

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

LaPlata County (NAD83)

Anderson 3-5H

Anderson 3-5H

Lower Lateral

Plan: Lower Lateral Design #1

Standard Planning Report

30 March, 2015

XTO Energy, Inc.

Planning Report

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

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

Site	Anderson 3-5H		
Site Position:		Northing:	1,142,067.16 usft
From:	Lat/Long	Easting:	2,411,763.21 usft
Position Uncertainty:	0.00 ft	Slot Radius:	0 "
		Latitude:	37° 2' 21.840000 N
		Longitude:	107° 30' 55.440000 W
		Grid Convergence:	-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
3,025.00	45.00	316.82	2,751.76	567.85	-532.83	0.00	0.00	0.00	0.00	
3,040.00	46.74	318.20	2,762.21	575.79	-540.10	13.33	11.60	9.15	30.00	
3,045.00	46.74	318.20	2,765.63	578.50	-542.52	0.00	0.00	0.00	0.00	
3,452.36	89.96	269.71	2,920.32	699.76	-877.44	15.00	10.61	-11.90	-58.79	
6,971.97	89.96	269.71	2,923.00	682.00	-4,397.00	0.00	0.00	0.00	0.00	3-5H Lower Lat BHL

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Wellbore:	Lower Lateral		
Design:	Lower Lateral 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	3.55	5.00	5.00	0.00
1,700.00	10.08	316.82	1,698.96	12.90	-12.10	13.93	5.00	5.00	0.00
1,800.00	15.08	316.82	1,796.53	28.77	-27.00	31.09	5.00	5.00	0.00
1,900.00	20.08	316.82	1,891.83	50.79	-47.66	54.88	5.00	5.00	0.00
2,000.00	25.08	316.82	1,984.14	78.78	-73.92	85.12	5.00	5.00	0.00
2,100.00	30.08	316.82	2,072.75	112.53	-105.59	121.59	5.00	5.00	0.00
2,200.00	35.08	316.82	2,156.98	151.79	-142.42	164.01	5.00	5.00	0.00
2,300.00	40.08	316.82	2,236.21	196.24	-184.14	212.04	5.00	5.00	0.00
2,400.00	45.00	316.82	2,309.82	245.57	-230.42	265.34	4.92	4.92	0.00
2,500.00	45.00	316.82	2,380.53	297.13	-278.81	321.06	0.00	0.00	0.00
2,600.00	45.00	316.82	2,451.24	348.70	-327.19	376.77	0.00	0.00	0.00
2,700.00	45.00	316.82	2,521.95	400.26	-375.58	432.49	0.00	0.00	0.00
2,800.00	45.00	316.82	2,592.66	451.83	-423.96	488.20	0.00	0.00	0.00
2,900.00	45.00	316.82	2,663.38	503.39	-472.34	543.92	0.00	0.00	0.00
3,000.00	45.00	316.82	2,734.09	554.96	-520.73	599.64	0.00	0.00	0.00
3,025.00	45.00	316.82	2,751.76	567.85	-532.83	613.57	0.00	0.00	0.00
3,040.00	46.74	318.20	2,762.21	575.79	-540.10	621.97	13.33	11.60	9.15
3,045.00	46.74	318.20	2,765.63	578.50	-542.52	624.78	0.00	0.00	0.00
3,100.00	51.39	309.16	2,801.70	607.05	-572.59	658.87	15.00	8.45	-16.43
3,200.00	61.27	295.55	2,857.26	650.88	-642.84	735.01	15.00	9.88	-13.61
3,300.00	72.27	284.42	2,896.75	681.83	-729.01	824.90	15.00	11.00	-11.13
3,400.00	83.82	274.62	2,917.48	697.79	-825.23	922.44	15.00	11.55	-9.80
3,452.36	89.96	269.71	2,920.32	699.76	-877.44	974.32	15.00	11.72	-9.38
3,500.00	89.96	269.71	2,920.36	699.52	-925.08	1,021.36	0.00	0.00	0.00
3,600.00	89.96	269.71	2,920.43	699.02	-1,025.08	1,120.10	0.00	0.00	0.00
3,700.00	89.96	269.71	2,920.51	698.51	-1,125.07	1,218.84	0.00	0.00	0.00
3,800.00	89.96	269.71	2,920.58	698.01	-1,225.07	1,317.58	0.00	0.00	0.00
3,900.00	89.96	269.71	2,920.66	697.50	-1,325.07	1,416.32	0.00	0.00	0.00
4,000.00	89.96	269.71	2,920.74	697.00	-1,425.07	1,515.06	0.00	0.00	0.00
4,100.00	89.96	269.71	2,920.81	696.49	-1,525.07	1,613.80	0.00	0.00	0.00
4,200.00	89.96	269.71	2,920.89	695.99	-1,625.07	1,712.54	0.00	0.00	0.00
4,300.00	89.96	269.71	2,920.97	695.48	-1,725.07	1,811.28	0.00	0.00	0.00
4,400.00	89.96	269.71	2,921.04	694.98	-1,825.07	1,910.02	0.00	0.00	0.00
4,500.00	89.96	269.71	2,921.12	694.47	-1,925.06	2,008.76	0.00	0.00	0.00
4,600.00	89.96	269.71	2,921.19	693.97	-2,025.06	2,107.50	0.00	0.00	0.00
4,700.00	89.96	269.71	2,921.27	693.47	-2,125.06	2,206.24	0.00	0.00	0.00

