



XTO Energy

Lea County, NM (NAD-27)

Bootstrap Bill State

#1H

Wellbore #1

Plan: PERMIT

Standard Survey Report

14 March, 2019

HOBBS OCD
MAY 06 2019
RECEIVED



Project: Lea County, NM (NAD-27)
Site: Bootstrap Bill State
Well: #1H
Wellbore: Wellbore #1
Design: PERMIT

PROJECT DETAILS: Lea County, NM (NAD-27)
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1886
Zone: New Mexico East 3001
System Datum: Mean Sea Level

WELL DETAILS: #1H

Rig Name: RKB = 17 @ 3719.00usft
Ground Level: 3702.00
Northing: 586672.80
Easting: 756310.40
Latitude: 32.610110
Longitude: -103.500965

DESIGN TARGET DETAILS

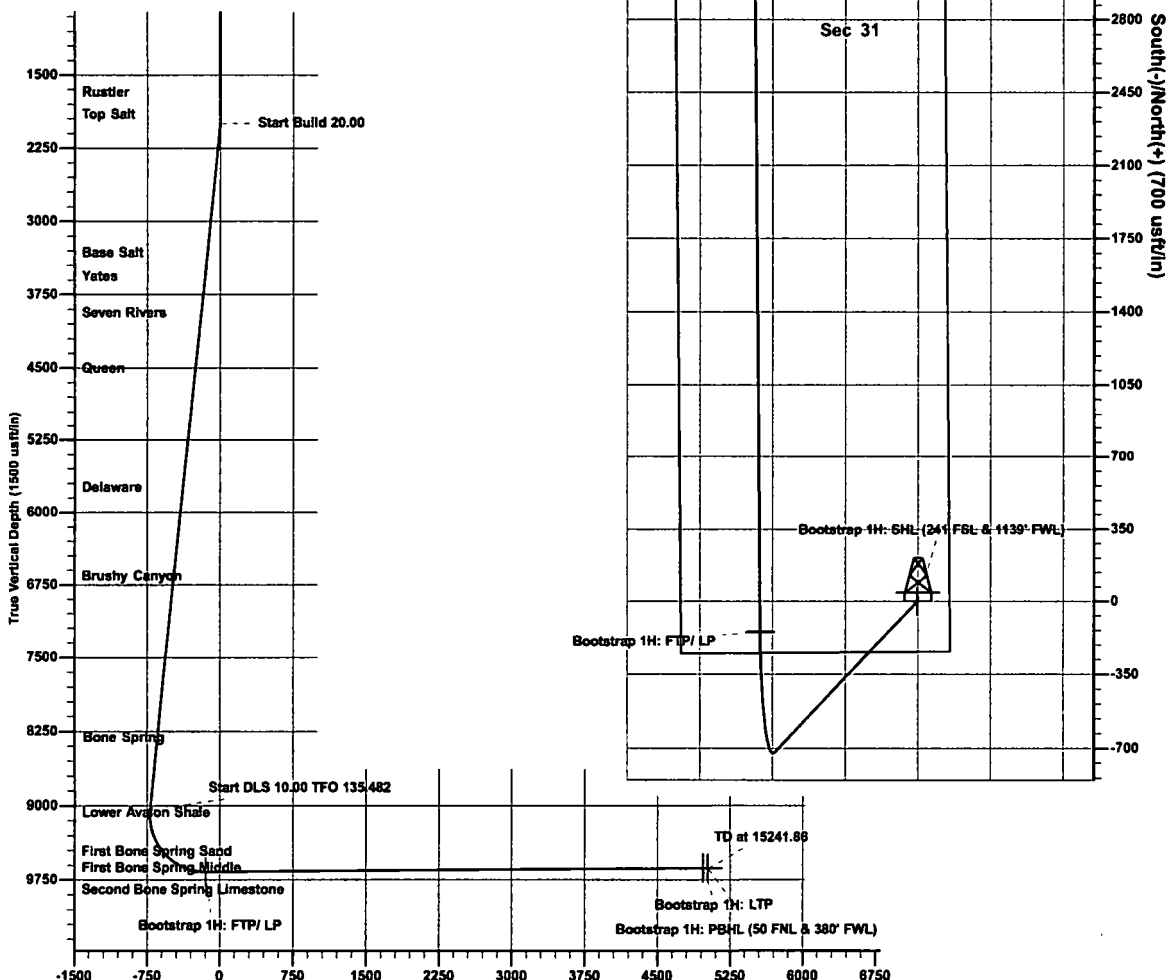
Name	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude	Shape
Bootstrap 1H: SHL (241 FSL & 1139' FWL)	0.00	0.00	0.00	586672.80	756310.40	32.610110	-103.500965	Point
Bootstrap 1H: PBHL (50 FNL & 380' FWL)	9630.00	5017.90	-801.90	591690.70	755508.50	32.623919	-103.503442	Point
Bootstrap 1H: LTP	9630.39	4967.80	-801.50	591840.70	755508.90	32.623781	-103.503442	Point
Bootstrap 1H: FTP/ LP	9670.00	-148.30	-757.70	588524.50	755552.70	32.609718	-103.503429	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	2040.48	8.10	223.70	2040.34	-2.06	-1.97	20.00	223.697	-2.05
4	6112.95	8.10	223.70	9042.33	-722.19	-690.06	0.00	0.000	-716.26
5	10075.32	90.44	359.51	9670.00	-148.30	-757.70	10.00	135.482	-141.81
6	15191.88	90.44	359.51	9630.39	4967.80	-801.47	0.00	0.000	4974.57
7	15241.88	90.44	359.51	9630.00	5017.90	-801.90	0.00	0.000	5024.57

