

# **XTO Energy**

**LaPlata County Directionals**

**R&G #26-3**

**R&G #26-3**

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**Plan: Permitted Wellbore -- R&G #26-3**

## **Standard Planning Report**

**20 July, 2010**

# XTO Energy Inc.

## Planning Report

<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well R&G #26-3
<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	Rig KB @ 6518.0ft (Aztec 507)
<b>Project:</b>	LaPlata County Directionals	<b>MD Reference:</b>	Rig KB @ 6518.0ft (Aztec 507)
<b>Site:</b>	R&G #26-3	<b>North Reference:</b>	True
<b>Well:</b>	R&G #26-3	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	R&G #26-3		
<b>Design:</b>	Permitted Wellbore -- R&G #26-3		

<b>Project</b>	LaPlata County Directionals, 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>	R&G #26-3, T33N, R7W		
<b>Site Position:</b>		<b>Northing:</b>	351,852.56 m
<b>From:</b>	Lat/Long	<b>Easting:</b>	729,990.40 m
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	in
		<b>Latitude:</b>	37° 4' 19.812 N
		<b>Longitude:</b>	107° 34' 25.788 W
		<b>Grid Convergence:</b>	-1.27 °

<b>Well</b>	R&G #26-3, S-well to top of FC		
<b>Well Position</b>	<b>+N/-S</b>	0.0 ft	<b>Northing:</b> 351,852.56 m
	<b>+E/-W</b>	0.0 ft	<b>Easting:</b> 729,990.40 m
<b>Position Uncertainty</b>		0.0 ft	<b>Wellhead Elevation:</b> 6,506.0 ft
			<b>Ground Level:</b> 6,506.0 ft

<b>Wellbore</b>	R&G #26-3				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF200510	12/31/2009	10.02	63.83	51,124

<b>Design</b>	Permitted Wellbore -- R&G #26-3			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	64.46

<b>Plan Sections</b>										
<b>Measured Depth</b>	<b>Inclination</b>	<b>Azimuth</b>	<b>Vertical Depth</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Dogleg Rate</b>	<b>Build Rate</b>	<b>Turn Rate</b>	<b>TFO</b>	<b>Target</b>
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)	(°)	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,500.0	30.00	64.46	1,454.9	110.3	230.9	3.00	3.00	0.00	64.46	
2,095.9	30.00	64.46	1,971.0	238.8	499.7	0.00	0.00	0.00	0.00	
2,762.6	10.00	64.46	2,594.3	336.6	704.4	3.00	-3.00	0.00	180.00	
3,276.1	10.00	64.46	3,100.0	375.1	784.8	0.00	0.00	0.00	0.00	Proposed BHL -- R&G

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<b>Project:</b>	LaPlata County Directionals	<b>MD Reference:</b>	Rig KB @ 6518.0ft (Aztec 507)
<b>Site:</b>	R&G #26-3	<b>North Reference:</b>	True
<b>Well:</b>	R&G #26-3	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	R&G #26-3		
<b>Design:</b>	Permitted Wellbore -- R&G #26-3		

