

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

LaPlata County (NAD83)

Anderson 3-5H

Anderson 3-5H

Slant Well

Plan: Slant Well 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:	Slant Well		
Design:	Slant Well 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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,498.42	0.00	0.00	1,498.42	0.00	0.00	0.00	0.00	0.00	0.00	
2,398.42	45.00	316.82	2,308.71	244.76	-229.66	5.00	5.00	0.00	316.82	
3,401.51	45.00	316.82	3,018.00	762.00	-715.00	0.00	0.00	0.00	0.00	3-5H Slant BHL

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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
1,498.42	0.00	0.00	1,498.42	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	5.00	5.00	0.00
1,600.00	5.08	316.82	1,599.87	3.28	-3.08	4.50	5.00	5.00	0.00
1,700.00	10.08	316.82	1,698.96	12.90	-12.10	17.68	5.00	5.00	0.00
1,706.14	10.39	316.82	1,705.00	13.69	-12.85	18.77	5.00	5.00	0.00
Ojo Alamo									
1,800.00	15.08	316.82	1,796.53	28.77	-27.00	39.46	5.00	5.00	0.00
1,864.18	18.29	316.82	1,858.00	42.21	-39.60	57.88	5.00	5.00	0.00
Kirtland									
1,900.00	20.08	316.82	1,891.83	50.79	-47.66	69.65	5.00	5.00	0.00
2,000.00	25.08	316.82	1,984.14	78.78	-73.92	108.03	5.00	5.00	0.00
2,100.00	30.08	316.82	2,072.75	112.53	-105.59	154.31	5.00	5.00	0.00
2,200.00	35.08	316.82	2,156.98	151.79	-142.42	208.14	5.00	5.00	0.00
2,300.00	40.08	316.82	2,236.21	196.24	-184.14	269.11	5.00	5.00	0.00
2,398.42	45.00	316.82	2,308.71	244.76	-229.66	335.63	5.00	5.00	0.00
2,400.00	45.00	316.82	2,309.82	245.57	-230.42	336.75	0.00	0.00	0.00
2,500.00	45.00	316.82	2,380.53	297.13	-278.81	407.46	0.00	0.00	0.00
2,600.00	45.00	316.82	2,451.24	348.70	-327.19	478.17	0.00	0.00	0.00
2,684.51	45.00	316.82	2,511.00	392.28	-368.08	537.93	0.00	0.00	0.00
Fruitland									
2,700.00	45.00	316.82	2,521.95	400.26	-375.58	548.88	0.00	0.00	0.00
2,800.00	45.00	316.82	2,592.66	451.83	-423.96	619.59	0.00	0.00	0.00
2,900.00	45.00	316.82	2,663.38	503.39	-472.34	690.30	0.00	0.00	0.00
3,000.00	45.00	316.82	2,734.09	554.96	-520.73	761.01	0.00	0.00	0.00
3,063.52	45.00	316.82	2,779.00	587.71	-551.46	805.93	0.00	0.00	0.00
Upper Fruitland Coal									
3,100.00	45.00	316.82	2,804.80	606.52	-569.11	831.72	0.00	0.00	0.00
3,199.28	45.00	316.82	2,875.00	657.72	-617.15	901.93	0.00	0.00	0.00
Middle Fruitland Coal									
3,200.00	45.00	316.82	2,875.51	658.09	-617.50	902.43	0.00	0.00	0.00
3,261.51	45.00	316.82	2,919.00	689.81	-647.26	945.93	0.00	0.00	0.00
Lower Fruitland Coal									
3,300.00	45.00	316.82	2,946.22	709.65	-665.88	973.14	0.00	0.00	0.00
3,330.80	45.00	316.82	2,968.00	725.54	-680.79	994.93	0.00	0.00	0.00
Upper Pictured Cliffs									
3,381.00	45.00	316.82	3,003.49	751.42	-705.07	1,030.42	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:	Slant Well		
Design:	Slant Well 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)
7"									
3,400.00	45.00	316.82	3,016.93	761.22	-714.27	1,043.85	0.00	0.00	0.00
3,401.51	45.00	316.82	3,018.00	762.00	-715.00	1,044.93	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 Slant BHL	0.00	0.00	3,018.00	762.00	-715.00	1,142,844.40	2,411,064.82	37° 2' 29.373694 N	107° 31' 4.258509 W
- plan hits target center									
- Point									

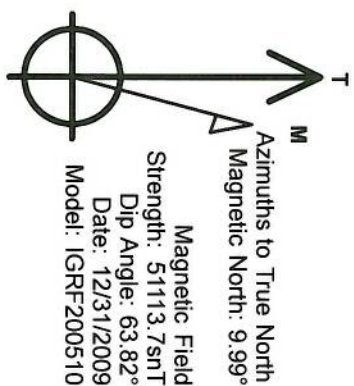
Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
225.00	225.00	9 5/8"	9-5/8	12-1/4	
3,381.00	3,003.49	7"	7	8-3/4	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,706.14	1,705.00	Ojo Alamo				
1,864.18	1,858.00	Kirtland				
2,684.51	2,511.00	Fruitland				
3,063.52	2,779.00	Upper Fruitland Coal				
3,199.28	2,875.00	Middle Fruitland Coal				
3,261.51	2,919.00	Lower Fruitland Coal		0.00		
3,330.80	2,968.00	Upper Pictured Cliffs		0.00		



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

