



## **EQT Production - Marcellus**

Wetzel County, WV  
Wetzel County 513925  
Well #513925

Main Wellbore

Design: As Drilled Surveys

## **Standard Survey Report**

16 January, 2014

Received

JUL 31 2014

Office of Oil and Gas  
WV Dept. of Environmental Protection

**EQT**

Where energy meets innovation.



Phoenix Technology Services  
Survey Report



Received  
JUL 31 2014

<b>Database:</b> EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b> Site Wetzel County 513925
<b>Company:</b> EQT Production - Marcellus	<b>TVD Reference:</b> KB @ 1489.0usft
<b>Project:</b> Wetzel County, WV	<b>MD Reference:</b> KB @ 1489.0usft
<b>Site:</b> Wetzel County 513925	<b>North Reference:</b> Grid
<b>Well:</b> Well #513925	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Wellbore:</b> Main Wellbore	
<b>Design:</b> As Drilled Surveys	

<b>Project:</b> Wetzel County, WV	
<b>Map System:</b> US State Plane 1927 (Exact solution)	<b>System Datum:</b> Mean Sea Level
<b>Geo Datum:</b> NAD 1927 (NADCON CONUS)	Office of Oil and Gas
<b>Map Zone:</b> West Virginia North 4701	WV Dept. of Environmental Protection
	Using geodetic scale factor

<b>Site:</b> Wetzel County 513925		
<b>Site Position:</b>	<b>Northing:</b> 385,128.00 usft	<b>Latitude:</b> 39.55
<b>From:</b> Map	<b>Easting:</b> 1,688,202.00 usft	<b>Longitude:</b> -80.61
<b>Position Uncertainty:</b> 0.0 usft	<b>Slot Radius:</b> 13-3/16 "	<b>Grid Convergence:</b> -0.71 "

<b>Well:</b> Well #513925			
<b>Well Position</b>	<b>+N/-S</b> 0.0 usft	<b>Northing:</b> 385,128.00 usft	<b>Latitude:</b> 39° 33' 7.679 N
	<b>+E/-W</b> 0.0 usft	<b>Easting:</b> 1,688,202.00 usft	<b>Longitude:</b> 80° 36' 20.845 W
<b>Position Uncertainty</b>	0.0 usft	<b>Wellhead Elevation:</b> usft	<b>Ground Level:</b> 1,473.0 usft

<b>Wellbore:</b> Main Wellbore					
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010_14	12/23/2013	-8.64	67.04	52,463

<b>Design:</b> As Drilled Surveys				
<b>Audit Notes:</b>				
<b>Version:</b> 1.0	<b>Phase:</b> ACTUAL	<b>Tie On Depth:</b> 0.0		
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	355.72

<b>Survey Program</b>	<b>Date:</b> 1/16/2014			
<b>From (')</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.00	5,730.0	513925 VES Gyros (Main Wellbore)	Gyroflex Multishot	North sensing gyrocompassing m/s
0.00	13,249.0	513925 MWD (Main Wellbore)	MWD	MWD - Standard

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	-1,489.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.27	280.14	100.0	-1,389.0	0.0	-0.2	0.1	0.27	0.27	0.00
200.0	0.10	290.29	200.0	-1,289.0	0.1	-0.5	0.2	0.17	-0.17	10.15
300.0	0.27	329.27	300.0	-1,189.0	0.3	-0.7	0.4	0.20	0.17	38.98
400.0	0.33	10.78	400.0	-1,089.0	0.8	-0.8	0.9	0.22	0.06	41.51
500.0	0.16	40.13	500.0	-989.0	1.2	-0.7	1.3	0.21	-0.17	29.35
600.0	0.38	32.16	600.0	-889.0	1.6	-0.4	1.6	0.22	0.22	-7.97
700.0	0.08	39.27	700.0	-789.0	1.9	-0.2	2.0	0.30	-0.30	7.11





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<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Site Wetzel County 51 1925
<b>Company:</b>	EQT Production - Marcellus	<b>TVD Reference:</b>	KB @ 1489 0usft
<b>Project:</b>	Wetzel County, WV	<b>MD Reference:</b>	KB @ 1489 0usft
<b>Site:</b>	Wetzel County 51 1925	<b>North Reference:</b>	3rd
<b>Well:</b>	Well #519925	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Main Wellbore		
<b>Design:</b>	As Drilled Surveys		

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Survey Office of Oil and Gas Regulation

