



XTO Energy

Eddy County, NM (NAD-27)

Tombstone 11 State

#122H

Wellbore #1

Plan: PERMIT

Standard Planning Report

15 February, 2019



Project: Eddy County, NM (NAD-27)
Site: Tombstone 11 State
Well: #122H
Wellbore: Wellbore #1
Design: PERMIT

WELL DETAILS: #122H

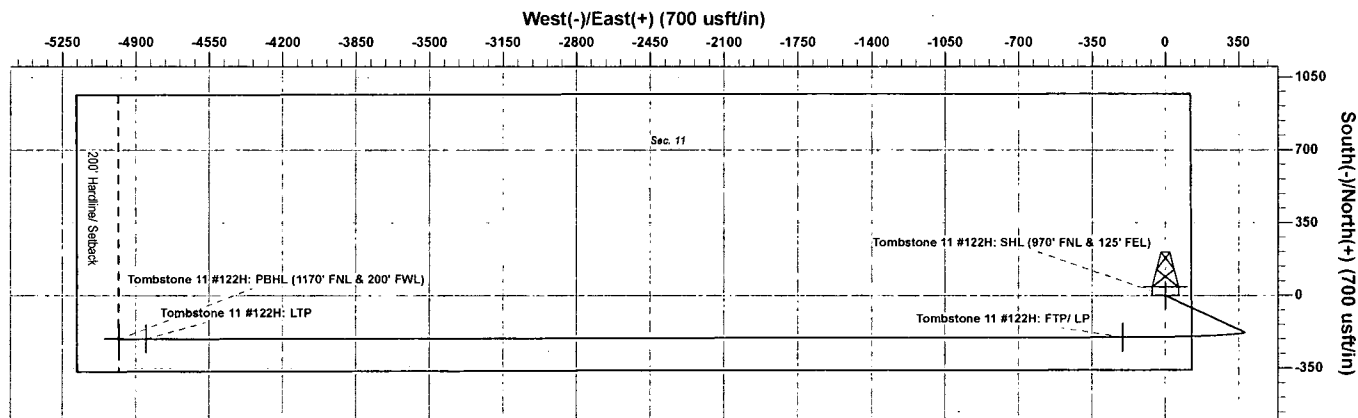
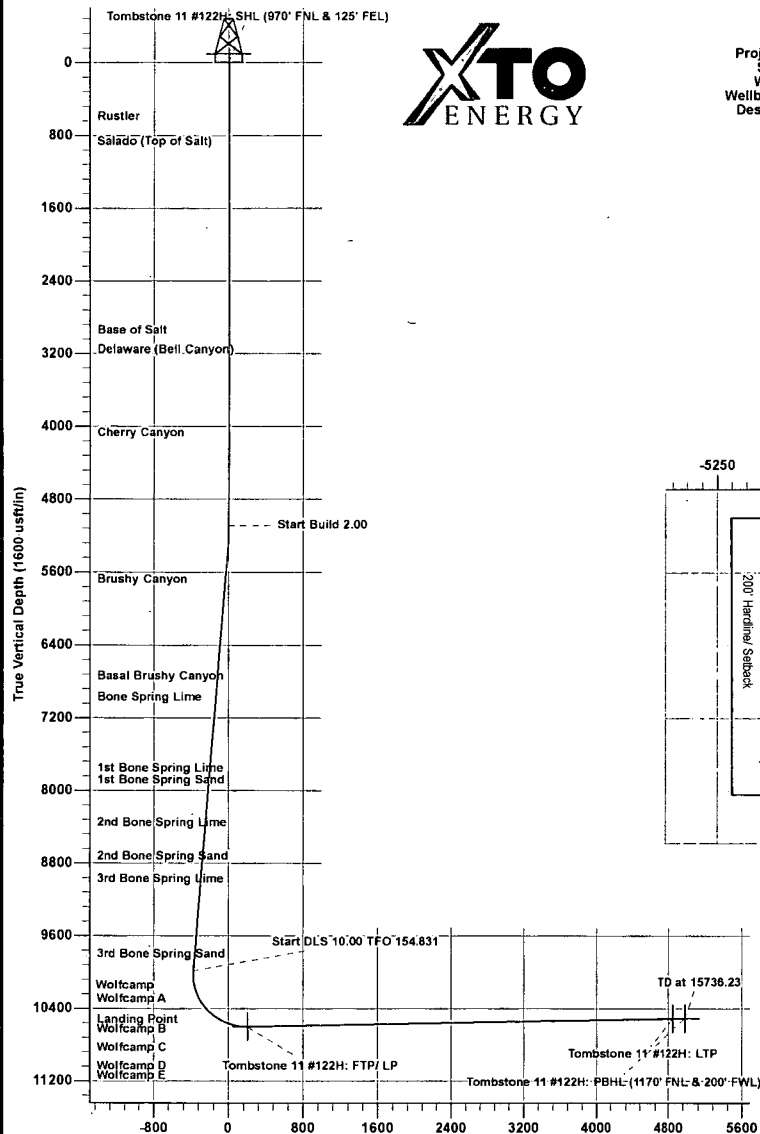
Rig Name: Precision 525
RKB = 15' @ 3107.00usft (Precision 525)
Ground Level: 3082.00
Northing: 418198.20
Easting: 619717.40
Latitude: 32.149152
Longitude: -103.946515

