

# **XTO Energy - Western Div. (NM, CO, UT)**

**LaPlata County (NAD83)**

**Anderson 3-5H**

**Anderson 3-5H**

**Middle Lateral**

**Plan: Design #1**

## **Standard Planning Report**

**30 March, 2015**

# XTO Energy, Inc.

## Planning Report

<b>Database:</b>	LMRKPROD	<b>Local Co-ordinate Reference:</b>	Site Anderson 3-5H
<b>Company:</b>	XTO Energy - Western Div. (NM, CO, UT)	<b>TVD Reference:</b>	WELL @ 6443.00ft (Original Well Elev)
<b>Project:</b>	LaPlata County (NAD83)	<b>MD Reference:</b>	WELL @ 6443.00ft (Original Well Elev)
<b>Site:</b>	Anderson 3-5H	<b>North Reference:</b>	True
<b>Well:</b>	Anderson 3-5H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Middle Lateral		
<b>Design:</b>	Design #1		

<b>Project</b>	LaPlata County (NAD83), LaPlata County, Colorado, Directional Fruitland Coal Wells		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		Using Well Reference Point
<b>Map Zone:</b>	Colorado Southern Zone		

<b>Site</b>	Anderson 3-5H		
<b>Site Position:</b>		<b>Northing:</b>	1,142,067.16 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,411,763.21 usft
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	0 "
		<b>Latitude:</b>	37° 2' 21.840000 N
		<b>Longitude:</b>	107° 30' 55.440000 W
		<b>Grid Convergence:</b>	-1.24 °

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
2,955.00	45.00	316.82	2,702.27	531.75	-498.96	0.00	0.00	0.00	0.00	
2,970.00	46.55	315.05	2,712.73	539.48	-506.43	13.33	10.30	-11.80	-40.00	
2,990.00	46.55	315.05	2,726.48	549.75	-516.69	0.00	0.00	0.00	0.00	
3,387.45	89.97	269.18	2,877.11	659.04	-847.73	15.00	10.93	-11.54	-56.32	
6,937.09	89.97	269.18	2,879.00	608.00	-4,397.00	0.00	0.00	0.00	0.00	3-5H Mid BHL

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<b>Well:</b>	Anderson 3-5H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Middle Lateral		
<b>Design:</b>	Design #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	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
225.00	0.00	0.00	225.00	0.00	0.00	0.00	0.00	0.00	0.00
9 5/8"									
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
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	0.08	316.82	1,500.00	0.00	0.00	0.00	0.08	0.08	0.00
1,600.00	5.08	316.82	1,599.87	3.28	-3.08	3.50	5.00	5.00	0.00
1,700.00	10.08	316.82	1,698.96	12.90	-12.10	13.75	5.00	5.00	0.00
1,800.00	15.08	316.82	1,796.53	28.77	-27.00	30.68	5.00	5.00	0.00
1,900.00	20.08	316.82	1,891.83	50.79	-47.66	54.17	5.00	5.00	0.00
2,000.00	25.08	316.82	1,984.14	78.78	-73.92	84.02	5.00	5.00	0.00
2,100.00	30.08	316.82	2,072.75	112.53	-105.59	120.01	5.00	5.00	0.00
2,200.00	35.08	316.82	2,156.98	151.79	-142.42	161.87	5.00	5.00	0.00
2,300.00	40.08	316.82	2,236.21	196.24	-184.14	209.29	5.00	5.00	0.00
2,400.00	45.00	316.82	2,309.82	245.57	-230.42	261.89	4.92	4.92	0.00
2,500.00	45.00	316.82	2,380.53	297.13	-278.81	316.88	0.00	0.00	0.00
2,600.00	45.00	316.82	2,451.24	348.70	-327.19	371.87	0.00	0.00	0.00
2,700.00	45.00	316.82	2,521.95	400.26	-375.58	426.86	0.00	0.00	0.00
2,800.00	45.00	316.82	2,592.66	451.83	-423.96	481.85	0.00	0.00	0.00
2,900.00	45.00	316.82	2,663.38	503.39	-472.34	536.84	0.00	0.00	0.00
2,955.00	45.00	316.82	2,702.27	531.75	-498.96	567.09	0.00	0.00	0.00
2,970.00	46.55	315.05	2,712.73	539.48	-506.43	575.55	13.33	10.30	-11.80
2,990.00	46.55	315.05	2,726.48	549.75	-516.69	587.12	0.00	0.00	0.00
3,000.00	47.39	313.36	2,733.31	554.85	-521.93	593.01	15.00	8.45	-16.96
3,100.00	56.97	298.68	2,794.77	600.49	-585.83	662.56	15.00	9.58	-14.68
3,200.00	67.91	287.07	2,841.09	634.40	-667.36	747.96	15.00	10.94	-11.61
3,300.00	79.55	277.19	2,869.12	654.26	-760.97	843.41	15.00	11.64	-9.88
3,387.45	89.97	269.18	2,877.11	659.04	-847.73	930.01	15.00	11.92	-9.16
3,400.00	89.97	269.18	2,877.12	658.86	-860.28	942.41	0.00	0.00	0.00
3,500.00	89.97	269.18	2,877.17	657.42	-960.27	1,041.26	0.00	0.00	0.00
3,600.00	89.97	269.18	2,877.23	655.98	-1,060.26	1,140.11	0.00	0.00	0.00
3,700.00	89.97	269.18	2,877.28	654.54	-1,160.25	1,238.96	0.00	0.00	0.00
3,800.00	89.97	269.18	2,877.33	653.11	-1,260.24	1,337.81	0.00	0.00	0.00
3,900.00	89.97	269.18	2,877.38	651.67	-1,360.22	1,436.67	0.00	0.00	0.00
4,000.00	89.97	269.18	2,877.44	650.23	-1,460.21	1,535.52	0.00	0.00	0.00
4,100.00	89.97	269.18	2,877.49	648.79	-1,560.20	1,634.37	0.00	0.00	0.00
4,200.00	89.97	269.18	2,877.54	647.35	-1,660.19	1,733.22	0.00	0.00	0.00
4,300.00	89.97	269.18	2,877.60	645.92	-1,760.18	1,832.07	0.00	0.00	0.00
4,400.00	89.97	269.18	2,877.65	644.48	-1,860.17	1,930.92	0.00	0.00	0.00
4,500.00	89.97	269.18	2,877.70	643.04	-1,960.16	2,029.77	0.00	0.00	0.00
4,600.00	89.97	269.18	2,877.76	641.60	-2,060.15	2,128.62	0.00	0.00	0.00
4,700.00	89.97	269.18	2,877.81	640.17	-2,160.14	2,227.47	0.00	0.00	0.00