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
800.0	0.47	26.39	800.0	-689.0	2.4	0.0	2.4	0.39	0.39	-12.88
900.0	0.31	20.01	900.0	-589.0	3.0	0.3	3.0	0.17	-0.16	-6.38
1,000.0	0.32	22.73	1,000.0	-489.0	3.5	0.5	3.4	0.02	0.01	2.72
1,100.0	0.08	340.02	1,100.0	-389.0	3.8	0.6	3.8	0.27	-0.24	-42.71
1,200.0	0.22	336.23	1,200.0	-289.0	4.1	0.5	4.0	0.14	0.14	-3.79
1,300.0	0.27	328.19	1,300.0	-189.0	4.4	0.3	4.4	0.06	0.05	-8.04
1,400.0	0.30	326.56	1,400.0	-89.0	4.9	0.0	4.8	0.03	0.03	-1.63
1,500.0	0.42	331.61	1,500.0	11.0	5.4	-0.3	5.4	0.12	0.12	5.05
1,600.0	0.41	339.04	1,600.0	111.0	6.1	-0.6	6.1	0.05	-0.01	7.43
1,700.0	0.43	346.10	1,700.0	211.0	6.8	-0.8	6.8	0.06	0.02	7.06
1,800.0	0.41	352.65	1,800.0	311.0	7.5	-0.9	7.5	0.05	-0.02	6.55
1,900.0	0.60	343.99	1,900.0	411.0	8.3	-1.1	8.4	0.20	0.19	-8.66
2,000.0	0.51	323.34	2,000.0	511.0	9.2	-1.5	9.3	0.22	-0.09	-20.65
2,100.0	0.44	187.50	2,100.0	611.0	9.2	-1.9	9.3	0.88	-0.07	-135.84
2,200.0	0.89	132.32	2,200.0	711.0	8.3	-1.3	8.3	0.73	0.45	-55.18
2,300.0	1.08	103.29	2,299.9	810.9	7.5	0.2	7.5	0.53	0.19	-29.03
2,400.0	0.79	91.55	2,399.9	910.9	7.3	1.8	7.1	0.35	-0.29	-11.74
2,500.0	0.84	83.37	2,499.9	1,010.9	7.4	3.2	7.1	0.13	0.05	-8.18
2,600.0	0.74	86.50	2,599.9	1,110.9	7.5	4.6	7.1	0.11	-0.10	3.13
2,700.0	0.90	71.78	2,699.9	1,210.9	7.8	5.9	7.3	0.26	0.16	-14.72
2,800.0	0.80	69.91	2,799.9	1,310.9	8.2	7.3	7.7	0.10	-0.10	-1.87
2,900.0	0.73	65.68	2,899.9	1,410.9	8.8	8.6	8.1	0.09	-0.07	-4.23
3,000.0	0.53	45.57	2,999.9	1,510.9	9.3	9.5	8.6	0.30	-0.20	-20.11
3,100.0	0.52	350.80	3,099.9	1,610.9	10.1	9.7	9.4	0.48	-0.01	-54.77
3,200.0	0.59	333.28	3,199.9	1,710.9	11.0	9.4	10.3	0.18	0.07	-17.52
3,300.0	0.69	327.69	3,299.9	1,810.9	12.0	8.9	11.3	0.12	0.10	-5.59
3,400.0	0.63	327.64	3,399.9	1,910.9	13.0	8.3	12.3	0.06	-0.05	-0.05
3,500.0	0.69	322.14	3,499.8	2,010.8	13.9	7.6	13.3	0.09	0.06	-5.50
3,600.0	0.69	319.14	3,599.8	2,110.8	14.8	6.8	14.3	0.04	0.00	-3.00
3,700.0	0.33	318.75	3,699.8	2,210.8	15.5	6.3	15.0	0.36	-0.36	-0.39
3,800.0	0.67	314.16	3,799.8	2,310.8	16.1	5.7	15.7	0.34	0.34	-4.59
3,900.0	0.53	315.97	3,899.8	2,410.8	16.9	4.9	16.5	0.14	-0.14	1.81
4,000.0	0.41	302.34	3,999.8	2,510.8	17.4	4.3	17.0	0.16	-0.12	-13.63
4,100.0	0.62	301.03	4,099.8	2,610.8	17.9	3.5	17.5	0.21	0.21	-1.31
4,200.0	0.71	307.15	4,199.8	2,710.8	18.5	2.6	18.3	0.11	0.09	6.12
4,300.0	0.53	304.71	4,299.8	2,810.8	19.1	1.7	19.0	0.18	-0.18	-2.44
4,400.0	0.60	308.41	4,399.8	2,910.8	19.7	0.9	19.6	0.08	0.07	3.70
4,500.0	0.52	312.80	4,499.8	3,010.8	20.4	0.2	20.3	0.09	-0.08	4.39
4,600.0	0.43	328.29	4,599.8	3,110.8	21.0	-0.4	21.0	0.16	-0.09	15.49
4,700.0	0.35	337.04	4,699.8	3,210.8	21.6	-0.7	21.6	0.10	-0.08	8.75
4,800.0	0.48	25.16	4,799.8	3,310.8	22.3	-0.6	22.2	0.36	0.13	48.12
4,900.0	0.40	36.66	4,899.8	3,410.8	22.9	-0.2	22.9	0.12	-0.08	11.50





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Survey Report



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<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Site Wetzel County
<b>Company:</b>	EQT Production - MacroSurf	<b>TVD Reference:</b>	KB @ 1489.0usft
<b>Project:</b>	Wetzel County, WV	<b>MD Reference:</b>	KB @ 1489.0usft
<b>Site:</b>	Wetzel County 513925	<b>North Reference:</b>	Grid
<b>Well:</b>	Well #813225	<b>Survey Calculation Method:</b>	Minimum-Turnature
<b>Wellbore:</b>	Main Wellbore		
<b>Design:</b>	As Drilled Surveys		