FORMATION TOP DETAILS

TVDPath	Formation
1850.00	Rustler
1980.00	Top Salt
3398.00	Base Salt
3639.00	Yates
4013.00	Seven Rivers
4580.00	Queen
5819.00	Delaware
6736.00	Brushy Canyon
8133.00	Bone Spring
9235.00	Lower Avaton Shale
9550.00	First Bone Spring Sand
9630.00	TD
9670.00	Landing Point



The customer should only rely on this document after independently verifying all paths, targets, coordinates, lease and hard lines represented. Any decisions made or wells drilled utilizing this or any other information supplied by Prototype are at the sole risk and responsibility of the user.

Vertical Section at 359.51° (1500 usft/in)

Plan: PERMIT (#1H/Wellbore #1)

Created By: Matthew May Date: 9:13, March 14 2019

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 30-025-	² Pool Code	³ Pool Name
⁴ Property Code	⁵ Property Name BOOTSTRAP BILL STATE	⁶ Well Number 1H
⁷ OGRID No. 005380	⁸ Operator Name XTO ENERGY, INC.	⁹ Elevation 3,702'

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
L4	31	19 S	35 E		241	SOUTH	1,139	WEST	LEA

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
L1	31	19 S	35 E		50	NORTH	380	WEST	LEA

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

	SURFACE LOCATION NAD 27 NME Y= 586,672.8 X= 756,310.4 LAT.= 32.610110°N LONG.= 103.500965°W FIRST TAKE POINT NAD 27 NME Y= 586,524.5 X= 755,552.7 LAT.= 32.609718°N LONG.= 103.503429°W CORNER COORDINATES TABLE NAD 27 NME A - Y= 586,433.0 N, X= 756,467.9 E B - Y= 589,083.3 N, X= 756,444.8 E C - Y= 591,748.9 N, X= 756,421.9 E D - Y= 586,421.0 N, X= 755,173.6 E E - Y= 589,070.8 N, X= 755,150.6 E F - Y= 591,738.2 N, X= 755,128.1 E CORNER COORDINATES TABLE NAD 83 NME A - Y= 586,494.8 N, X= 797,648.6 E B - Y= 589,145.2 N, X= 797,625.4 E C - Y= 591,808.9 N, X= 797,602.4 E D - Y= 586,482.8 N, X= 796,354.3 E E - Y= 589,132.7 N, X= 796,331.2 E F - Y= 591,800.2 N, X= 796,308.6 E SURFACE LOCATION NAD 83 NME Y= 586,734.6 X= 797,491.1 LAT.= 32.610230°N LONG.= 103.501455°W FIRST TAKE POINT NAD 83 NME Y= 586,586.3 X= 796,733.4 LAT.= 32.609839°N LONG.= 103.503919°W	LAST TAKE POINT NAD 27 NME Y= 591,640.7 X= 755,508.9 LAT.= 32.623781°N LONG.= 103.503442°W BOTTOM HOLE LOCATION NAD 27 NME Y= 591,690.7 X= 755,508.5 LAT.= 32.623919°N LONG.= 103.503442°W LAST TAKE POINT NAD 83 NME Y= 591,702.7 X= 796,689.4 LAT.= 32.623902°N LONG.= 103.503933°W BOTTOM HOLE LOCATION NAD 83 NME Y= 591,752.7 X= 796,689.0 LAT.= 32.624039°N LONG.= 103.503933°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. Signature _____ Date _____ Printed Name _____ 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. 3-6-2019 Date of Survey _____ Signature and Seal of Professional Surveyor: _____ PRELIMINARY, THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE USED OR VIEWED OR RELIED UPON AS A FINAL SURVEY DOCUMENT MARK DILLON HARP 23786 Certificate Number _____	AI 2018112724	