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<b>Project:</b>	LaPlata County (NAD83)	<b>MD Reference:</b>	WELL @ 6443.00ft (Original Well Elev)
<b>Site:</b>	Anderson 3-5H	<b>North Reference:</b>	True
<b>Well:</b>	Anderson 3-5H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Middle Lateral		
<b>Design:</b>	Design #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,800.00	89.97	269.18	2,877.86	638.73	-2,260.13	2,326.32	0.00	0.00	0.00
4,900.00	89.97	269.18	2,877.92	637.29	-2,360.12	2,425.17	0.00	0.00	0.00
5,000.00	89.97	269.18	2,877.97	635.85	-2,460.11	2,524.02	0.00	0.00	0.00
5,100.00	89.97	269.18	2,878.02	634.41	-2,560.10	2,622.87	0.00	0.00	0.00
5,200.00	89.97	269.18	2,878.08	632.98	-2,660.09	2,721.72	0.00	0.00	0.00
5,300.00	89.97	269.18	2,878.13	631.54	-2,760.08	2,820.57	0.00	0.00	0.00
5,400.00	89.97	269.18	2,878.18	630.10	-2,860.07	2,919.42	0.00	0.00	0.00
5,500.00	89.97	269.18	2,878.24	628.66	-2,960.06	3,018.27	0.00	0.00	0.00
5,600.00	89.97	269.18	2,878.29	627.23	-3,060.05	3,117.12	0.00	0.00	0.00
5,700.00	89.97	269.18	2,878.34	625.79	-3,160.04	3,215.97	0.00	0.00	0.00
5,800.00	89.97	269.18	2,878.40	624.35	-3,260.03	3,314.82	0.00	0.00	0.00
5,900.00	89.97	269.18	2,878.45	622.91	-3,360.02	3,413.67	0.00	0.00	0.00
6,000.00	89.97	269.18	2,878.50	621.47	-3,460.01	3,512.52	0.00	0.00	0.00
6,100.00	89.97	269.18	2,878.55	620.04	-3,560.00	3,611.37	0.00	0.00	0.00
6,200.00	89.97	269.18	2,878.61	618.60	-3,659.99	3,710.22	0.00	0.00	0.00
6,300.00	89.97	269.18	2,878.66	617.16	-3,759.98	3,809.07	0.00	0.00	0.00
6,400.00	89.97	269.18	2,878.71	615.72	-3,859.97	3,907.92	0.00	0.00	0.00
6,500.00	89.97	269.18	2,878.77	614.28	-3,959.96	4,006.77	0.00	0.00	0.00
6,600.00	89.97	269.18	2,878.82	612.85	-4,059.95	4,105.62	0.00	0.00	0.00
6,700.00	89.97	269.18	2,878.87	611.41	-4,159.93	4,204.47	0.00	0.00	0.00
6,800.00	89.97	269.18	2,878.93	609.97	-4,259.92	4,303.32	0.00	0.00	0.00
6,900.00	89.97	269.18	2,878.98	608.53	-4,359.91	4,402.17	0.00	0.00	0.00
6,937.09	89.97	269.18	2,879.00	608.00	-4,397.00	4,438.84	0.00	0.00	0.00

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
3-5H Mid BHL	0.00	0.00	2,879.00	608.00	-4,397.00	1,142,769.88	2,407,380.36	37° 2' 27.847695 N	107° 31' 49.670443 W
- plan hits target center									
- Point									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
225.00	225.00	9 5/8"	9-5/8	12-1/4	



# XTO Energy - Western Division

Well Name: Anderson 3-5H  
Geodetic Datum: NAD 1983  
Latitude: 37° 2' 21.840000 N  
Longitude: 107° 30' 55.440000 W

## FORMATION TOP DETAILS

TVDPath	MDPath	Formation	2000
1705.00	1706.14	Ojo Alamo	
1858.00	1864.18	Kirtland	
2511.00	2684.51	Fruitland	2500
2779.00	3063.52	Upper Fruitland Coal	
2875.00	3199.28	Middle Fruitland Coal	3000
2919.00	3261.51	Lower Fruitland Coal	
2968.00	3330.80	Upper Pictured Cliffs	3500

## CASING DETAILS

TVD	MD	Size
225.00	225.00	9-5/8
3003.49	3381.00	7