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,000.0	0.51	41.47	4,999.8	3,510.8	23.5	0.3	23.4	0.12	0.11	4.81
5,100.0	0.47	45.80	5,099.8	3,610.8	24.2	0.8	24.0	0.05	-0.04	4.33
5,200.0	0.76	51.54	5,199.8	3,710.8	24.9	1.7	24.7	0.30	0.29	5.74
5,300.0	0.26	43.73	5,299.8	3,810.8	25.4	2.3	25.2	0.50	-0.50	-7.81
5,400.0	0.46	20.54	5,399.8	3,910.8	26.0	2.6	25.7	0.24	0.20	-23.19
5,500.0	0.74	3.62	5,499.8	4,010.8	27.0	2.8	26.7	0.33	0.28	-16.92
5,600.0	0.82	8.10	5,599.8	4,110.8	28.3	3.0	28.0	0.10	0.08	4.48
5,700.0	0.77	14.42	5,699.7	4,210.7	29.7	3.2	29.4	0.10	-0.05	6.32
<b>Gyro Tie to MD=6730'</b>										
5,730.0	0.54	18.78	5,729.8	4,240.8	30.0	3.3	29.7	0.78	-0.77	14.53
5,760.0	0.40	31.10	5,759.7	4,270.7	30.3	3.4	29.9	0.57	-0.47	41.08
5,791.0	0.80	4.30	5,790.7	4,301.7	30.6	3.5	30.2	1.54	1.29	-86.45
5,823.0	3.50	358.00	5,822.7	4,333.7	31.8	3.5	31.4	8.46	8.44	-19.69
5,854.0	6.90	352.50	5,853.6	4,364.6	34.6	3.2	34.2	11.07	10.97	-17.74
5,886.0	10.40	352.10	5,885.2	4,396.2	39.3	2.6	39.0	10.94	10.94	-1.25
5,917.0	12.90	3.40	5,915.6	4,426.6	45.5	2.4	45.2	10.88	8.06	36.45
5,949.0	14.30	12.80	5,946.7	4,457.7	53.0	3.5	52.6	8.16	4.38	29.38
5,980.0	16.40	23.30	5,976.6	4,487.6	60.7	6.0	60.1	11.21	6.77	33.87
6,012.0	17.90	32.80	6,007.2	4,518.2	69.0	10.5	68.0	9.91	4.69	29.69
6,044.0	19.90	43.80	6,037.4	4,548.4	77.1	16.9	75.6	12.74	6.25	34.38
6,075.0	21.40	54.60	6,066.5	4,577.5	84.2	25.2	82.0	13.18	4.84	34.84
6,107.0	22.90	65.00	6,098.1	4,607.1	90.2	35.6	87.3	13.10	4.69	32.50
6,138.0	22.90	72.40	6,124.7	4,635.7	94.6	46.8	90.8	9.28	0.00	23.87
6,169.0	25.00	73.20	6,153.0	4,664.0	98.3	58.8	93.6	6.85	6.77	2.58
6,201.0	27.60	70.40	6,181.7	4,692.7	102.7	72.3	97.0	9.00	8.13	-8.75
6,232.0	30.70	69.60	6,208.8	4,719.8	107.9	86.5	101.1	10.08	10.00	-2.58
6,264.0	34.50	68.80	6,235.7	4,746.7	114.0	102.6	106.0	11.95	11.88	-2.50
6,296.0	38.10	67.90	6,261.5	4,772.5	121.0	120.2	111.7	11.37	11.25	-2.81
6,328.0	41.80	67.30	6,286.0	4,797.0	128.8	139.2	118.1	11.62	11.56	-1.88
6,359.0	45.20	67.10	6,308.5	4,819.5	137.1	158.9	124.9	10.98	10.97	-0.65
6,391.0	45.20	66.30	6,331.1	4,842.1	146.1	179.7	132.3	1.77	0.00	-2.50
6,454.0	43.20	64.80	6,376.2	4,887.2	164.3	219.7	147.4	3.58	-3.17	-2.38
6,517.0	42.70	66.60	6,422.3	4,933.3	181.9	258.8	162.1	2.10	-0.79	2.86
6,580.0	41.80	67.90	6,469.0	4,980.0	198.3	297.9	175.5	1.99	-1.43	2.06
6,643.0	42.00	67.80	6,515.9	5,026.9	214.2	336.8	188.4	0.33	0.32	-0.16
6,706.0	41.30	68.90	6,562.9	5,073.9	229.6	375.8	200.9	1.61	-1.11	1.75
6,769.0	41.50	67.30	6,610.2	5,121.2	245.2	414.4	213.6	1.71	0.32	-2.54
6,832.0	41.80	66.10	6,657.3	5,168.3	261.7	452.9	227.2	1.35	0.48	-1.90
6,894.0	40.60	65.60	6,703.9	5,214.9	278.4	490.1	241.1	2.01	-1.94	-0.81
6,957.0	39.20	63.80	6,752.3	5,263.3	295.7	526.7	255.6	2.88	-2.22	-2.86
7,019.0	39.20	64.10	6,800.3	5,311.3	312.9	561.9	270.1	0.31	0.00	0.48
7,083.0	39.40	66.20	6,849.8	5,360.8	329.9	598.6	284.3	2.10	0.31	3.28
7,145.0	40.00	67.70	6,897.5	5,408.5	345.4	635.1	297.1	1.82	0.97	2.42