Survey Report

Company: XTO Energy
 Project: Lea County, NM (NAD-27)
 Site: Bootstrap Bill State
 Well: #1H
 Wellbore: Wellbore #1
 Design: PERMIT

Local Co-ordinate Reference: Well #1H
 TVD Reference: RKB = 17' @ 3719.00usft
 MD Reference: RKB = 17' @ 3719.00usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.1 Single User Db

Project	Lea 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		Bootstrap Bill State				
Site Position:		Northing:	586,672.80 usft	Latitude:	32.610110	
From:	Map	Eastng:	756,310.40 usft	Longitude:	-103.500965	
Position Uncertainty:		0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.449 °

Well	#1H					
Well Position	+N/-S	0.00 usft	Northing:	586,672.80 usft	Latitude:	32.610110
	+E/-W	0.00 usft	Easting:	756,310.40 usft	Longitude:	-103.500965
Position Uncertainty	0.00 usft		Wellhead Elevation:	0.00 usft	Ground Level:	3,702.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	3/13/2019	6.760	60.403	47,993

Design	PERMIT				
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	359.51	

Survey Tool Program Date 3/13/2019

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	15,241.86	PERMIT (Wellbore #1)	MWD	MWD - Standard

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
Bootstrap 1H: SHL (241 FSL & 1139' FWL)									
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00



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 MD Reference: RKB = 17' @ 3719.00usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.1 Single User Db

