

Pathfinder Energy Survey Report

Company: XTO Energy		Date: 11/7/2006	Time: 16:24:28	Page: 1
Field: Rio Arriba County, NM NAD-27		Co-ordinate(NE) Reference: Well: Gregory Federal A #1B, Grid North		
Site: Blanco Mesa Verde		Vertical (TVD) Reference: SITE 7273.0		
Well: Gregory Federal A #1B <i>30-039-29503</i>		Section (VS) Reference: Well (0.00N,0.00E,327.85Azi)		
Wellpath: OH		Survey Calculation Method: Minimum Curvature Db: Sybase		

Field: Rio Arriba County, NM NAD-27 1200' F&L 1925' FEL Sec. 34, T28N; R4W <i>2680 N 1340 W 27;</i>		Map Zone: New Mexico, Central Zone
Map System: US State Plane Coordinate System 1927		Coordinate System: Well Centre
Geo Datum: NAD27 (Clarke 1866)		Geomagnetic Model: igrf2005
Sys Datum: Mean Sea Level		

Site: Blanco Mesa Verde			
Site Position:	Northing:	ft	Latitude:
From: Lease Line	Easting:	ft	Longitude:
Position Uncertainty: 0.00 ft			North Reference: Grid
Ground Level: 7261.00 ft			Grid Convergence: -0.59 deg

Well: Gregory Federal A #1B		Slot Name:	
Well Position: +N/-S 0.00 ft	Northing: 2050497.56 ft	Latitude: 36 37 52.500 N	
+E/-W 0.00 ft	Easting: 208782.01 ft	Longitude: 107 14 33.000 W	
Position Uncertainty: 0.00 ft			

Wellpath: OH		Drilled From: Surface	
Current Datum: SITE	Height: 7273.00 ft	Tie-on Depth: 0.00 ft	
Magnetic Data: 9/8/2006		Above System Datum: Mean Sea Level	
Field Strength: 51284 nT		Declination: 10.23 deg	
Vertical Section: Depth From (TVD)	+N/-S	Mag Dip Angle: 63.59 deg	
ft	ft	+E/-W	Direction
		ft	deg
0.00	0.00	0.00	327.85

Survey: Pathfinder Surveys	Start Date: 9/19/2006
Company: Pathfinder Energy	Engineer: Midwellplan
Tool:	Tied-to: From Surface

Survey: Pathfinder Surveys										
MD ft	Incl deg	Azlm deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
445.00	1.32	142.83	444.96	-4.08	3.10	-5.11	0.30	0.30	0.00	Surface
547.00	1.58	136.24	546.93	-6.04	4.78	-7.65	0.30	0.25	-6.46	2680/N 1340/W
563.00	1.58	138.35	562.92	-6.36	5.08	-8.09	0.36	0.00	13.19	
593.00	1.41	143.62	592.91	-6.97	5.57	-8.86	0.73	-0.57	17.57	
623.00	1.06	160.32	622.90	-7.53	5.88	-9.50	1.66	-1.17	55.67	Int BHL
653.00	0.88	200.40	652.90	-8.00	5.90	-9.91	2.29	-0.60	133.60	1973/N 907/W
681.00	1.23	235.29	680.90	-8.37	5.58	-10.06	2.55	1.25	124.61	
713.00	1.76	251.90	712.89	-8.72	4.83	-9.95	2.12	1.66	51.91	
744.00	2.73	262.63	743.86	-8.97	3.64	-9.53	3.40	3.13	34.61	423B - m2
776.00	4.04	268.16	775.80	-9.10	1.76	-8.64	4.21	4.09	17.28	4100 +vd
808.00	5.72	271.94	807.69	-9.08	-0.96	-7.18	5.34	5.25	11.81	
840.00	7.30	275.55	839.48	-8.83	-4.58	-5.04	5.10	4.94	11.28	
872.00	8.71	273.35	871.17	-8.49	-9.02	-2.39	4.51	4.41	-6.87	Td 66765 mcl
903.00	9.41	267.46	901.78	-8.47	-13.90	0.23	3.75	2.26	-19.00	6638 TVd
935.00	10.20	267.55	933.31	-8.71	-19.34	2.92	2.47	2.47	0.28	
967.00	11.26	273.26	964.76	-8.65	-25.29	6.14	4.69	3.31	17.84	
998.00	12.31	280.12	995.10	-7.90	-31.57	10.11	5.64	3.39	22.13	
1029.00	13.45	286.01	1025.32	-6.32	-38.29	15.02	5.60	3.68	19.00	
1060.00	14.51	291.10	1055.41	-3.93	-45.37	20.82	5.23	3.42	16.42	
1091.00	15.65	296.90	1085.34	-0.64	-52.73	27.52	6.10	3.68	18.71	
1122.00	16.80	302.18	1115.11	3.64	-60.25	35.14	6.03	3.71	17.03	
1153.00	17.85	306.84	1144.70	8.88	-67.84	43.62	5.61	3.39	15.03	
1184.00	18.91	311.49	1174.12	15.05	-75.41	52.87	5.83	3.42	15.00	