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<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Site Wetzel County 1489.25
<b>Company:</b>	EQT Production - Marcellus	<b>TVD Reference:</b>	KB @ 1489.0usft
<b>Project:</b>	Wetzel County, WV	<b>MD Reference:</b>	KB @ 1489.0usft
<b>Site:</b>	Wetzel County 513025	<b>North Reference:</b>	Grid
<b>Well:</b>	Well #513025	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Main Wellbore		
<b>Design:</b>	As Drilled Surveys		

Received  
JUL 31 2014

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,208.0	40.60	69.20	6,945.6	5,456.6	360.4	673.0	309.2	1.81	0.95	2.38
7,270.0	41.40	69.70	6,992.4	5,503.4	374.7	711.1	320.6	1.39	1.29	0.81
7,333.0	42.60	68.40	7,039.2	5,550.2	389.7	750.4	332.7	2.35	1.90	-2.06
7,396.0	42.00	67.90	7,085.8	5,596.8	405.5	789.8	345.5	-1.09	-0.95	-0.79
7,459.0	41.10	67.00	7,132.9	5,643.9	421.5	828.4	358.6	1.71	-1.43	-1.43
7,491.0	40.80	66.40	7,157.1	5,668.1	429.8	847.6	365.4	1.55	-0.94	-1.88
7,522.0	39.90	62.00	7,180.7	5,691.7	438.6	865.7	372.8	9.64	-2.90	-14.19
7,554.0	40.50	55.60	7,205.2	5,716.2	449.3	883.3	382.1	13.04	1.88	-20.00
7,585.0	41.50	51.10	7,228.6	5,739.6	461.4	899.7	393.0	10.05	3.23	-14.52
7,617.0	42.90	47.30	7,252.3	5,763.3	475.4	915.9	405.8	9.10	4.38	-11.88
7,648.0	44.90	42.90	7,274.6	5,785.6	490.6	931.1	419.8	11.77	6.45	-14.19
7,680.0	46.20	38.70	7,297.1	5,808.1	507.9	946.0	435.9	10.21	4.06	-13.13
7,711.0	47.80	35.50	7,318.2	5,829.2	526.0	959.7	452.9	9.14	5.16	-10.32
7,743.0	48.00	33.40	7,339.7	5,850.7	545.6	973.1	471.5	4.91	0.63	-6.56
7,774.0	48.30	29.90	7,360.3	5,871.3	565.2	985.2	490.1	8.46	0.97	-11.29
7,806.0	49.70	26.10	7,381.3	5,892.3	586.5	996.6	510.6	9.97	4.38	-11.88
7,837.0	52.80	23.50	7,400.7	5,911.7	608.5	1,006.7	531.7	11.95	10.00	-8.39
7,869.0	53.90	21.20	7,418.8	5,930.8	632.2	1,016.4	554.6	6.71	3.44	-7.19
7,900.0	56.00	19.00	7,437.6	5,948.6	656.1	1,025.2	577.8	8.92	6.77	-7.10
7,932.0	56.60	16.90	7,455.4	5,966.4	681.4	1,033.4	602.4	5.77	1.88	-6.56
7,963.0	59.40	13.20	7,471.8	5,982.8	706.8	1,040.2	627.2	13.56	9.03	-11.94
7,995.0	62.80	9.50	7,487.3	5,998.3	734.2	1,045.7	654.2	14.67	10.63	-11.56
8,026.0	66.30	6.70	7,500.6	6,011.6	761.9	1,049.6	681.5	13.93	11.29	-9.03
8,058.0	68.60	3.80	7,512.9	6,023.9	791.4	1,052.3	710.5	11.03	7.19	-9.06
8,089.0	70.90	1.00	7,523.6	6,034.6	820.4	1,053.5	739.5	11.26	7.42	-9.03
8,120.0	73.00	358.80	7,533.2	6,044.2	849.9	1,053.5	768.9	9.56	6.77	-7.10
8,152.0	74.90	356.40	7,542.1	6,053.1	880.6	1,052.2	799.7	9.34	5.94	-7.50
8,183.0	77.40	354.60	7,549.5	6,060.5	910.6	1,049.8	829.7	9.84	8.06	-5.81
8,214.0	77.80	353.00	7,556.2	6,067.2	940.7	1,046.5	860.0	5.20	1.29	-5.16
8,246.0	79.60	350.80	7,562.4	6,073.4	971.8	1,042.1	891.3	8.78	5.63	-6.88
8,278.0	81.50	349.50	7,567.7	6,078.7	1,002.9	1,036.7	922.7	7.16	5.94	-4.06
8,309.0	83.60	347.00	7,571.7	6,082.7	1,032.9	1,030.5	953.2	10.48	6.77	-8.06
8,341.0	87.10	345.60	7,574.3	6,085.3	1,063.9	1,022.9	984.7	11.77	10.94	-4.38
8,372.0	89.50	342.80	7,575.2	6,086.2	1,093.7	1,014.5	1,015.0	11.89	7.74	-9.03
8,404.0	91.30	342.30	7,575.0	6,086.0	1,124.3	1,004.9	1,046.2	5.84	5.63	-1.56
8,468.0	91.60	343.10	7,573.4	6,084.4	1,185.4	985.8	1,108.5	1.33	0.47	1.25
8,530.0	90.80	343.20	7,572.1	6,083.1	1,244.7	967.9	1,169.0	1.30	-1.29	0.16
8,594.0	90.80	344.70	7,571.2	6,082.2	1,306.2	950.2	1,231.7	2.34	0.00	2.34
8,657.0	91.30	345.80	7,570.0	6,081.0	1,367.1	934.1	1,293.6	1.92	0.79	1.75
8,719.0	91.50	345.70	7,568.5	6,079.5	1,427.2	918.9	1,354.6	0.36	0.32	-0.16
8,782.0	90.80	345.40	7,567.2	6,078.2	1,488.2	903.2	1,416.6	1.21	-1.11	-0.48
8,845.0	90.40	345.10	7,566.6	6,077.6	1,549.1	887.1	1,478.6	0.79	-0.63	-0.48
8,908.0	90.60	344.90	7,566.0	6,077.0	1,609.9	870.8	1,540.5	0.45	0.32	-0.32