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	5090.00	0.00	0.00	5090.00	0.00	0.00	0.00	0.00	0.00
3	5339.99	5.00	114.95	5339.67	-4.60	9.88	2.00	114.947	-9.88
4	10022.40	5.00	114.95	9984.34	-175.98	378.31	0.00	0.000	-378.01
5	10956.47	91.08	269.90	10802.00	-200.30	-203.60	10.00	154.931	203.95
6	15606.21	91.08	269.90	10514.45	-208.28	-4850.50	0.00	0.000	4850.86
7	15736.23	91.08	269.90	10512.00	-208.50	-4980.50	0.00	0.000	4980.86

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Tombstone 11 #122H: SHL (970' FNL & 125' FEL)	0.00	0.00	0.00	418198.20	619717.40	32.149152	-103.946515	Point
Tombstone 11 #122H: PBHL (1170' FNL & 200' FWL)	10512.00	-208.50	-4980.50	417989.70	614736.90	32.148627	-103.962510	Point
Tombstone 11 #122H: LTP	10514.45	-208.30	-4850.50	417989.90	614866.90	32.148627	-103.962190	Point
Tombstone 11 #122H: FTP/LP	10602.00	-200.30	-203.60	417997.90	619513.80	32.148604	-103.947176	Point



FORMATION TOP DETAILS

TVDPath	Formation
673.00	Rustler
946.00	Salado (Top of Salt)
3023.00	Base of Salt
3236.00	Delaware (Bell Canyon)
4153.00	Cherry Canyon
5758.00	Brushy Canyon
6820.00	Basal Brushy Canyon
7052.00	Bone Spring Lime
7919.00	1st Bone Spring Lime
7966.00	1st Bone Spring Sand
8434.00	2nd Bone Spring Lime
8805.00	2nd Bone Spring Sand
9055.00	3rd Bone Spring Lime
9879.00	3rd Bone Spring Sand
10231.00	Wolfcamp
10259.00	Wolfcamp X
10323.00	Wolfcamp Y
10376.00	Wolfcamp A
10602.00	Landing Point

PROJECT DETAILS: Eddy County, NM (NAD-27)

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level

Plan: PERMIT (#122H/Wellbore #1)

Created By: Matthew May Date: 6.06, February 15 2019

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 customer.



Database: EDM 5000.1 Single User Db
 Company: XTO Energy
 Project: Eddy County, NM (NAD-27)
 Site: Tombstone 11 State
 Well: #122H
 Wellbore: Wellbore #1
 Design: PERMIT

Local Co-ordinate Reference: Well #122H
 TVD Reference: RKB = 15' @ 3107.00usft (Precision 525)
 MD Reference: RKB = 15' @ 3107.00usft (Precision 525)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Project	Eddy County, NM (NAD-27)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site		Tombstone 11 State			
Site Position:		Northing:	418,228.20 usft	Latitude:	32.149235
From:	Map	Easting:	619,717.20 usft	Longitude:	-103.946516
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.206 °