In File: Deviation to TD

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Pathfinder Energy

Survey Report

Company: XTO Energy	Date: 11/7/2006	Time: 16:24:28	Page: 2
Field: Rio Arriba County, NM NAD-27	Co-ordinate(NE) Reference: Well: Gregory Federal A #1B, Grid North		
Site: Blanco Mesa Verde	Vertical (TVD) Reference: SITE 7273.0		
Well: Gregory Federal A #1B	Section (VS) Reference: Well (0.00N,0.00E,327.85Azi)		
Wellpath: OH	Survey Calculation Method: Minimum Curvature		Db: Sybase

Survey: Pathfinder Surveys

MD ft	Incl deg	Azlm deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Builld deg/100ft	Turn deg/100ft	Tool/Comment
1216.00	19.61	317.03	1204.33	22.42	-82.95	63.13	6.11	2.19	17.31	
1248.00	19.87	322.39	1234.45	30.66	-89.93	73.81	5.71	0.81	16.75	
1277.00	20.14	324.77	1261.70	38.64	-95.82	83.71	2.96	0.93	8.21	
1309.00	20.66	327.14	1291.70	47.88	-102.06	94.85	3.05	1.62	7.41	
1341.00	21.10	329.77	1321.60	57.60	-108.03	106.25	3.24	1.37	8.22	
1373.00	21.19	330.83	1351.44	67.63	-113.74	117.79	1.23	0.28	3.31	
1404.00	21.19	330.92	1380.35	77.41	-119.20	128.98	0.10	0.00	0.29	
1436.00	21.37	330.74	1410.16	87.55	-124.86	140.57	0.60	0.56	-0.56	
1468.00	21.81	331.09	1439.92	97.84	-130.58	152.33	1.43	1.37	1.09	
1499.00	22.16	331.53	1468.67	108.03	-136.15	163.92	1.25	1.13	1.42	
1531.00	22.25	332.67	1498.29	118.71	-141.81	175.97	1.38	0.28	3.56	
1561.00	21.98	333.91	1526.09	128.80	-146.89	187.22	1.80	-0.90	4.13	
1593.00	21.63	334.79	1555.80	139.51	-152.03	199.03	1.50	-1.09	2.75	
1625.00	21.10	336.10	1585.60	150.12	-156.88	210.58	2.23	-1.66	4.09	
1657.00	20.58	336.58	1615.50	160.54	-161.45	221.84	1.71	-1.62	1.50	
1689.00	19.87	336.37	1645.53	170.69	-165.86	232.78	2.23	-2.22	-0.66	
1720.00	19.43	336.37	1674.72	180.24	-170.04	243.09	1.42	-1.42	0.00	
1751.00	19.26	335.22	1703.97	189.60	-174.25	253.26	1.35	-0.55	-3.71	
1782.00	19.26	334.26	1733.24	198.85	-178.62	263.41	1.02	0.00	-3.10	
1814.00	19.61	333.73	1763.42	208.42	-183.28	274.00	1.22	1.09	-1.66	
1845.00	19.70	333.55	1792.61	217.76	-187.91	284.37	0.35	0.29	-0.58	
1875.00	19.43	333.99	1820.88	226.77	-192.35	294.36	1.03	-0.90	1.47	