Phoenix Technology Services  
Survey Report



<b>Database:</b>	EDM 5000 - Single User Dr	<b>Local Co-ordinate Reference:</b>	Site Wetzel County 51, B2f
<b>Company:</b>	EQT Production - Marcellus	<b>TVD Reference:</b>	KB @ 1489 fust
<b>Project:</b>	Wetzel County, WV	<b>MD Reference:</b>	KB @ 1489 fust
<b>Site:</b>	Wetzel County 513925	<b>North Reference:</b>	Grid
<b>Well:</b>	Well #513925	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Main Wellbore		
<b>Design:</b>	As Drilled Surveys		

Received  
JUL 31 2014

Survey Office of Oil and Gas

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,971.0	90.50	344.30	7,565.4	6,076.4	1,670.7	854.1	1,602.3	0.97	-0.16	-0.95
9,035.0	90.40	344.30	7,564.9	6,075.9	1,732.3	836.8	1,665.0	0.16	-0.16	0.00
9,098.0	90.40	344.00	7,564.5	6,075.5	1,792.9	819.6	1,726.7	0.48	0.00	-0.48
9,161.0	89.80	343.30	7,564.4	6,075.4	1,853.3	801.8	1,788.3	1.46	-0.95	-1.11
9,224.0	89.60	342.50	7,564.7	6,075.7	1,913.5	783.3	1,849.8	1.31	-0.32	-1.27
9,287.0	89.90	342.30	7,565.0	6,076.0	1,973.6	764.3	1,911.1	0.57	0.48	-0.32
9,350.0	89.70	341.80	7,565.2	6,076.2	2,033.5	744.9	1,972.3	0.85	-0.32	-0.79
9,413.0	90.00	342.00	7,565.4	6,076.4	2,093.4	725.3	2,033.5	0.57	0.48	0.32
9,476.0	89.80	341.20	7,565.5	6,076.5	2,153.2	705.4	2,094.6	1.31	-0.32	-1.27
9,539.0	90.10	342.90	7,565.5	6,076.5	2,213.1	686.0	2,155.8	2.74	0.48	2.70
9,603.0	91.80	342.70	7,564.5	6,075.5	2,274.2	667.1	2,218.1	2.67	2.66	-0.31
9,666.0	91.90	341.50	7,562.4	6,073.4	2,334.2	647.7	2,279.3	1.91	0.16	-1.90
9,729.0	92.30	342.60	7,560.1	6,071.1	2,394.1	628.3	2,340.5	1.86	0.63	1.75
9,792.0	91.50	342.50	7,558.0	6,069.0	2,454.1	609.4	2,401.8	1.28	-1.27	-0.16
9,855.0	92.00	342.70	7,556.1	6,067.1	2,514.2	590.6	2,463.1	0.85	0.79	0.32
9,918.0	91.80	341.70	7,554.0	6,065.0	2,574.2	571.3	2,524.4	1.62	-0.32	-1.59
9,981.0	90.90	340.00	7,552.5	6,063.5	2,633.7	550.7	2,585.2	3.05	-1.43	-2.70
10,044.0	91.20	339.90	7,551.4	6,062.4	2,692.8	529.1	2,645.9	0.50	0.48	-0.16
10,107.0	91.70	340.40	7,549.8	6,060.8	2,752.1	507.7	2,706.5	1.12	0.79	0.79
10,170.0	90.90	341.20	7,548.4	6,059.4	2,811.5	487.0	2,767.4	1.80	-1.27	1.27
10,233.0	90.80	342.10	7,547.4	6,058.4	2,871.3	467.2	2,828.5	1.44	-0.16	1.43
10,296.0	90.00	342.20	7,547.0	6,058.0	2,931.3	447.6	2,889.7	1.28	-1.27	0.16
10,359.0	89.70	342.20	7,547.2	6,058.2	2,991.3	428.6	2,951.0	0.48	-0.48	0.00
10,422.0	89.70	342.40	7,547.5	6,058.5	3,051.3	409.4	3,012.3	0.32	0.00	0.32
10,485.0	90.10	342.60	7,547.6	6,058.6	3,111.4	390.5	3,073.6	0.71	0.63	0.32
10,549.0	90.70	342.30	7,547.1	6,058.1	3,172.4	371.2	3,135.9	1.05	0.94	-0.47
10,612.0	90.90	342.40	7,546.3	6,057.3	3,232.4	352.1	3,197.2	0.35	0.32	0.16
10,675.0	90.80	341.80	7,545.3	6,056.3	3,292.4	332.7	3,258.4	0.97	-0.16	-0.95
10,738.0	90.90	342.60	7,544.4	6,055.4	3,352.3	313.5	3,319.6	1.28	0.16	1.27
10,802.0	91.10	342.70	7,543.3	6,054.3	3,413.4	294.4	3,382.0	0.35	0.31	0.16
10,865.0	90.90	342.80	7,542.2	6,053.2	3,473.6	275.7	3,443.3	0.35	-0.32	0.16
10,928.0	91.20	342.80	7,541.0	6,052.0	3,533.8	257.1	3,504.7	0.48	0.48	0.00
10,991.0	90.60	342.00	7,540.0	6,051.0	3,593.8	238.0	3,566.0	1.59	-0.95	-1.27
11,054.0	89.10	341.40	7,540.2	6,051.2	3,653.6	218.3	3,627.1	2.56	-2.38	-0.95
11,117.0	89.30	341.10	7,541.1	6,052.1	3,713.3	198.0	3,688.1	0.57	0.32	-0.48
11,180.0	89.40	341.90	7,541.8	6,052.8	3,773.0	178.0	3,749.2	1.28	0.16	1.27
11,244.0	89.40	341.70	7,542.5	6,053.5	3,833.8	158.0	3,811.3	0.31	0.00	-0.31
11,307.0	89.70	341.30	7,543.0	6,054.0	3,893.5	138.0	3,872.4	0.79	0.48	-0.63
11,370.0	90.80	341.20	7,542.7	6,053.7	3,953.2	117.8	3,933.4	1.75	1.75	-0.16
11,433.0	91.20	342.50	7,541.6	6,052.6	4,013.1	98.2	3,994.5	2.16	0.63	2.06
11,496.0	91.30	343.30	7,540.2	6,051.2	4,073.3	79.6	4,056.0	1.28	0.16	1.27
11,559.0	91.30	342.90	7,538.8	6,049.8	4,133.5	61.3	4,117.4	0.63	0.00	-0.63





Phoenix Technology Services  
Survey Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Site Wetzel County 513925
<b>Company:</b>	EQT Production - Marcellus	<b>TVD Reference:</b>	KB @ 1489 Duff
<b>Project:</b>	Wetzel County, WV	<b>MD Reference:</b>	KB @ 1489 Duff
<b>Site:</b>	Wetzel County 513925	<b>North Reference:</b>	Grid
<b>Well:</b>	Well #513925	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Main Wellbore		
<b>Design:</b>	As Drilled Surveys		