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)
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
1,850.00	0.00	0.00	1,850.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,980.00	0.00	0.00	1,980.00	0.00	0.00	0.00	0.00	0.00	0.00
Top Salt									
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,025.00	5.00	223.70	2,024.97	-0.79	-0.75	-0.78	20.00	20.00	0.00
2,040.48	8.10	223.70	2,040.34	-2.06	-1.97	-2.05	20.00	20.00	0.00
2,100.00	8.10	223.70	2,099.27	-8.12	-7.76	-8.06	0.00	0.00	0.00
2,200.00	8.10	223.70	2,198.28	-18.31	-17.49	-18.16	0.00	0.00	0.00
2,300.00	8.10	223.70	2,297.28	-28.49	-27.22	-28.25	0.00	0.00	0.00
2,400.00	8.10	223.70	2,396.28	-38.67	-36.95	-38.35	0.00	0.00	0.00
2,500.00	8.10	223.70	2,495.29	-48.85	-46.68	-48.45	0.00	0.00	0.00
2,600.00	8.10	223.70	2,594.29	-59.03	-56.41	-58.55	0.00	0.00	0.00
2,700.00	8.10	223.70	2,693.29	-69.22	-66.14	-68.65	0.00	0.00	0.00
2,800.00	8.10	223.70	2,792.30	-79.40	-75.87	-78.75	0.00	0.00	0.00
2,900.00	8.10	223.70	2,891.30	-89.58	-85.60	-88.85	0.00	0.00	0.00
3,000.00	8.10	223.70	2,990.30	-99.76	-95.33	-98.94	0.00	0.00	0.00
3,100.00	8.10	223.70	3,089.31	-109.95	-105.06	-109.04	0.00	0.00	0.00
3,200.00	8.10	223.70	3,188.31	-120.13	-114.78	-119.14	0.00	0.00	0.00
3,300.00	8.10	223.70	3,287.31	-130.31	-124.51	-129.24	0.00	0.00	0.00
3,400.00	8.10	223.70	3,386.32	-140.49	-134.24	-139.34	0.00	0.00	0.00
3,411.80	8.10	223.70	3,398.00	-141.69	-135.39	-140.53	0.00	0.00	0.00
Base Salt									
3,500.00	8.10	223.70	3,485.32	-150.67	-143.97	-149.44	0.00	0.00	0.00
3,600.00	8.10	223.70	3,584.32	-160.86	-153.70	-159.53	0.00	0.00	0.00
3,655.23	8.10	223.70	3,639.00	-166.48	-159.07	-165.11	0.00	0.00	0.00
Yates									
3,700.00	8.10	223.70	3,683.33	-171.04	-163.43	-169.63	0.00	0.00	0.00
3,800.00	8.10	223.70	3,782.33	-181.22	-173.16	-179.73	0.00	0.00	0.00
3,900.00	8.10	223.70	3,881.33	-191.40	-182.89	-189.83	0.00	0.00	0.00
4,000.00	8.10	223.70	3,980.34	-201.58	-192.62	-199.93	0.00	0.00	0.00
4,032.99	8.10	223.70	4,013.00	-204.94	-195.83	-203.26	0.00	0.00	0.00
Seven Rivers									
4,100.00	8.10	223.70	4,079.34	-211.77	-202.35	-210.03	0.00	0.00	0.00



Survey Report

Company: XTO Energy
 Project: Lea County, NM (NAD-27)
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 Wellbore: Wellbore #1
 Design: PERMIT