Well	#122H					
Well Position	+N/-S	-30.00 usft	Northing:	418,198.20 usft	Latitude:	32.149153
	+E/-W	0.20 usft	Easting:	619,717.40 usft	Longitude:	-103.946516
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,092.00 usft	

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	2/15/2019	6.942	59.913	47,686

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	269.90

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	
5,090.00	0.00	0.00	5,090.00	0.00	0.00	0.00	0.00	0.00	0.000	
5,339.99	5.00	114.95	5,339.67	-4.60	9.88	2.00	2.00	0.00	114.947	
10,002.40	5.00	114.95	9,984.34	-175.98	378.31	0.00	0.00	0.00	0.000	
10,958.48	91.08	269.90	10,602.00	-200.30	-203.60	10.00	9.00	16.21	154.831	Tombstone 11 #12:
15,606.21	91.08	269.90	10,514.45	-208.28	-4,850.50	0.00	0.00	0.00	0.000	Tombstone 11 #12:
15,736.23	91.08	269.90	10,512.00	-208.50	-4,980.50	0.00	0.00	0.00	0.000	Tombstone 11 #12:



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 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

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
Tombstone 11 #122H: SHL (970' FNL & 125' FEL)									
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
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
673.00	0.00	0.00	673.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
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
946.00	0.00	0.00	946.00	0.00	0.00	0.00	0.00	0.00	0.00
Salado (Top of Salt)									
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,023.00	0.00	0.00	3,023.00	0.00	0.00	0.00	0.00	0.00	0.00
Base of Salt									
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,236.00	0.00	0.00	3,236.00	0.00	0.00	0.00	0.00	0.00	0.00
Delaware (Bell Canyon)									
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,153.00	0.00	0.00	4,153.00	0.00	0.00	0.00	0.00	0.00	0.00
Cherry Canyon									



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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	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,090.00	0.00	0.00	5,090.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.20	114.95	5,100.00	-0.01	0.02	-0.02	2.00	2.00	0.00
5,200.00	2.20	114.95	5,199.97	-0.89	1.91	-1.91	2.00	2.00	0.00
5,300.00	4.20	114.95	5,299.81	-3.24	6.98	-6.97	2.00	2.00	0.00
5,339.99	5.00	114.95	5,339.67	-4.60	9.88	-9.88	2.00	2.00	0.00
5,400.00	5.00	114.95	5,399.45	-6.80	14.63	-14.61	0.00	0.00	0.00
5,500.00	5.00	114.95	5,499.07	-10.48	22.53	-22.51	0.00	0.00	0.00
5,600.00	5.00	114.95	5,598.69	-14.16	30.43	-30.41	0.00	0.00	0.00
5,700.00	5.00	114.95	5,698.31	-17.83	38.33	-38.30	0.00	0.00	0.00
5,760.92	5.00	114.95	5,759.00	-20.07	43.15	-43.11	0.00	0.00	0.00
Brushy Canyon									
5,800.00	5.00	114.95	5,797.93	-21.51	46.23	-46.20	0.00	0.00	0.00
5,900.00	5.00	114.95	5,897.55	-25.18	54.14	-54.09	0.00	0.00	0.00
6,000.00	5.00	114.95	5,997.17	-28.86	62.04	-61.99	0.00	0.00	0.00
6,100.00	5.00	114.95	6,096.79	-32.54	69.94	-69.88	0.00	0.00	0.00
6,200.00	5.00	114.95	6,196.41	-36.21	77.84	-77.78	0.00	0.00	0.00
6,300.00	5.00	114.95	6,296.03	-39.89	85.74	-85.68	0.00	0.00	0.00
6,400.00	5.00	114.95	6,395.65	-43.56	93.65	-93.57	0.00	0.00	0.00
6,500.00	5.00	114.95	6,495.27	-47.24	101.55	-101.47	0.00	0.00	0.00
6,600.00	5.00	114.95	6,594.89	-50.91	109.45	-109.36	0.00	0.00	0.00
6,700.00	5.00	114.95	6,694.51	-54.59	117.35	-117.26	0.00	0.00	0.00
6,800.00	5.00	114.95	6,794.13	-58.27	125.26	-125.15	0.00	0.00	0.00
6,825.97	5.00	114.95	6,820.00	-59.22	127.31	-127.20	0.00	0.00	0.00
Basal Brushy Canyon									
6,900.00	5.00	114.95	6,893.75	-61.94	133.16	-133.05	0.00	0.00	0.00
7,000.00	5.00	114.95	6,993.37	-65.62	141.06	-140.94	0.00	0.00	0.00
7,058.86	5.00	114.95	7,052.00	-67.78	145.71	-145.59	0.00	0.00	0.00
Bone Spring Lime									
7,100.00	5.00	114.95	7,092.99	-69.29	148.96	-148.84	0.00	0.00	0.00
7,200.00	5.00	114.95	7,192.61	-72.97	156.86	-156.74	0.00	0.00	0.00
7,300.00	5.00	114.95	7,292.23	-76.65	164.77	-164.63	0.00	0.00	0.00
7,400.00	5.00	114.95	7,391.84	-80.32	172.67	-172.53	0.00	0.00	0.00
7,500.00	5.00	114.95	7,491.46	-84.00	180.57	-180.42	0.00	0.00	0.00
7,600.00	5.00	114.95	7,591.08	-87.67	188.47	-188.32	0.00	0.00	0.00
7,700.00	5.00	114.95	7,690.70	-91.35	196.37	-196.21	0.00	0.00	0.00
7,800.00	5.00	114.95	7,790.32	-95.03	204.28	-204.11	0.00	0.00	0.00
7,900.00	5.00	114.95	7,889.94	-98.70	212.18	-212.01	0.00	0.00	0.00
7,929.17	5.00	114.95	7,919.00	-99.77	214.48	-214.31	0.00	0.00	0.00
1st Bone Spring Lime									
7,976.35	5.00	114.95	7,966.00	-101.51	218.21	-218.03	0.00	0.00	0.00
1st Bone Spring Sand									
8,000.00	5.00	114.95	7,989.56	-102.38	220.08	-219.90	0.00	0.00	0.00
8,100.00	5.00	114.95	8,089.18	-106.05	227.98	-227.80	0.00	0.00	0.00
8,200.00	5.00	114.95	8,188.80	-109.73	235.89	-235.69	0.00	0.00	0.00