Received  
JUL 31 2014

Survey Office of Oil and Gas

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,622.0	91.30	342.90	7,537.4	6,048.4	4,193.7	42.8	4,178.8	0.00	0.00	0.00
11,685.0	91.60	342.20	7,535.8	6,046.8	4,253.8	23.9	4,240.2	1.21	0.48	-1.11
11,748.0	91.60	342.00	7,534.0	6,045.0	4,313.7	4.6	4,301.4	0.32	0.00	-0.32
11,811.0	91.70	340.70	7,532.2	6,043.2	4,373.4	-15.6	4,362.4	2.07	0.16	-2.06
11,874.0	91.50	341.80	7,530.4	6,041.4	4,433.0	-35.8	4,423.3	1.77	-0.32	1.75
11,938.0	91.10	342.10	7,529.0	6,040.0	4,493.9	-55.6	4,485.5	0.78	-0.63	0.47
12,001.0	89.70	342.80	7,528.5	6,039.5	4,553.9	-74.6	4,546.8	2.48	-2.22	1.11
12,064.0	88.80	342.00	7,529.4	6,040.4	4,614.0	-93.7	4,608.1	1.91	-1.43	-1.27
12,126.0	88.40	341.60	7,530.9	6,041.9	4,672.8	-113.0	4,668.3	0.91	-0.65	-0.65
12,189.0	88.70	342.40	7,532.5	6,043.5	4,732.7	-132.5	4,729.4	1.36	0.48	1.27
12,252.0	90.20	342.30	7,533.1	6,044.1	4,792.8	-151.6	4,790.7	2.39	2.38	-0.16
12,316.0	90.20	342.90	7,532.9	6,043.9	4,853.8	-170.7	4,853.1	0.94	0.00	0.94
12,379.0	90.60	343.50	7,532.4	6,043.4	4,914.2	-188.9	4,914.6	1.14	0.63	0.95
12,442.0	90.70	344.00	7,531.7	6,042.7	4,974.6	-206.6	4,976.2	0.81	0.16	0.79
12,505.0	90.90	344.60	7,530.8	6,041.8	5,035.3	-223.6	5,037.9	1.00	0.32	0.95
12,568.0	90.90	344.80	7,529.8	6,040.8	5,096.0	-240.2	5,099.8	0.32	0.00	0.32
12,631.0	90.90	345.40	7,528.8	6,039.8	5,156.9	-256.4	5,161.7	0.95	0.00	0.95
12,694.0	91.10	344.30	7,527.7	6,038.7	5,217.7	-272.9	5,223.5	1.77	0.32	-1.75
12,757.0	91.30	344.40	7,526.4	6,037.4	5,278.4	-289.9	5,285.3	0.35	0.32	0.16
12,820.0	91.30	344.40	7,525.0	6,036.0	5,339.0	-306.8	5,347.0	0.00	0.00	0.00
12,883.0	91.30	343.80	7,523.6	6,034.6	5,399.6	-324.1	5,408.7	0.95	0.00	-0.95
12,945.0	90.50	343.10	7,522.6	6,033.6	5,459.0	-341.7	5,469.3	1.71	-1.29	-1.13
13,008.0	90.20	343.00	7,522.2	6,033.2	5,519.3	-360.1	5,530.8	0.50	-0.48	-0.16
13,071.0	90.10	343.00	7,522.0	6,033.0	5,579.5	-378.5	5,592.2	0.16	-0.16	0.00
13,135.0	89.10	341.40	7,522.5	6,033.5	5,640.5	-398.1	5,654.4	2.95	-1.56	-2.50
Last Survey MD=13189'										
13,189.0	89.00	340.40	7,523.4	6,034.4	5,691.5	-415.8	5,706.6	1.86	-0.19	-1.85
Projection to TD MD=13249'										
13,249.0	89.00	340.40	7,524.4	6,035.4	5,748.0	-435.9	5,764.5	0.00	0.00	0.00