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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)
4,200.00	8.10	223.70	4,178.34	-221.95	-212.08	-220.13	0.00	0.00	0.00
4,300.00	8.10	223.70	4,277.35	-232.13	-221.81	-230.22	0.00	0.00	0.00
4,400.00	8.10	223.70	4,376.35	-242.31	-231.53	-240.32	0.00	0.00	0.00
4,500.00	8.10	223.70	4,475.35	-252.49	-241.26	-250.42	0.00	0.00	0.00
4,600.00	8.10	223.70	4,574.36	-262.68	-250.99	-260.52	0.00	0.00	0.00
4,605.70	8.10	223.70	4,580.00	-263.26	-251.55	-261.10	0.00	0.00	0.00
Queen									
4,700.00	8.10	223.70	4,673.36	-272.86	-260.72	-270.62	0.00	0.00	0.00
4,800.00	8.10	223.70	4,772.36	-283.04	-270.45	-280.72	0.00	0.00	0.00
4,900.00	8.10	223.70	4,871.37	-293.22	-280.18	-290.81	0.00	0.00	0.00
5,000.00	8.10	223.70	4,970.37	-303.40	-289.91	-300.91	0.00	0.00	0.00
5,100.00	8.10	223.70	5,069.37	-313.59	-299.64	-311.01	0.00	0.00	0.00
5,200.00	8.10	223.70	5,168.38	-323.77	-309.37	-321.11	0.00	0.00	0.00
5,300.00	8.10	223.70	5,267.38	-333.95	-319.10	-331.21	0.00	0.00	0.00
5,400.00	8.10	223.70	5,366.38	-344.13	-328.83	-341.31	0.00	0.00	0.00
5,500.00	8.10	223.70	5,465.39	-354.31	-338.56	-351.41	0.00	0.00	0.00
5,600.00	8.10	223.70	5,564.39	-364.50	-348.28	-361.50	0.00	0.00	0.00
5,700.00	8.10	223.70	5,663.39	-374.68	-358.01	-371.60	0.00	0.00	0.00
5,800.00	8.10	223.70	5,762.40	-384.86	-367.74	-381.70	0.00	0.00	0.00
5,857.17	8.10	223.70	5,819.00	-390.68	-373.31	-387.47	0.00	0.00	0.00
Delaware									
5,900.00	8.10	223.70	5,861.40	-395.04	-377.47	-391.80	0.00	0.00	0.00
6,000.00	8.10	223.70	5,960.40	-405.22	-387.20	-401.90	0.00	0.00	0.00
6,100.00	8.10	223.70	6,059.41	-415.41	-396.93	-412.00	0.00	0.00	0.00
6,200.00	8.10	223.70	6,158.41	-425.59	-406.66	-422.09	0.00	0.00	0.00
6,300.00	8.10	223.70	6,257.41	-435.77	-416.39	-432.19	0.00	0.00	0.00
6,400.00	8.10	223.70	6,356.42	-445.95	-426.12	-442.29	0.00	0.00	0.00
6,500.00	8.10	223.70	6,455.42	-456.13	-435.85	-452.39	0.00	0.00	0.00
6,600.00	8.10	223.70	6,554.42	-466.32	-445.58	-462.49	0.00	0.00	0.00
6,700.00	8.10	223.70	6,653.43	-476.50	-455.31	-472.59	0.00	0.00	0.00
6,783.40	8.10	223.70	6,736.00	-484.99	-463.42	-481.01	0.00	0.00	0.00
Brushy Canyon									
6,800.00	8.10	223.70	6,752.43	-486.68	-465.03	-482.69	0.00	0.00	0.00
6,900.00	8.10	223.70	6,851.43	-496.86	-474.76	-492.78	0.00	0.00	0.00
7,000.00	8.10	223.70	6,950.44	-507.04	-484.49	-502.88	0.00	0.00	0.00
7,100.00	8.10	223.70	7,049.44	-517.23	-494.22	-512.98	0.00	0.00	0.00
7,200.00	8.10	223.70	7,148.44	-527.41	-503.95	-523.08	0.00	0.00	0.00
7,300.00	8.10	223.70	7,247.45	-537.59	-513.68	-533.18	0.00	0.00	0.00
7,400.00	8.10	223.70	7,346.45	-547.77	-523.41	-543.28	0.00	0.00	0.00
7,500.00	8.10	223.70	7,445.45	-557.95	-533.14	-553.37	0.00	0.00	0.00
7,600.00	8.10	223.70	7,544.46	-568.14	-542.87	-563.47	0.00	0.00	0.00
7,700.00	8.10	223.70	7,643.46	-578.32	-552.60	-573.57	0.00	0.00	0.00
7,800.00	8.10	223.70	7,742.47	-588.50	-562.33	-583.67	0.00	0.00	0.00
7,900.00	8.10	223.70	7,841.47	-598.68	-572.06	-593.77	0.00	0.00	0.00



Survey Report

Company: XTO Energy
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 Site: Bootstrap Bill State
 Well: #1H
 Wellbore: Wellbore #1
 Design: PERMIT

Local Co-ordinate Reference: Well #1H
 TVD Reference: RKB = 17' @ 3719.00usft
 MD Reference: RKB = 17' @ 3719.00usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.1 Single User Db

