energy Inc
Project: Lea County, New Mexico
Site: Charro Federal
Well: Charro Federal Well No. 1H
Wellbore: Original hole
Design: rev0

Local Co-ordinate Reference: Well Charro Federal Well No. 1H
TVD Reference: RKB=3584+23 @ 3607.00usft (Nabors 730)
MD Reference: RKB=3584+23 @ 3607.00usft (Nabors 730)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Ddatabase

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100ft)	V. Sec (usft)	Northing (usft)	Easting (usft)
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
7,565.00	0.00	0.00	7,565.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
Brushy Canyon									
7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
7,900.00	0.00	0.00	7,900.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
8,000.00	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
8,100.00	0.00	0.00	8,100.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
8,200.00	0.00	0.00	8,200.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
8,300.00	0.00	0.00	8,300.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
8,400.00	0.00	0.00	8,400.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
8,500.00	0.00	0.00	8,500.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
8,565.00	0.00	0.00	8,565.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
Basal Brushy Canyon									
8,600.00	0.00	0.00	8,600.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
8,700.00	0.00	0.00	8,700.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
8,800.00	0.00	0.00	8,800.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
8,825.00	0.00	0.00	8,825.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
Bone Spring									
8,900.00	0.00	0.00	8,900.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
9,000.00	0.00	0.00	9,000.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
9,100.00	0.00	0.00	9,100.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00



Standard_report

Company: XTO Energy Inc
 Project: Lea County, New Mexico
 Site: Charro Federal
 Well: Charro Federal Well No. 1H
 Wellbore: Original hole
 Design: rev0

Local Co-ordinate Reference: Well Charro Federal Well No. 1H
 TVD Reference: RKB=3584+23 @ 3607.00usft (Nabors 730)
 MD Reference: RKB=3584+23 @ 3607.00usft (Nabors 730)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.1 Ddatabase

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100ft)	V. Sec (usft)	Northing (usft)	Easting (usft)
9,200.00	0.00	0.00	9,200.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
9,300.00	0.00	0.00	9,300.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
9,400.00	0.00	0.00	9,400.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
9,500.00	0.00	0.00	9,500.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
9,600.00	0.00	0.00	9,600.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
9,700.00	0.00	0.00	9,700.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
9,790.00	0.00	0.00	9,790.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
1st Bone Spring Lm									
9,800.00	0.00	0.00	9,800.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
9,900.00	0.00	0.00	9,900.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
9,949.00	0.00	0.00	9,949.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
1st Bone Spring Ss									
10,000.00	0.00	0.00	10,000.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
10,100.00	0.00	0.00	10,100.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
10,163.00	0.00	0.00	10,163.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
2nd Bone Spring Lm									
10,200.00	0.00	0.00	10,200.00	0.00	0.00	0.00	0.00	435,758.30	710,957.00
10,283.04	0.00	0.00	10,283.04	0.00	0.00	0.00	0.00	435,758.30	710,957.00
KOP Begin 10°/100' build									
10,300.00	1.70	359.68	10,300.00	0.25	0.00	10.00	0.25	435,758.55	710,957.00
10,400.00	11.70	359.68	10,399.19	11.90	-0.07	10.00	11.90	435,770.20	710,956.93
10,470.32	18.73	359.68	10,467.00	30.33	-0.17	10.00	30.34	435,788.63	710,956.83
2nd Bone Spring Ss									
10,500.00	21.70	359.68	10,494.85	40.59	-0.22	10.00	40.59	435,798.89	710,956.78
10,600.00	31.70	359.68	10,584.08	85.46	-0.47	10.00	85.46	435,843.76	710,956.53
10,700.00	41.70	359.68	10,664.16	145.14	-0.80	10.00	145.14	435,903.44	710,956.20
10,800.00	51.70	359.68	10,732.66	217.82	-1.20	10.00	217.82	435,976.12	710,955.80



Standard_report

Company: XTO Energy Inc
 Project: Lea County, New Mexico
 Site: Charro Federal
 Well: Charro Federal Well No. 1H
 Wellbore: Original hole
 Design: rev0

Local Co-ordinate Reference: Well Charro Federal Well No. 1H
 TVD Reference: RKB=3584+23 @ 3607.00usft (Nabors 730)
 MD Reference: RKB=3584+23 @ 3607.00usft (Nabors 730)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.1 Ddatabase