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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
225.0	0.00	0.00	225.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>8 5/8"</b>									
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	3.00	64.46	600.0	1.1	2.4	2.6	3.00	3.00	0.00
700.0	6.00	64.46	699.6	4.5	9.4	10.5	3.00	3.00	0.00
800.0	9.00	64.46	798.8	10.1	21.2	23.5	3.00	3.00	0.00
900.0	12.00	64.46	897.1	18.0	37.7	41.7	3.00	3.00	0.00
1,000.0	15.00	64.46	994.3	28.1	58.7	65.1	3.00	3.00	0.00
1,100.0	18.00	64.46	1,090.2	40.3	84.3	93.5	3.00	3.00	0.00
1,200.0	21.00	64.46	1,184.4	54.7	114.5	126.9	3.00	3.00	0.00
1,300.0	24.00	64.46	1,276.8	71.2	149.0	165.1	3.00	3.00	0.00
1,400.0	27.00	64.46	1,367.1	89.8	187.8	208.2	3.00	3.00	0.00
1,449.7	28.49	64.46	1,411.0	99.7	208.7	231.3	3.00	3.00	0.00
<b>Ojo Alamo SS</b>									
1,500.0	30.00	64.46	1,454.9	110.3	230.9	255.9	3.00	3.00	0.00
1,600.0	30.00	64.46	1,541.5	131.9	276.0	305.9	0.00	0.00	0.00
1,621.3	30.00	64.46	1,560.0	136.5	285.6	316.5	0.00	0.00	0.00
<b>Kirtland Shale</b>									
1,700.0	30.00	64.46	1,628.1	153.4	321.1	355.9	0.00	0.00	0.00
1,800.0	30.00	64.46	1,714.7	175.0	366.2	405.9	0.00	0.00	0.00
1,900.0	30.00	64.46	1,801.3	196.6	411.3	455.9	0.00	0.00	0.00
2,000.0	30.00	64.46	1,887.9	218.1	456.4	505.9	0.00	0.00	0.00
2,095.9	30.00	64.46	1,971.0	238.8	499.7	553.8	0.00	0.00	0.00
2,100.0	29.88	64.46	1,974.5	239.7	501.5	555.9	3.00	-3.00	0.00
2,200.0	26.88	64.46	2,062.5	260.2	544.4	603.4	3.00	-3.00	0.00
2,300.0	23.88	64.46	2,152.9	278.6	583.1	646.2	3.00	-3.00	0.00
2,400.0	20.88	64.46	2,245.3	295.1	617.4	684.3	3.00	-3.00	0.00
2,500.0	17.88	64.46	2,339.6	309.4	647.4	717.5	3.00	-3.00	0.00
2,542.3	16.61	64.46	2,380.0	314.8	658.7	730.0	3.00	-3.00	0.00
<b>Fruitland Formation</b>									
2,600.0	14.88	64.46	2,435.6	321.5	672.8	745.7	3.00	-3.00	0.00
2,700.0	11.88	64.46	2,532.9	331.5	693.7	768.8	3.00	-3.00	0.00
2,762.6	10.00	64.46	2,594.3	336.6	704.4	780.7	3.00	-3.00	0.00
2,785.6	10.00	64.46	2,617.0	338.3	708.0	784.7	0.00	0.00	0.00
<b>Upper Fruitland Coal</b>									
2,800.0	10.00	64.46	2,631.1	339.4	710.2	787.2	0.00	0.00	0.00
2,881.1	10.00	64.46	2,711.0	345.5	723.0	801.3	0.00	0.00	0.00
<b>Middle Fruitland Coal</b>									
2,900.0	10.00	64.46	2,729.6	346.9	725.9	804.5	0.00	0.00	0.00
2,959.3	10.00	64.46	2,788.0	351.3	735.2	814.8	0.00	0.00	0.00
<b>Pictured Cliffs Tongue</b>									
3,000.0	10.00	64.46	2,828.1	354.4	741.6	821.9	0.00	0.00	0.00
3,100.0	10.00	64.46	2,926.6	361.9	757.3	839.3	0.00	0.00	0.00
3,152.2	10.00	64.46	2,978.0	365.8	765.4	848.3	0.00	0.00	0.00
<b>Lower Fruitland Coal</b>									
3,159.3	10.00	64.46	2,985.0	366.3	766.5	849.6	0.00	0.00	0.00
<b>Pictured Cliffs SS</b>									
3,200.0	10.00	64.46	3,025.1	369.4	772.9	856.6	0.00	0.00	0.00

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<b>Wellbore:</b>	R&G #26-3		
<b>Design:</b>	Permitted Wellbore -- R&G #26-3		

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)
3,276.1	10.00	64.46	3,100.0	375.1	784.8	869.8	0.00	0.00	0.00

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (m)	Easting (m)	Latitude	Longitude
- hit/miss target									
- Shape									
Proposed BHL -- R&G #	0.00	0.00	3,100.0	375.1	784.8	351,961.53	730,232.10	37° 4' 23.520 N	107° 34' 16.104 W
- plan hits target									
- Rectangle (sides W10.0 H10.0 D0.0)									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
3,276.1	3,100.0	5 1/2"	5.500	7.875	
225.0	225.0	8 5/8"	8.625	12.250	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,449.7	1,411.0	Ojo Alamo SS		0.00		
1,621.3	1,560.0	Kirtland Shale		0.00		
2,542.3	2,380.0	Fruitland Formation		0.00		
2,785.6	2,617.0	Upper Fruitland Coal		0.00		
2,881.1	2,711.0	Middle Fruitland Coal		0.00		
2,959.3	2,788.0	Pictured Cliffs Tongue		0.00		
3,152.2	2,978.0	Lower Fruitland Coal		0.00		
3,159.3	2,985.0	Pictured Cliffs SS		0.00		