1906.00	18.91	334.08	1850.16	235.93	-196.81	304.48	1.68	-1.68	0.29	
1938.00	18.47	333.47	1880.47	245.13	-201.34	314.68	1.50	-1.37	-1.91	
1969.00	18.29	332.94	1909.89	253.85	-205.75	324.41	0.79	-0.58	-1.71	
2001.00	18.38	331.88	1940.27	262.77	-210.41	334.45	1.08	0.28	-3.31	
2032.00	17.76	331.18	1969.74	271.23	-214.99	344.04	2.12	-2.00	-2.26	
2063.00	17.15	331.45	1999.31	279.38	-219.46	353.32	1.99	-1.97	0.87	
2094.00	16.62	331.71	2028.97	287.30	-223.74	362.31	1.73	-1.71	0.84	
2124.00	16.18	332.76	2057.75	294.80	-227.69	370.75	1.77	-1.47	3.50	
2155.00	15.74	333.55	2087.56	302.40	-231.54	379.24	1.58	-1.42	2.55	
2219.00	15.92	333.47	2149.13	318.03	-239.33	396.61	0.28	0.28	-0.12	
2282.00	16.36	332.41	2209.65	333.62	-247.30	414.06	0.84	0.70	-1.68	
2344.00	16.88	331.62	2269.06	349.28	-255.62	431.74	0.91	0.84	-1.27	
2404.00	17.50	331.53	2326.38	364.87	-264.06	449.44	1.03	1.03	-0.15	
2467.00	17.06	333.03	2386.53	381.44	-272.77	468.10	0.99	-0.70	2.38	
2529.00	16.27	334.43	2445.93	397.38	-280.64	485.78	1.43	-1.27	2.26	
2592.00	15.56	335.58	2506.51	413.03	-287.94	502.92	1.23	-1.13	1.83	
2653.00	15.74	335.49	2565.25	428.01	-294.76	519.23	0.30	0.30	-0.15	
2716.00	15.92	335.22	2625.86	443.63	-301.92	536.27	0.31	0.29	-0.43	
2776.00	15.65	334.17	2683.60	458.38	-308.90	552.47	0.66	-0.45	-1.75	
2839.00	15.56	333.38	2744.28	473.59	-316.39	569.33	0.37	-0.14	-1.25	
2902.00	15.56	333.91	2804.97	488.73	-323.89	586.14	0.23	0.00	0.84	
2965.00	15.92	334.52	2865.61	504.12	-331.32	603.12	0.63	0.57	0.97	
3026.00	15.92	333.99	2924.27	519.19	-338.59	619.75	0.24	0.00	-0.87	
3088.00	15.48	333.55	2983.95	534.24	-346.00	636.44	0.74	-0.71	-0.71	
3150.00	15.56	334.35	3043.69	549.14	-353.29	652.93	0.37	0.13	1.29	
3213.00	15.30	334.08	3104.42	564.24	-360.58	669.59	0.43	-0.41	-0.43	
3276.00	15.65	333.11	3165.14	579.29	-368.06	686.32	0.69	0.56	-1.54	
3339.00	15.65	333.55	3225.80	594.48	-375.68	703.23	0.19	0.00	0.70	
3400.00	15.04	331.80	3284.63	608.82	-383.09	719.32	1.26	-1.00	-2.87	
3462.00	14.95	331.18	3344.52	622.92	-390.75	735.33	0.30	-0.15	-1.00	
3524.00	14.25	332.06	3404.51	636.66	-398.18	750.92	1.18	-1.13	1.42	