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100ft)	V. Sec (usft)	Northing (usft)	Easting (usft)
10,886.59	60.35	359.68	10,781.00	289.55	-1.59	10.00	289.56	436,047.85	710,955.41
2nd Bone Spring B Ss									
10,900.00	61.70	359.68	10,787.50	301.29	-1.66	10.00	301.29	436,059.59	710,955.34
11,000.00	71.70	359.68	10,827.01	393.01	-2.16	10.00	393.02	436,151.31	710,954.84
11,100.00	81.70	359.68	10,849.99	490.20	-2.70	10.00	490.21	436,248.50	710,954.30
11,183.04	90.00	359.68	10,856.00	572.95	-3.15	10.00	572.96	436,331.25	710,953.85
Begin 90.00° lateral - Target 10856 TVD @ OVS with no dip									
11,200.00	90.00	359.68	10,856.00	589.91	-3.24	0.00	589.92	436,348.21	710,953.76
11,300.00	90.00	359.68	10,856.00	689.91	-3.79	0.00	689.92	436,448.21	710,953.21
11,400.00	90.00	359.68	10,856.00	789.91	-4.34	0.00	789.92	436,548.21	710,952.66
11,500.00	90.00	359.68	10,856.00	889.90	-4.89	0.00	889.92	436,648.20	710,952.11
11,600.00	90.00	359.68	10,856.00	989.90	-5.44	0.00	989.92	436,748.20	710,951.56
11,700.00	90.00	359.68	10,856.00	1,089.90	-5.99	0.00	1,089.92	436,848.20	710,951.01
11,800.00	90.00	359.68	10,856.00	1,189.90	-6.54	0.00	1,189.92	436,948.20	710,950.46
11,900.00	90.00	359.68	10,856.00	1,289.90	-7.09	0.00	1,289.92	437,048.20	710,949.91
12,000.00	90.00	359.68	10,856.00	1,389.90	-7.64	0.00	1,389.92	437,148.20	710,949.36
12,100.00	90.00	359.68	10,856.00	1,489.90	-8.19	0.00	1,489.92	437,248.20	710,948.81
12,200.00	90.00	359.68	10,856.00	1,589.89	-8.74	0.00	1,589.92	437,348.19	710,948.26
12,300.00	90.00	359.68	10,856.00	1,689.89	-9.29	0.00	1,689.92	437,448.19	710,947.71
12,400.00	90.00	359.68	10,856.00	1,789.89	-9.84	0.00	1,789.92	437,548.19	710,947.16
12,500.00	90.00	359.68	10,856.00	1,889.89	-10.39	0.00	1,889.92	437,648.19	710,946.61
12,600.00	90.00	359.68	10,856.00	1,989.89	-10.94	0.00	1,989.92	437,748.19	710,946.06
12,700.00	90.00	359.68	10,856.00	2,089.89	-11.49	0.00	2,089.92	437,848.19	710,945.51
12,800.00	90.00	359.68	10,856.00	2,189.89	-12.04	0.00	2,189.92	437,948.19	710,944.96
12,900.00	90.00	359.68	10,856.00	2,289.88	-12.59	0.00	2,289.92	438,048.18	710,944.41
13,000.00	90.00	359.68	10,856.00	2,389.88	-13.14	0.00	2,389.92	438,148.18	710,943.86
13,100.00	90.00	359.68	10,856.00	2,489.88	-13.69	0.00	2,489.92	438,248.18	710,943.31



Standard_report

Company: XTO Energy Inc
 Project: Lea County, New Mexico
 Site: Charro Federal
 Well: Charro Federal Well No. 1H
 Wellbore: Original hole
 Design: rev0

Local Co-ordinate Reference: Well Charro Federal Well No. 1H
 TVD Reference: RKB=3584+23 @ 3607.00usft (Nabors 730)
 MD Reference: RKB=3584+23 @ 3607.00usft (Nabors 730)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.1 Ddatabase