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8,300.00	5.00	114.95	8,288.42	-113.41	243.79	-243.59	0.00	0.00	0.00
8,400.00	5.00	114.95	8,388.04	-117.08	251.69	-251.48	0.00	0.00	0.00
8,446.14	5.00	114.95	8,434.00	-118.78	255.34	-255.13	0.00	0.00	0.00
2nd Bone Spring Lime									
8,500.00	5.00	114.95	8,487.66	-120.76	259.59	-259.38	0.00	0.00	0.00
8,600.00	5.00	114.95	8,587.28	-124.43	267.49	-267.28	0.00	0.00	0.00
8,700.00	5.00	114.95	8,686.90	-128.11	275.40	-275.17	0.00	0.00	0.00
8,800.00	5.00	114.95	8,786.52	-131.79	283.30	-283.07	0.00	0.00	0.00
8,818.55	5.00	114.95	8,805.00	-132.47	284.76	-284.53	0.00	0.00	0.00
2nd Bone Spring Sand									
8,900.00	5.00	114.95	8,886.14	-135.46	291.20	-290.96	0.00	0.00	0.00
9,000.00	5.00	114.95	8,985.76	-139.14	299.10	-298.86	0.00	0.00	0.00
9,069.51	5.00	114.95	9,055.00	-141.69	304.60	-304.35	0.00	0.00	0.00
3rd Bone Spring Lime									
9,100.00	5.00	114.95	9,085.38	-142.81	307.00	-306.75	0.00	0.00	0.00
9,200.00	5.00	114.95	9,185.00	-146.49	314.91	-314.65	0.00	0.00	0.00
9,300.00	5.00	114.95	9,284.62	-150.16	322.81	-322.55	0.00	0.00	0.00
9,400.00	5.00	114.95	9,384.23	-153.84	330.71	-330.44	0.00	0.00	0.00
9,500.00	5.00	114.95	9,483.85	-157.52	338.61	-338.34	0.00	0.00	0.00
9,600.00	5.00	114.95	9,583.47	-161.19	346.52	-346.23	0.00	0.00	0.00
9,700.00	5.00	114.95	9,683.09	-164.87	354.42	-354.13	0.00	0.00	0.00
9,800.00	5.00	114.95	9,782.71	-168.54	362.32	-362.02	0.00	0.00	0.00
9,896.66	5.00	114.95	9,879.00	-172.10	369.96	-369.66	0.00	0.00	0.00
3rd Bone Spring Sand									
9,900.00	5.00	114.95	9,882.33	-172.22	370.22	-369.92	0.00	0.00	0.00
10,002.40	5.00	114.95	9,984.34	-175.98	378.31	-378.01	0.00	0.00	0.00
10,050.00	2.14	186.11	10,031.86	-177.74	380.10	-379.79	10.00	-6.01	149.51
10,100.00	5.65	247.83	10,081.76	-179.60	377.72	-377.41	10.00	7.02	123.43
10,150.00	10.45	258.26	10,131.25	-181.45	371.00	-370.68	10.00	9.60	20.86
10,200.00	15.38	262.11	10,179.97	-183.29	359.99	-359.67	10.00	9.86	7.70
10,250.00	20.34	264.12	10,227.55	-185.09	344.77	-344.45	10.00	9.93	4.02
10,253.69	20.71	264.23	10,231.00	-185.22	343.48	-343.16	10.00	9.94	3.02
Wolfcamp									
10,283.93	23.72	265.02	10,259.00	-186.28	332.10	-331.78	10.00	9.95	2.61
Wolfcamp X									
10,300.00	25.32	265.36	10,273.62	-186.84	325.46	-325.13	10.00	9.96	2.15
10,350.00	30.30	266.22	10,317.83	-188.54	302.20	-301.87	10.00	9.97	1.72
10,356.01	30.90	266.31	10,323.00	-188.74	299.15	-298.82	10.00	9.97	1.43
Wolfcamp Y									
10,400.00	35.29	266.86	10,359.85	-190.16	275.18	-274.85	10.00	9.98	1.25
10,418.78	37.16	267.06	10,375.00	-190.75	264.09	-263.76	10.00	9.98	1.06
Wolfcamp A									
10,450.00	40.28	267.35	10,399.35	-191.70	244.59	-244.26	10.00	9.98	0.95
10,500.00	45.27	267.76	10,436.04	-193.14	210.68	-210.34	10.00	9.99	0.81
10,550.00	50.27	268.09	10,469.64	-194.48	173.69	-173.35	10.00	9.99	0.68
10,600.00	55.26	268.39	10,499.88	-195.70	133.92	-133.58	10.00	9.99	0.59
10,650.00	60.26	268.65	10,526.55	-196.79	91.65	-91.31	10.00	9.99	0.52
10,700.00	65.25	268.88	10,549.44	-197.74	47.23	-46.88	10.00	9.99	0.47
10,750.00	70.25	269.10	10,568.36	-198.56	0.97	-0.63	10.00	9.99	0.43
10,800.00	75.24	269.30	10,583.19	-199.22	-46.76	47.11	10.00	9.99	0.41
10,850.00	80.24	269.50	10,593.80	-199.74	-95.60	95.95	10.00	9.99	0.39
10,900.00	85.24	269.68	10,600.12	-200.09	-145.18	145.53	10.00	9.99	0.38
10,936.87	88.92	269.82	10,602.00	-200.25	-182.00	182.35	10.00	9.99	0.37