Design Annotations

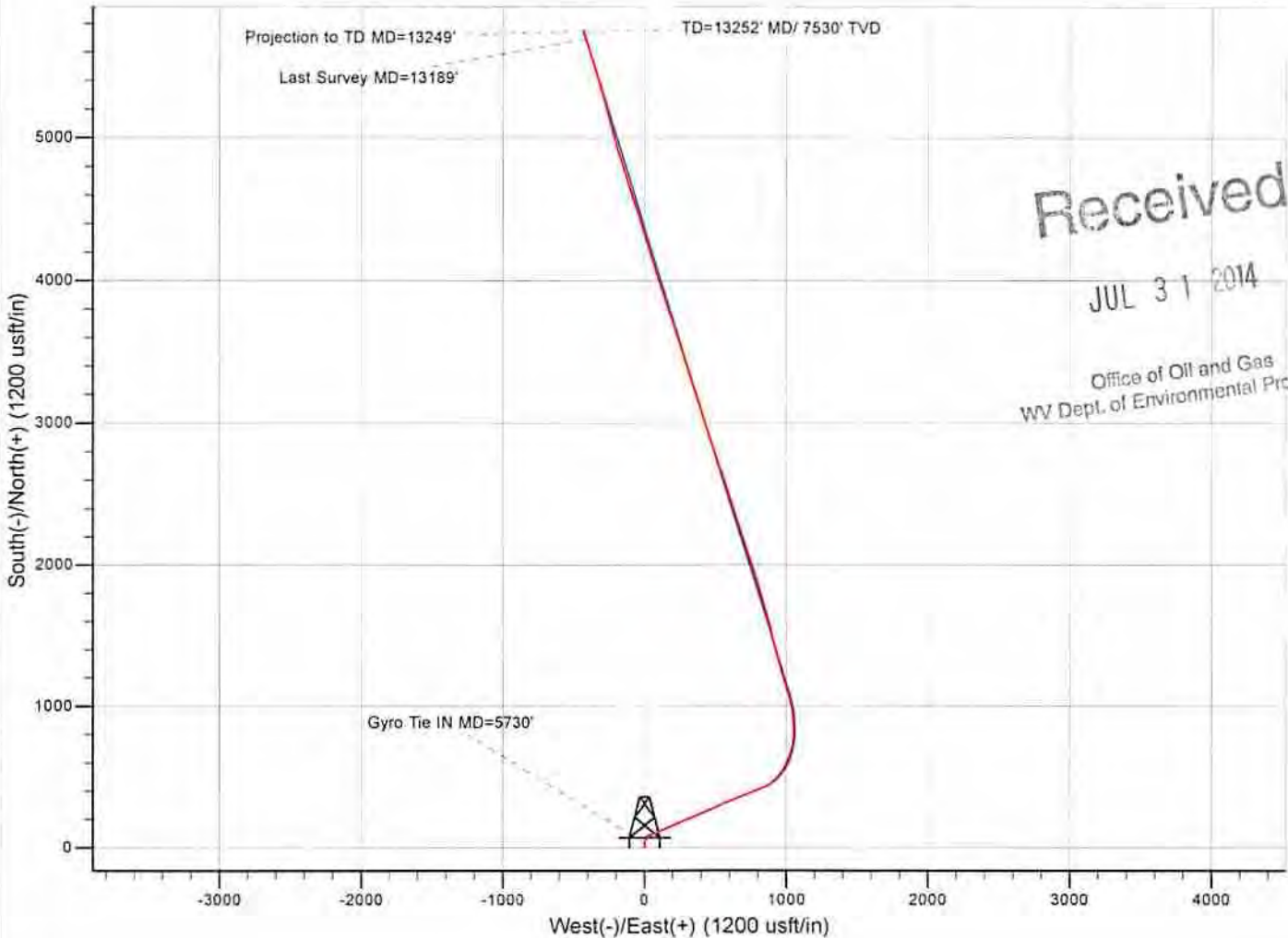
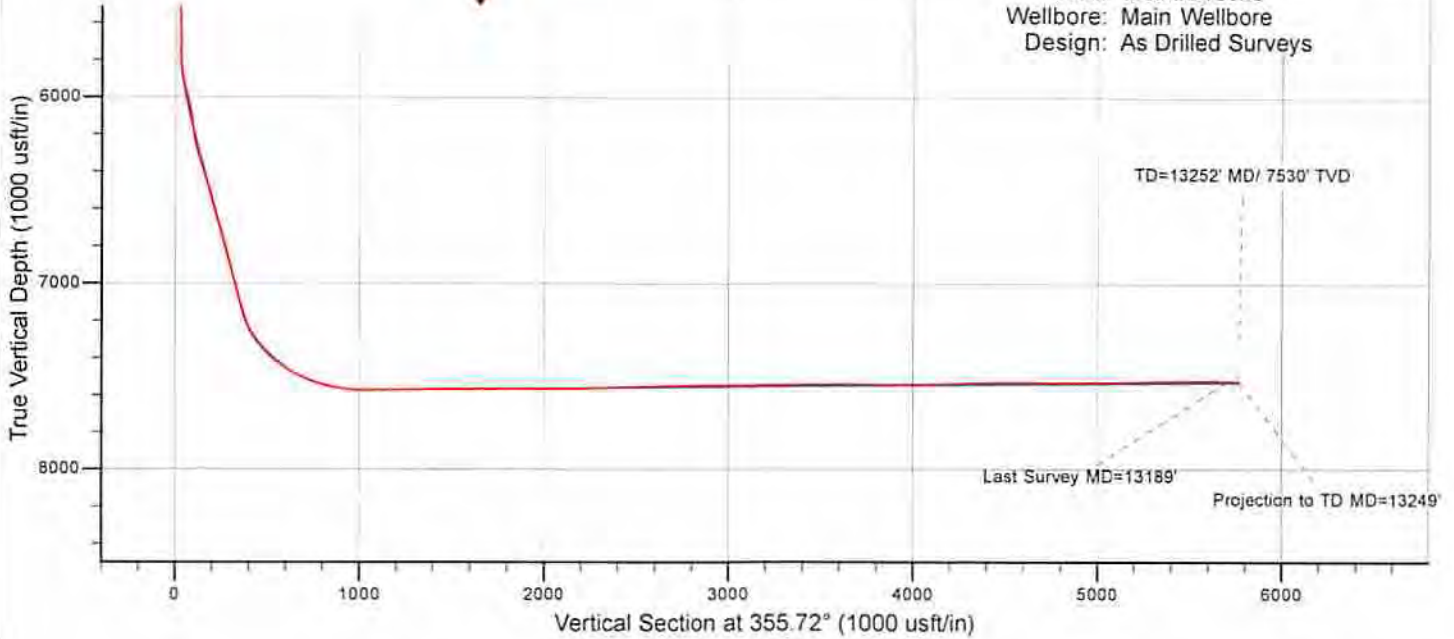
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
5,730.0	5,729.8	30.0	3.3	Gyro Tie IN MD=5730'
13,189.0	7,523.4	5,691.5	-415.8	Last Survey MD=13189'
13,249.0	7,524.4	5,748.0	-435.9	Projection to TD MD=13249'

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_



# EQT Production - Marcellus

Project: Wetzel County, WV  
Site: Wetzel County 513925  
Well: Well #513925  
Wellbore: Main Wellbore  
Design: As Drilled Surveys



Received  
JUL 31 2014  
Office of Oil and Gas  
WV Dept. of Environmental Protection