**Well Name: R&G #26-3**

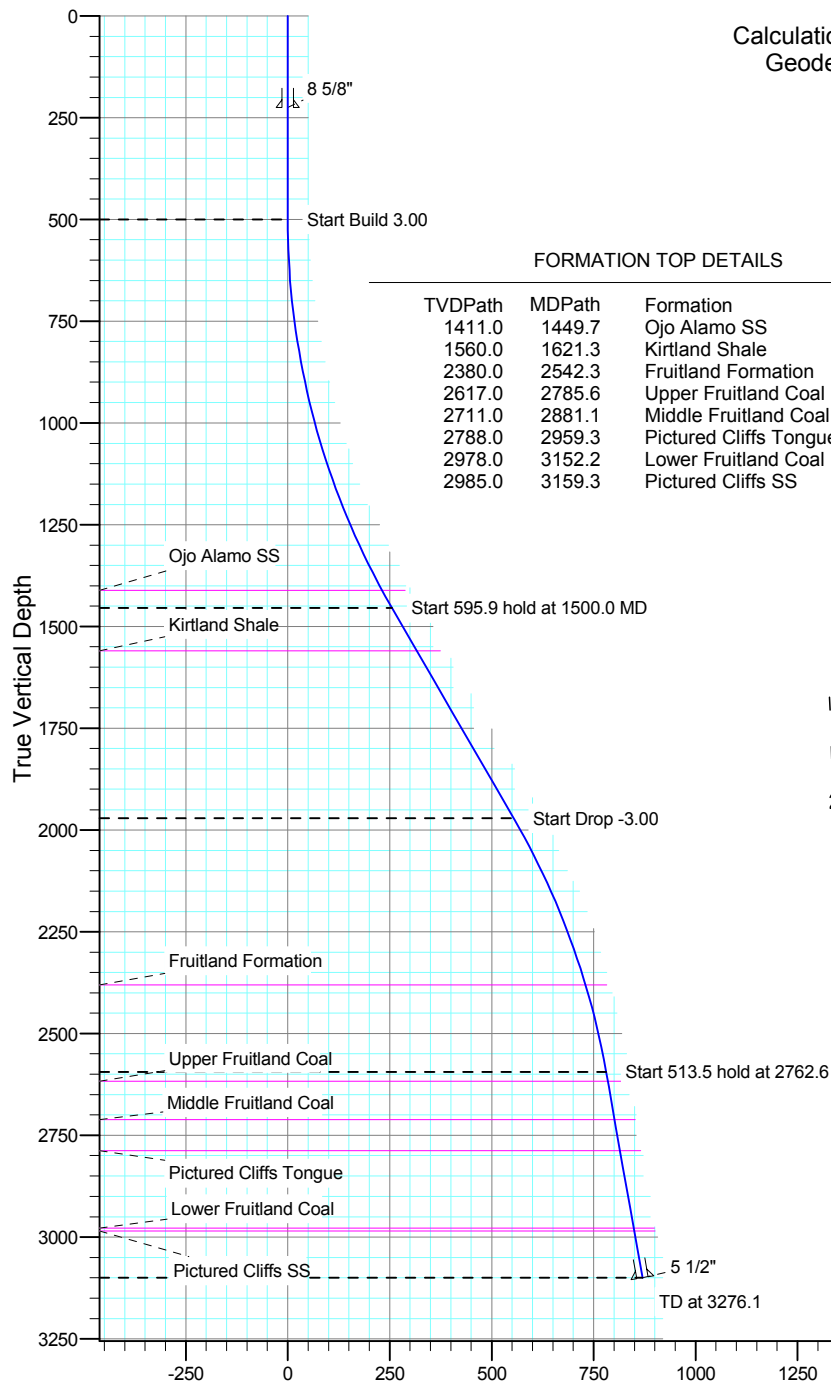
San Juan Division  
Drilling Department

Calculation Method: Minimum Curvature  
Geodetic Datum: North American Datum 1983  
Lat: 37° 4' 19.812 N  
Long: 107° 34' 25.788 W