www.prototypewellplanning.com
Planning Report

Database: EDM 5000.1 Single User Db
Company: XTO Energy
Project: Eddy County, NM (NAD-27)
Site: Tombstone 11 State
Well: #122H
Wellbore: Wellbore #1
Design: PERMIT

Local Co-ordinate Reference: Well #122H
TVD Reference: RKB = 15' @ 3107.00usft (Precision 525)
MD Reference: RKB = 15' @ 3107.00usft (Precision 525)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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)
Landing Point									
10,950.00	90.23	269.87	10,602.10	-200.28	-195.13	195.48	10.00	9.99	0.37
10,958.48	91.08	269.90	10,602.00	-200.30	-203.60	203.95	10.00	9.99	0.37
Tombstone 11 #122H: FTP/ LP									
11,000.00	91.08	269.90	10,601.22	-200.37	-245.12	245.47	0.00	0.00	0.00
11,100.00	91.08	269.90	10,599.33	-200.54	-345.10	345.45	0.00	0.00	0.00
11,200.00	91.08	269.90	10,597.45	-200.71	-445.08	445.43	0.00	0.00	0.00
11,300.00	91.08	269.90	10,595.57	-200.89	-545.06	545.41	0.00	0.00	0.00
11,400.00	91.08	269.90	10,593.68	-201.06	-645.05	645.40	0.00	0.00	0.00
11,500.00	91.08	269.90	10,591.80	-201.23	-745.03	745.38	0.00	0.00	0.00
11,600.00	91.08	269.90	10,589.92	-201.40	-845.01	845.36	0.00	0.00	0.00
11,700.00	91.08	269.90	10,588.03	-201.57	-944.99	945.34	0.00	0.00	0.00
11,800.00	91.08	269.90	10,586.15	-201.74	-1,044.97	1,045.33	0.00	0.00	0.00
11,900.00	91.08	269.90	10,584.26	-201.92	-1,144.96	1,145.31	0.00	0.00	0.00
12,000.00	91.08	269.90	10,582.38	-202.09	-1,244.94	1,245.29	0.00	0.00	0.00
12,100.00	91.08	269.90	10,580.50	-202.26	-1,344.92	1,345.27	0.00	0.00	0.00
12,200.00	91.08	269.90	10,578.61	-202.43	-1,444.90	1,445.25	0.00	0.00	0.00
12,300.00	91.08	269.90	10,576.73	-202.60	-1,544.89	1,545.24	0.00	0.00	0.00
12,400.00	91.08	269.90	10,574.85	-202.77	-1,644.87	1,645.22	0.00	0.00	0.00
12,500.00	91.08	269.90	10,572.96	-202.95	-1,744.85	1,745.20	0.00	0.00	0.00
12,600.00	91.08	269.90	10,571.08	-203.12	-1,844.83	1,845.18	0.00	0.00	0.00
12,700.00	91.08	269.90	10,569.19	-203.29	-1,944.81	1,945.17	0.00	0.00	0.00
12,800.00	91.08	269.90	10,567.31	-203.46	-2,044.80	2,045.15	0.00	0.00	0.00
12,900.00	91.08	269.90	10,565.43	-203.63	-2,144.78	2,145.13	0.00	0.00	0.00