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)
8,000.00	8.10	223.70	7,940.47	-608.86	-581.78	-603.87	0.00	0.00	0.00
8,100.00	8.10	223.70	8,039.48	-619.05	-591.51	-613.97	0.00	0.00	0.00
8,194.47	8.10	223.70	8,133.00	-628.67	-600.70	-623.51	0.00	0.00	0.00
Bone Spring									
8,200.00	8.10	223.70	8,138.48	-629.23	-601.24	-624.06	0.00	0.00	0.00
8,300.00	8.10	223.70	8,237.48	-639.41	-610.97	-634.16	0.00	0.00	0.00
8,400.00	8.10	223.70	8,336.49	-649.59	-620.70	-644.26	0.00	0.00	0.00
8,500.00	8.10	223.70	8,435.49	-659.77	-630.43	-654.36	0.00	0.00	0.00
8,600.00	8.10	223.70	8,534.49	-669.96	-640.16	-664.46	0.00	0.00	0.00
8,700.00	8.10	223.70	8,633.50	-680.14	-649.89	-674.56	0.00	0.00	0.00
8,800.00	8.10	223.70	8,732.50	-690.32	-659.62	-684.65	0.00	0.00	0.00
8,900.00	8.10	223.70	8,831.50	-700.50	-669.35	-694.75	0.00	0.00	0.00
9,000.00	8.10	223.70	8,930.51	-710.69	-679.08	-704.85	0.00	0.00	0.00
9,100.00	8.10	223.70	9,029.51	-720.87	-688.81	-714.95	0.00	0.00	0.00
9,112.95	8.10	223.70	9,042.33	-722.19	-690.06	-716.26	0.00	0.00	0.00
9,150.00	6.04	249.22	9,079.11	-724.76	-693.69	-718.81	10.00	-5.56	68.87
9,200.00	6.37	296.74	9,128.84	-724.45	-698.63	-718.45	10.00	0.67	95.04
9,250.00	9.72	324.08	9,178.36	-719.78	-703.59	-713.74	10.00	6.71	54.68
9,300.00	14.08	336.17	9,227.28	-710.79	-708.52	-704.70	10.00	8.72	24.18
9,307.97	14.82	337.43	9,235.00	-708.96	-709.31	-702.87	10.00	9.18	15.87
Lower Avalon Shale									
9,350.00	18.76	342.48	9,275.23	-697.55	-713.41	-691.42	10.00	9.39	12.01
9,400.00	23.57	346.32	9,321.85	-680.16	-718.19	-673.99	10.00	9.61	7.67
9,450.00	28.44	348.91	9,366.78	-658.75	-722.85	-652.54	10.00	9.74	5.18
9,500.00	33.34	350.79	9,409.67	-633.49	-727.34	-627.24	10.00	9.81	3.77
9,550.00	38.27	352.24	9,450.21	-604.56	-731.64	-598.28	10.00	9.86	2.90
9,600.00	43.21	353.40	9,488.08	-572.19	-735.70	-565.88	10.00	9.88	2.33
9,650.00	48.17	354.37	9,523.00	-536.63	-739.49	-530.28	10.00	9.90	1.93
9,692.25	52.36	355.08	9,550.00	-504.28	-742.47	-497.92	10.00	9.92	1.67
First Bone Spring Sand									
9,700.00	53.13	355.20	9,554.69	-498.14	-743.00	-491.77	10.00	9.92	1.56
9,750.00	58.09	355.92	9,582.93	-457.01	-746.18	-450.62	10.00	9.93	1.45
9,800.00	63.06	356.57	9,607.48	-413.57	-749.02	-407.15	10.00	9.94	1.30
9,850.00	68.03	357.17	9,628.18	-368.14	-751.50	-361.70	10.00	9.94	1.19
9,854.92	68.52	357.23	9,630.00	-363.58	-751.72	-357.14	10.00	9.94	1.14
TD									
9,900.00	73.00	357.73	9,644.85	-321.07	-753.59	-314.61	10.00	9.95	1.11
9,950.00	77.97	358.25	9,657.38	-272.71	-755.29	-266.24	10.00	9.95	1.05
10,000.00	82.95	358.76	9,665.66	-223.43	-756.57	-216.95	10.00	9.95	1.02
10,050.00	87.92	359.26	9,669.64	-173.61	-757.43	-167.13	10.00	9.95	0.99
10,075.32	90.44	359.51	9,670.00	-148.30	-757.70	-141.81	10.00	9.95	0.99
Landing Point - Bootstrap 1H: FTP/ LP									
10,100.00	90.44	359.51	9,669.81	-123.62	-757.91	-117.13	0.00	0.00	0.00
10,200.00	90.44	359.51	9,669.03	-23.63	-758.77	-17.14	0.00	0.00	0.00



Company: XTO Energy
 Project: Lea County, NM (NAD-27)
 Site: Bootstrap Bill State
 Well: #1H
 Wellbore: Wellbore #1
 Design: PERMIT

Local Co-ordinate Reference: Well #1H
 TVD Reference: RKB = 17' @ 3719.00usft
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 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.1 Single User Db