Pathfinder Energy

Survey Report

Company: XTO Energy Field: Rio Arriba County, NM NAD-27 Site: Blanco Mesa Verde Well: Gregory Federal A #1B Wellpath: OH	Date: 11/7/2006 Time: 16:24:28 Page: 3 Co-ordinate(NE) Reference: Well: Gregory Federal A #1B, Grid North Vertical (TVD) Reference: SITE 7273.0 Section (VS) Reference: Well (0.00N,0.00E,327.85Azi) Survey Calculation Method: Minimum Curvature Db: Sybase
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Survey: Pathfinder Surveys

MD ft	Incl deg	Azlm deg	TVD ft	+N-S ft	+E-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
3587.00	13.19	331.36	3465.72	649.82	-405.25	765.83	1.70	-1.68	-1.11	
3618.00	12.84	330.13	3495.92	655.91	-408.67	772.80	1.44	-1.13	-3.97	
3650.00	12.31	330.21	3527.15	661.96	-412.13	779.76	1.66	-1.66	0.25	
3681.00	11.52	330.48	3557.48	667.52	-415.30	786.16	2.55	-2.55	0.87	
3712.00	10.55	331.53	3587.91	672.71	-418.18	792.08	3.20	-3.13	3.39	
3743.00	9.94	331.45	3618.42	677.55	-420.81	797.58	1.97	-1.97	-0.26	
3774.00	9.41	329.51	3648.97	682.09	-423.37	802.79	2.01	-1.71	-6.26	
3805.00	8.71	326.35	3679.59	686.22	-425.96	807.67	2.77	-2.26	-10.19	
3836.00	7.91	325.64	3710.26	689.94	-428.46	812.14	2.60	-2.58	-2.29	
3868.00	7.21	325.73	3741.98	693.42	-430.84	816.35	2.19	-2.19	0.28	
3900.00	6.51	329.16	3773.75	696.63	-432.90	820.17	2.53	-2.19	10.72	
3931.00	5.72	334.08	3804.58	699.53	-434.47	823.46	3.06	-2.55	15.87	
3963.00	4.75	341.20	3836.44	702.22	-435.60	826.34	3.64	-3.03	22.25	
3994.00	3.69	351.22	3867.36	704.42	-436.16	828.50	4.15	-3.42	32.32	
4023.00	2.64	7.66	3896.32	706.01	-436.22	829.87	4.75	-3.62	56.69	
4056.00	1.76	34.90	3929.29	707.17	-435.83	830.65	4.07	-2.67	82.55	
4087.00	1.67	52.83	3960.28	707.84	-435.19	830.88	1.75	-0.29	57.84	
4119.00	1.32	77.35	3992.27	708.20	-434.46	830.80	2.25	-1.09	76.62	
4151.00	1.14	110.14	4024.26	708.17	-433.80	830.42	2.24	-0.56	102.47	
4182.00	0.95	132.81	4055.26	707.89	-433.33	829.93	1.45	-0.61	73.13	
4233.00	0.64	132.81	4106.25	707.41	-432.81	829.25	0.61	-0.61	0.00	

7" csg @ 4233'

need deviation to TD - in well file it



Field: Rio Arriba County, NM NAD-27
 Site: Blanco Mesa Verde
 Well: Gregory Federal A #1B
 Wellpath: OH
 Survey: Pathfinder Surveys

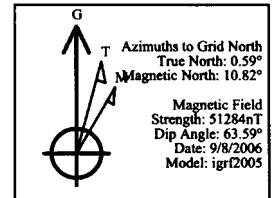


WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
Gregory Federal A #1B	0.00	0.00	2050497.56	208782.01	36°37'52.500N	107°14'33.000W	N/A

Survey: Pathfinder Surveys (Gregory Federal A #1B/OH)

No	MD	Inc	Az	TVD	+N/-S	+E/-W	DLeg	TFace	VSec
85	3805.00	8.71	326.35	3679.59	686.22	-425.96	2.77	-146.15	807.67
86	3836.00	7.91	325.64	3710.26	689.94	-428.46	2.60	-173.04	812.14
87	3868.00	7.21	325.73	3741.98	693.42	-430.84	2.19	179.08	816.35
88	3900.00	6.51	329.16	3773.75	696.63	-432.90	2.53	151.36	820.17
89	3931.00	5.72	334.08	3804.58	699.53	-434.47	3.06	148.87	823.46
90	3963.00	4.75	341.20	3836.44	702.22	-435.60	3.64	149.70	826.34
91	3994.00	3.69	351.22	3867.36	704.42	-436.16	4.15	150.11	828.50
92	4023.00	2.64	7.66	3896.32	706.01	-436.22	4.75	147.17	829.87
93	4056.00	1.76	34.90	3929.29	707.17	-435.83	4.07	143.15	830.65
94	4087.00	1.67	52.83	3960.28	707.84	-435.19	1.75	108.41	830.88
95	4119.00	1.32	77.35	3992.27	708.20	-434.46	2.25	130.57	830.80
96	4151.00	1.14	110.14	4024.26	708.17	-433.80	2.24	120.36	830.42
97	4182.00	0.95	132.81	4055.26	707.89	-433.33	1.45	125.73	829.93
98	4233.00	0.64	132.81	4106.25	707.41	-432.81	0.61	180.00	829.25



SITE DETAILS

Blanco Mesa Verde

Ground Level: 7261.00
 Positional Uncertainty: 0.00
 Convergence: -0.59

FIELD DETAILS

Rio Arriba County, NM NAD-27
 1200' FSL 1925' FEL Sec. 34; T28N; R4W
 Geodetic System: US State Plane Coordinate System 1927
 Ellipsoid: NAD27 (Clarke 1866)
 Zone: New Mexico, Central Zone
 Magnetic Model: igr2005
 System Datum: Mean Sea Level
 Local North: Grid North

ANNOTATIONS

No.	TVD	MD	Annotation
1	599.91	600.00	KOP @ 600' MD / TVD Build 3°/100'
2	1133.90	1141.67	Hold Inc 16.25°
3	3430.71	3551.00	Begin Drop 3°