Azimuths to True North  
Magnetic North: 10.02°

Magnetic Field  
Strength: 51124.0snT  
Dip Angle: 63.83°  
Date: 12/31/2009  
Model: IGRF200510



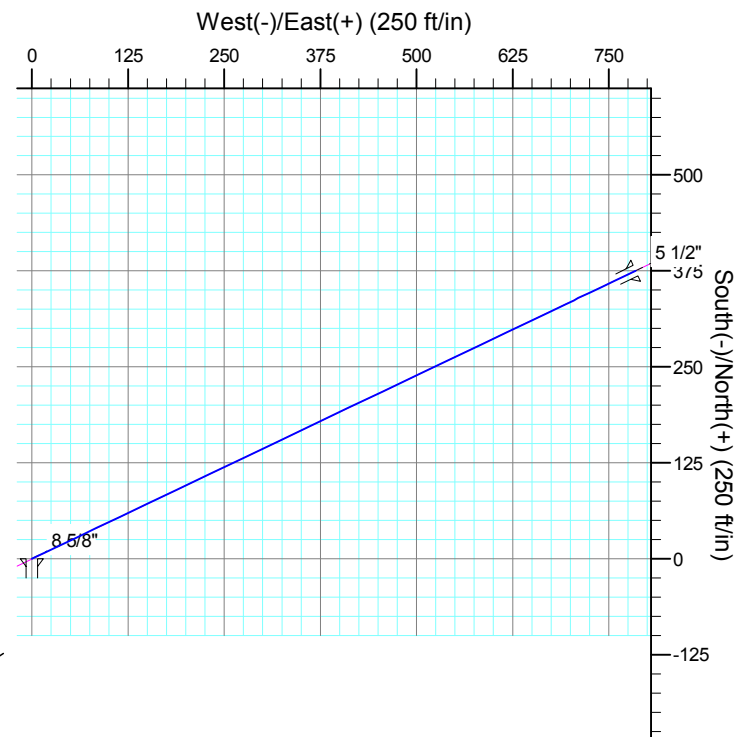
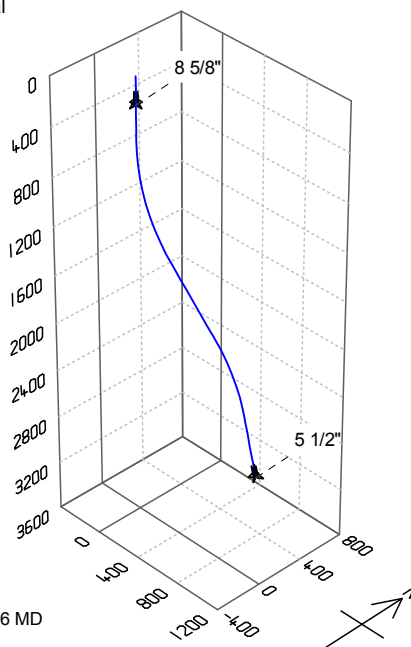
Vertical Section at 64.46°

**FORMATION TOP DETAILS**

TVDPath	MDPath	Formation
1411.0	1449.7	Ojo Alamo SS
1560.0	1621.3	Kirtland Shale
2380.0	2542.3	Fruitland Formation
2617.0	2785.6	Upper Fruitland Coal
2711.0	2881.1	Middle Fruitland Coal
2788.0	2959.3	Pictured Cliffs Tongue
2978.0	3152.2	Lower Fruitland Coal
2985.0	3159.3	Pictured Cliffs SS

**CASING DETAILS**

TVD	MD	Name	Size
225.0	225.0	8 5/8"	8.625
3100.0	3276.1	5 1/2"	5.500



**SECTION DETAILS**

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	500.0	0.00	0.00	500.0	0.0	0.0	0.00	0.00	0.0	
3	1500.0	30.00	64.46	1454.9	110.3	230.9	3.00	64.46	255.9	
4	2095.9	30.00	64.46	1971.0	238.8	499.7	0.00	0.00	553.8	
5	2762.6	10.00	64.46	2594.3	336.6	704.4	3.00	180.00	780.7	
6	3276.1	10.00	64.46	3100.0	375.1	784.8	0.00	0.00	869.8	Proposed BHL -- R&G #26-3