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,300.00	90.44	359.51	9,668.26	76.37	-759.62	82.86	0.00	0.00	0.00
10,400.00	90.44	359.51	9,667.49	176.36	-760.48	182.86	0.00	0.00	0.00
10,500.00	90.44	359.51	9,666.71	276.35	-761.33	282.85	0.00	0.00	0.00
10,600.00	90.44	359.51	9,665.94	376.35	-762.19	382.85	0.00	0.00	0.00
10,700.00	90.44	359.51	9,665.16	476.34	-763.04	482.85	0.00	0.00	0.00
10,800.00	90.44	359.51	9,664.39	576.33	-763.90	582.85	0.00	0.00	0.00
10,900.00	90.44	359.51	9,663.62	676.33	-764.76	682.84	0.00	0.00	0.00
11,000.00	90.44	359.51	9,662.84	776.32	-765.61	782.84	0.00	0.00	0.00
11,100.00	90.44	359.51	9,662.07	876.31	-766.47	882.84	0.00	0.00	0.00
11,200.00	90.44	359.51	9,661.29	976.31	-767.32	982.83	0.00	0.00	0.00
11,300.00	90.44	359.51	9,660.52	1,076.30	-768.18	1,082.83	0.00	0.00	0.00
11,400.00	90.44	359.51	9,659.74	1,176.29	-769.03	1,182.83	0.00	0.00	0.00
11,500.00	90.44	359.51	9,658.97	1,276.29	-769.89	1,282.82	0.00	0.00	0.00
11,600.00	90.44	359.51	9,658.20	1,376.28	-770.74	1,382.82	0.00	0.00	0.00
11,700.00	90.44	359.51	9,657.42	1,476.27	-771.60	1,482.82	0.00	0.00	0.00
11,800.00	90.44	359.51	9,656.65	1,576.27	-772.45	1,582.82	0.00	0.00	0.00
11,900.00	90.44	359.51	9,655.87	1,676.26	-773.31	1,682.81	0.00	0.00	0.00
12,000.00	90.44	359.51	9,655.10	1,776.25	-774.17	1,782.81	0.00	0.00	0.00
12,100.00	90.44	359.51	9,654.32	1,876.25	-775.02	1,882.81	0.00	0.00	0.00
12,200.00	90.44	359.51	9,653.55	1,976.24	-775.88	1,982.80	0.00	0.00	0.00
12,300.00	90.44	359.51	9,652.78	2,076.23	-776.73	2,082.80	0.00	0.00	0.00
12,400.00	90.44	359.51	9,652.00	2,176.23	-777.59	2,182.80	0.00	0.00	0.00
12,500.00	90.44	359.51	9,651.23	2,276.22	-778.44	2,282.79	0.00	0.00	0.00
12,600.00	90.44	359.51	9,650.45	2,376.21	-779.30	2,382.79	0.00	0.00	0.00
12,700.00	90.44	359.51	9,649.68	2,476.21	-780.15	2,482.79	0.00	0.00	0.00
12,800.00	90.44	359.51	9,648.91	2,576.20	-781.01	2,582.79	0.00	0.00	0.00
12,900.00	90.44	359.51	9,648.13	2,676.19	-781.87	2,682.78	0.00	0.00	0.00
13,000.00	90.44	359.51	9,647.36	2,776.19	-782.72	2,782.78	0.00	0.00	0.00
13,100.00	90.44	359.51	9,646.58	2,876.18	-783.58	2,882.78	0.00	0.00	0.00
13,200.00	90.44	359.51	9,645.81	2,976.17	-784.43	2,982.77	0.00	0.00	0.00
13,300.00	90.44	359.51	9,645.03	3,076.17	-785.29	3,082.77	0.00	0.00	0.00
13,400.00	90.44	359.51	9,644.26	3,176.16	-786.14	3,182.77	0.00	0.00	0.00
13,500.00	90.44	359.51	9,643.49	3,276.15	-787.00	3,282.76	0.00	0.00	0.00
13,600.00	90.44	359.51	9,642.71	3,376.15	-787.85	3,382.76	0.00	0.00	0.00
13,700.00	90.44	359.51	9,641.94	3,476.14	-788.71	3,482.76	0.00	0.00	0.00
13,800.00	90.44	359.51	9,641.16	3,576.13	-789.56	3,582.76	0.00	0.00	0.00
13,900.00	90.44	359.51	9,640.39	3,676.13	-790.42	3,682.75	0.00	0.00	0.00
14,000.00	90.44	359.51	9,639.61	3,776.12	-791.28	3,782.75	0.00	0.00	0.00
14,100.00	90.44	359.51	9,638.84	3,876.11	-792.13	3,882.75	0.00	0.00	0.00
14,200.00	90.44	359.51	9,638.07	3,976.11	-792.99	3,982.74	0.00	0.00	0.00
14,300.00	90.44	359.51	9,637.29	4,076.10	-793.84	4,082.74	0.00	0.00	0.00
14,400.00	90.44	359.51	9,636.52	4,176.09	-794.70	4,182.74	0.00	0.00	0.00
14,500.00	90.44	359.51	9,635.74	4,276.09	-795.55	4,282.73	0.00	0.00	0.00