13,000.00	91.08	269.90	10,563.54	-203.80	-2,244.76	2,245.11	0.00	0.00	0.00
13,100.00	91.08	269.90	10,561.66	-203.98	-2,344.74	2,345.09	0.00	0.00	0.00
13,200.00	91.08	269.90	10,559.78	-204.15	-2,444.72	2,445.08	0.00	0.00	0.00
13,300.00	91.08	269.90	10,557.89	-204.32	-2,544.71	2,545.06	0.00	0.00	0.00
13,400.00	91.08	269.90	10,556.01	-204.49	-2,644.69	2,645.04	0.00	0.00	0.00
13,500.00	91.08	269.90	10,554.12	-204.66	-2,744.67	2,745.02	0.00	0.00	0.00
13,600.00	91.08	269.90	10,552.24	-204.83	-2,844.65	2,845.01	0.00	0.00	0.00
13,700.00	91.08	269.90	10,550.36	-205.01	-2,944.63	2,944.99	0.00	0.00	0.00
13,800.00	91.08	269.90	10,548.47	-205.18	-3,044.62	3,044.97	0.00	0.00	0.00
13,900.00	91.08	269.90	10,546.59	-205.35	-3,144.60	3,144.95	0.00	0.00	0.00
14,000.00	91.08	269.90	10,544.71	-205.52	-3,244.58	3,244.93	0.00	0.00	0.00
14,100.00	91.08	269.90	10,542.82	-205.69	-3,344.56	3,344.92	0.00	0.00	0.00
14,200.00	91.08	269.90	10,540.94	-205.86	-3,444.55	3,444.90	0.00	0.00	0.00
14,300.00	91.08	269.90	10,539.05	-206.04	-3,544.53	3,544.88	0.00	0.00	0.00
14,400.00	91.08	269.90	10,537.17	-206.21	-3,644.51	3,644.86	0.00	0.00	0.00
14,500.00	91.08	269.90	10,535.29	-206.38	-3,744.49	3,744.85	0.00	0.00	0.00
14,600.00	91.08	269.90	10,533.40	-206.55	-3,844.47	3,844.83	0.00	0.00	0.00
14,700.00	91.08	269.90	10,531.52	-206.72	-3,944.46	3,944.81	0.00	0.00	0.00
14,800.00	91.08	269.90	10,529.64	-206.89	-4,044.44	4,044.79	0.00	0.00	0.00
14,900.00	91.08	269.90	10,527.75	-207.06	-4,144.42	4,144.78	0.00	0.00	0.00
15,000.00	91.08	269.90	10,525.87	-207.24	-4,244.40	4,244.76	0.00	0.00	0.00
15,100.00	91.08	269.90	10,523.99	-207.41	-4,344.38	4,344.74	0.00	0.00	0.00
15,200.00	91.08	269.90	10,522.10	-207.58	-4,444.37	4,444.72	0.00	0.00	0.00
15,300.00	91.08	269.90	10,520.22	-207.75	-4,544.35	4,544.70	0.00	0.00	0.00
15,400.00	91.08	269.90	10,518.33	-207.92	-4,644.33	4,644.69	0.00	0.00	0.00
15,500.00	91.08	269.90	10,516.45	-208.09	-4,744.31	4,744.67	0.00	0.00	0.00
15,606.21	91.08	269.90	10,514.45	-208.28	-4,850.50	4,850.86	0.00	0.00	0.00
Tombstone 11 #122H: LTP									
15,700.00	91.08	269.90	10,512.68	-208.44	-4,944.28	4,944.63	0.00	0.00	0.00