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Project:	LaPlata County (NAD83)	MD Reference:	WELL @ 6443.00ft (Original Well Elev)
Site:	Anderson 3-5H	North Reference:	True
Well:	Anderson 3-5H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lower Lateral		
Design:	Lower Lateral 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	89.96	269.71	2,921.35	692.96	-2,225.06	2,304.98	0.00	0.00	0.00
4,900.00	89.96	269.71	2,921.42	692.46	-2,325.06	2,403.72	0.00	0.00	0.00
5,000.00	89.96	269.71	2,921.50	691.95	-2,425.06	2,502.46	0.00	0.00	0.00
5,100.00	89.96	269.71	2,921.57	691.45	-2,525.06	2,601.20	0.00	0.00	0.00
5,200.00	89.96	269.71	2,921.65	690.94	-2,625.06	2,699.94	0.00	0.00	0.00
5,300.00	89.96	269.71	2,921.73	690.44	-2,725.05	2,798.68	0.00	0.00	0.00
5,400.00	89.96	269.71	2,921.80	689.93	-2,825.05	2,897.42	0.00	0.00	0.00
5,500.00	89.96	269.71	2,921.88	689.43	-2,925.05	2,996.16	0.00	0.00	0.00
5,600.00	89.96	269.71	2,921.96	688.92	-3,025.05	3,094.90	0.00	0.00	0.00
5,700.00	89.96	269.71	2,922.03	688.42	-3,125.05	3,193.64	0.00	0.00	0.00
5,800.00	89.96	269.71	2,922.11	687.91	-3,225.05	3,292.38	0.00	0.00	0.00
5,900.00	89.96	269.71	2,922.18	687.41	-3,325.05	3,391.12	0.00	0.00	0.00
6,000.00	89.96	269.71	2,922.26	686.90	-3,425.04	3,489.86	0.00	0.00	0.00
6,100.00	89.96	269.71	2,922.34	686.40	-3,525.04	3,588.60	0.00	0.00	0.00
6,200.00	89.96	269.71	2,922.41	685.90	-3,625.04	3,687.34	0.00	0.00	0.00
6,300.00	89.96	269.71	2,922.49	685.39	-3,725.04	3,786.08	0.00	0.00	0.00
6,400.00	89.96	269.71	2,922.56	684.89	-3,825.04	3,884.82	0.00	0.00	0.00
6,500.00	89.96	269.71	2,922.64	684.38	-3,925.04	3,983.56	0.00	0.00	0.00
6,600.00	89.96	269.71	2,922.72	683.88	-4,025.04	4,082.30	0.00	0.00	0.00
6,700.00	89.96	269.71	2,922.79	683.37	-4,125.04	4,181.04	0.00	0.00	0.00
6,800.00	89.96	269.71	2,922.87	682.87	-4,225.03	4,279.78	0.00	0.00	0.00
6,900.00	89.96	269.71	2,922.95	682.36	-4,325.03	4,378.52	0.00	0.00	0.00
6,971.97	89.96	269.71	2,923.00	682.00	-4,397.00	4,449.58	0.00	0.00	0.00

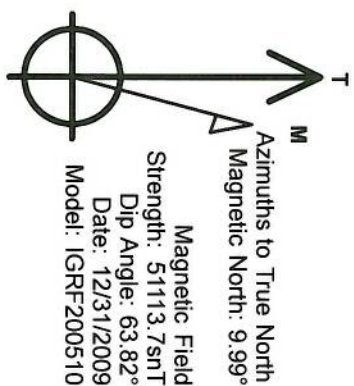
Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
3-5H Lower Lat BHL	0.00	0.00	2,923.00	682.00	-4,397.00	1,142,843.86	2,407,381.96	37° 2' 28.579327 N	107° 31' 49.670590 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	
1705.00	1706.14	Ojo Alamo	2000
1858.00	1864.18	Kirtland	2500
2511.00	2684.51	Fruitland	
2779.00	3063.52	Upper Fruitland Coal	3000
2875.00	3199.28	Middle Fruitland Coal	
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