Company: XTO Energy
 Project: Lea County, NM (NAD-27)
 Site: Bootstrap Bill State
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 Design: PERMIT

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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)
14,600.00	90.44	359.51	9,634.97	4,376.08	-796.41	4,382.73	0.00	0.00	0.00
14,700.00	90.44	359.51	9,634.20	4,476.07	-797.26	4,482.73	0.00	0.00	0.00
14,800.00	90.44	359.51	9,633.42	4,576.07	-798.12	4,582.73	0.00	0.00	0.00
14,900.00	90.44	359.51	9,632.65	4,676.06	-798.98	4,682.72	0.00	0.00	0.00
15,000.00	90.44	359.51	9,631.87	4,776.05	-799.83	4,782.72	0.00	0.00	0.00
15,100.00	90.44	359.51	9,631.10	4,876.05	-800.69	4,882.72	0.00	0.00	0.00
15,191.86	90.44	359.51	9,630.39	4,967.90	-801.47	4,974.57	0.00	0.00	0.00
Bootstrap 1H: LTP									
15,200.00	90.44	359.51	9,630.32	4,976.04	-801.54	4,982.71	0.00	0.00	0.00
15,241.86	90.44	359.51	9,630.00	5,017.90	-801.90	5,024.57	0.00	0.00	0.00
Bootstrap 1H: PBHL (50 FNL & 380' FWL)									

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
Bootstrap 1H: SHL (2- - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	586,672.80	756,310.40	32.610110	-103.500965
Bootstrap 1H: PBHL () - plan hits target center - Point	0.00	0.00	9,630.00	5,017.90	-801.90	591,690.70	755,508.50	32.623919	-103.503442
Bootstrap 1H: LTP - plan misses target center by 0.03usft at 15191.86usft MD (9630.39 TVD, 4967.90 N, -801.47 E) - Point	0.00	0.00	9,630.39	4,967.90	-801.50	591,640.70	755,508.90	32.623781	-103.503442
Bootstrap 1H: FTP/ LF - plan hits target center - Point	0.00	0.00	9,670.00	-148.30	-757.70	586,524.50	755,552.70	32.609718	-103.503430



Survey Report

Company: XTO Energy
Project: Lea County, NM (NAD-27)
Site: Bootstrap Bill State
Well: #1H
Wellbore: Wellbore #1
Design: PERMIT

Local Co-ordinate Reference: Well #1H
TVD Reference: RKB = 17' @ 3719.00usft
MD Reference: RKB = 17' @ 3719.00usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,850.00	1,850.00	Rustler			
1,980.00	1,980.00	Top Salt			
3,411.80	3,398.00	Base Salt			
3,655.23	3,639.00	Yates			
4,032.99	4,013.00	Seven Rivers			
4,605.70	4,580.00	Queen			
5,857.17	5,819.00	Delaware			
6,783.40	6,736.00	Brushy Canyon			
8,194.47	8,133.00	Bone Spring			
9,307.97	9,235.00	Lower Avalon Shale			
9,692.25	9,550.00	First Bone Spring Sand			
9,854.92	9,630.00	TD			
10,075.32	9,670.00	Landing Point			

Checked By: _____ Approved By: _____ Date: _____