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 Design: PERMIT

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 TVD Reference: RKB = 15' @ 3107.00usft (Precision 525)
 MD Reference: RKB = 15' @ 3107.00usft (Precision 525)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
15,736.23	91.08	269.90	10,512.00	-208.50	-4,980.50	4,980.86	0.00	0.00	0.00
Tombstone 11 #122H: PBHL (1170' FNL & 200' FWL)									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Tombstone 11 #122H	0.00	0.01	0.00	0.00	0.00	418,198.20	619,717.40	32.149153	-103.946516
- plan hits target center									
- Point									
Tombstone 11 #122H	0.00	0.01	10,512.00	-208.50	-4,980.50	417,989.70	614,736.90	32.148628	-103.962610
- plan hits target center									
- Point									
Tombstone 11 #122H	0.00	0.01	10,514.45	-208.30	-4,850.50	417,989.90	614,866.90	32.148627	-103.962190
- plan misses target center by 0.02usft at 15606.21usft MD (10514.45 TVD, -208.28 N, -4850.50 E)									
- Point									
Tombstone 11 #122H	0.00	0.01	10,602.00	-200.30	-203.60	417,997.90	619,513.80	32.148604	-103.947176
- plan hits target center									
- Point									

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
673.00	673.00	Rustler			
946.00	946.00	Salado (Top of Salt)			
3,023.00	3,023.00	Base of Salt			
3,236.00	3,236.00	Delaware (Bell Canyon)			
4,153.00	4,153.00	Cherry Canyon			
5,760.92	5,759.00	Brushy Canyon			
6,825.97	6,820.00	Basal Brushy Canyon			
7,058.86	7,052.00	Bone Spring Lime			
7,929.17	7,919.00	1st Bone Spring Lime			
7,976.35	7,966.00	1st Bone Spring Sand			
8,446.14	8,434.00	2nd Bone Spring Lime			
8,818.55	8,805.00	2nd Bone Spring Sand			
9,069.51	9,055.00	3rd Bone Spring Lime			
9,896.66	9,879.00	3rd Bone Spring Sand			
10,253.69	10,231.00	Wolfcamp			
10,283.93	10,259.00	Wolfcamp X			
10,356.01	10,323.00	Wolfcamp Y			
10,418.78	10,375.00	Wolfcamp A			
10,936.87	10,602.00	Landing Point			