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100ft)	V. Sec (usft)	Northing (usft)	Easting (usft)
13,200.00	90.00	359.68	10,856.00	2,589.88	-14.24	0.00	2,589.92	438,348.18	710,942.76
13,300.00	90.00	359.68	10,856.00	2,689.88	-14.79	0.00	2,689.92	438,448.18	710,942.21
13,400.00	90.00	359.68	10,856.00	2,789.88	-15.34	0.00	2,789.92	438,548.18	710,941.66
13,500.00	90.00	359.68	10,856.00	2,889.87	-15.89	0.00	2,889.92	438,648.17	710,941.11
13,600.00	90.00	359.68	10,856.00	2,989.87	-16.44	0.00	2,989.92	438,748.17	710,940.56
13,700.00	90.00	359.68	10,856.00	3,089.87	-16.99	0.00	3,089.92	438,848.17	710,940.01
13,800.00	90.00	359.68	10,856.00	3,189.87	-17.54	0.00	3,189.92	438,948.17	710,939.46
13,900.00	90.00	359.68	10,856.00	3,289.87	-18.09	0.00	3,289.92	439,048.17	710,938.91
14,000.00	90.00	359.68	10,856.00	3,389.87	-18.64	0.00	3,389.92	439,148.17	710,938.36
14,100.00	90.00	359.68	10,856.00	3,489.87	-19.19	0.00	3,489.92	439,248.17	710,937.81
14,200.00	90.00	359.68	10,856.00	3,589.86	-19.74	0.00	3,589.92	439,348.16	710,937.26
14,300.00	90.00	359.68	10,856.00	3,689.86	-20.29	0.00	3,689.92	439,448.16	710,936.71
14,400.00	90.00	359.68	10,856.00	3,789.86	-20.84	0.00	3,789.92	439,548.16	710,936.16
14,500.00	90.00	359.68	10,856.00	3,889.86	-21.39	0.00	3,889.92	439,648.16	710,935.61
14,600.00	90.00	359.68	10,856.00	3,989.86	-21.94	0.00	3,989.92	439,748.16	710,935.06
14,700.00	90.00	359.68	10,856.00	4,089.86	-22.49	0.00	4,089.92	439,848.16	710,934.51
14,800.00	90.00	359.68	10,856.00	4,189.86	-23.04	0.00	4,189.92	439,948.16	710,933.96
14,900.00	90.00	359.68	10,856.00	4,289.85	-23.59	0.00	4,289.92	440,048.15	710,933.41
15,000.00	90.00	359.68	10,856.00	4,389.85	-24.14	0.00	4,389.92	440,148.15	710,932.86
15,100.00	90.00	359.68	10,856.00	4,489.85	-24.69	0.00	4,489.92	440,248.15	710,932.31
15,200.00	90.00	359.68	10,856.00	4,589.85	-25.24	0.00	4,589.92	440,348.15	710,931.76
15,300.00	90.00	359.68	10,856.00	4,689.85	-25.79	0.00	4,689.92	440,448.15	710,931.21
15,400.00	90.00	359.68	10,856.00	4,789.85	-26.34	0.00	4,789.92	440,548.15	710,930.66
15,500.00	90.00	359.68	10,856.00	4,889.84	-26.89	0.00	4,889.92	440,648.14	710,930.11
15,519.86	90.00	359.68	10,856.00	4,909.70	-27.00	0.00	4,909.77	440,668.00	710,930.00

PBHL/TD



Standard_report

Company: XTO Energy Inc
Project: Lea County, New Mexico
Site: Charro Federal
Well: Charro Federal Well No. 1H
Wellbore: Original hole
Design: rev0

Local Co-ordinate Reference: Well Charro Federal Well No. 1H
TVD Reference: RKB=3584+23 @ 3607.00usft (Nabors 730)
MD Reference: RKB=3584+23 @ 3607.00usft (Nabors 730)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Ddatabase

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,071.00	1,071.00	Rustler		0.00	
1,370.00	1,370.00	Top Salt		0.00	
4,645.00	4,645.00	Base Salt		0.00	
4,884.00	4,884.00	Delaware		0.00	
5,821.00	5,821.00	Cherry Canyon		0.00	
7,565.00	7,565.00	Brushy Canyon		0.00	
8,565.00	8,565.00	Basal Brushy Canyon		0.00	
8,825.00	8,825.00	Bone Spring		0.00	
9,790.00	9,790.00	1st Bone Spring Lm		0.00	
9,949.00	9,949.00	1st Bone Spring Ss		0.00	
10,163.00	10,163.00	2nd Bone Spring Lm		0.00	
10,470.32	10,467.00	2nd Bone Spring Ss		0.00	
10,886.59	10,781.00	2nd Bone Spring B Ss		0.00	
11,183.04	10,856.00	Target 10856 TVD @ 0VS with no dip		0.00	

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
10,283.04	10,283.04	0.00	0.00	KOP Begin 10°/100' build
11,183.04	10,856.00	572.95	-3.15	Begin 90.00° lateral
15,519.86	10,856.00	4,909.70	-27.00	PBHL/TD

Fill Line

Flowline

3000# (3M)
BOP

SRR & A

Annular Preventer

Pipe Rams

Blind Rams

2" Minimum Kill Line

Kill Line

1 Kill Line Valve
(Minimum)

Drilling Spool

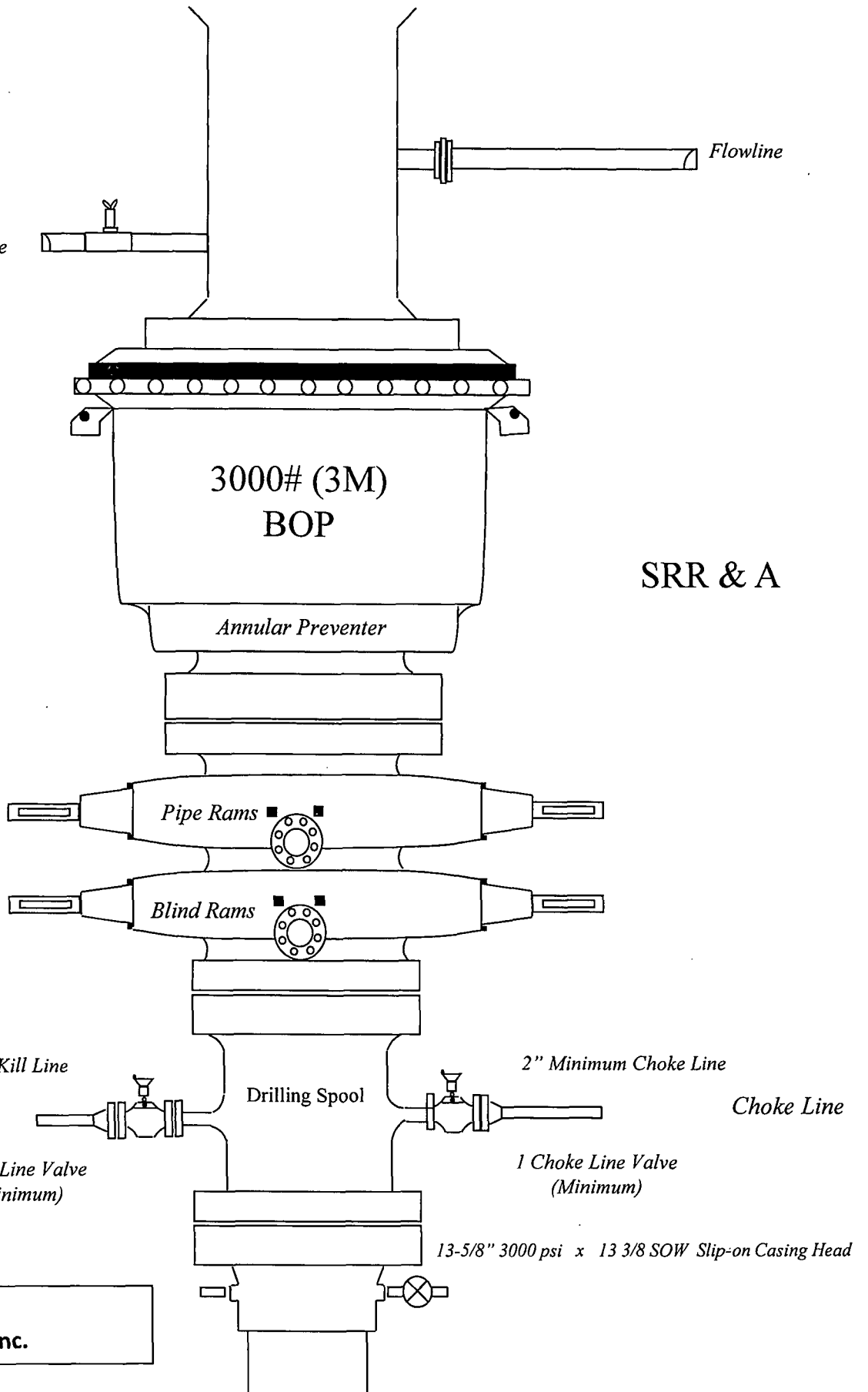
2" Minimum Choke Line

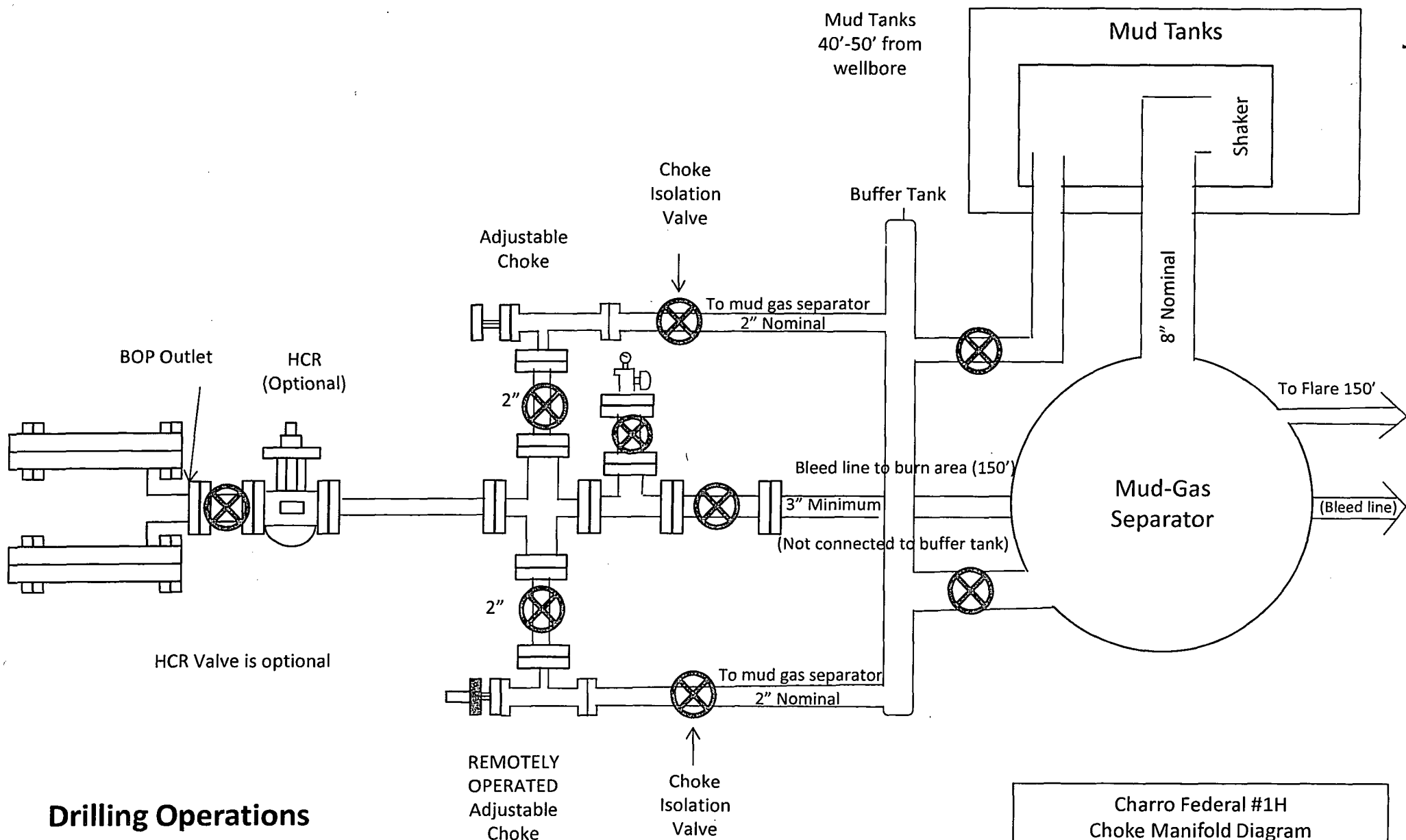
Choke Line

1 Choke Line Valve
(Minimum)

13-5/8" 3000 psi x 13 3/8 SOW Slip-on Casing Head

3000# BOP
XTO Energy, Inc.





Drilling Operations
Choke Manifold
3M Service

Charro Federal #1H
Choke Manifold Diagram
XTO Energy, Inc..