

Well Operator's Report of Well Work



Where energy meets innovation.

Well Number: 514378

API: 47 - 103 - 02875

Submission:  Initial  Amended

Notes: Amended Report with FB Data

Stimulation Notes:

Re-perforated stages 3 (3.1) and 10 (10.1)

Combined stages 3, 3.1 and 4;

Combined stages 10, 10.1 and 11

Received  
Office of Oil & Gas  
DEC 18 2014

01/16/2015

103-02875



Where energy meets innovation.

## **EQT Production - Marcellus**

Wetzel County, WV

Wetzel County 514378

Well #514378

Main Wellbore

Design: As Drilled Surveys

## **Standard Survey Report**

19 March, 2014

Received  
Office of Oil & Gas  
DEC 18 2014



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01/16/2015

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Site Wetzel County 514378
<b>Company:</b>	EQT Production - Marcellus	<b>TVD Reference:</b>	KB @ 1346.0usft
<b>Project:</b>	Wetzel County, WV	<b>MD Reference:</b>	KB @ 1346.0usft
<b>Site:</b>	Wetzel County 514378	<b>North Reference:</b>	Grid
<b>Well:</b>	Well #514378	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Main Wellbore		
<b>Design:</b>	As Drilled Surveys		

**Project** 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)		
<b>Map Zone:</b>	West Virginia North 4701		Using geodetic scale factor

**Site** Wetzel County 514378

<b>Site Position:</b>		<b>Northing:</b>	385,273.00 usft	<b>Latitude:</b>	39.55
<b>From:</b>	Map	<b>Easting:</b>	1,678,296.00 usft	<b>Longitude:</b>	-80.64
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	-0.73 °

**Well** Well #514378

<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b>	385,273.00 usft	<b>Latitude:</b>	39° 33' 7.888 N
	<b>+E/-W</b>	0.0 usft	<b>Easting:</b>	1,678,296.00 usft	<b>Longitude:</b>	80° 38' 27.329 W
<b>Position Uncertainty</b>		0.0 usft	<b>Wellhead Elevation:</b>	usft	<b>Ground Level:</b>	1,330.0 usft

**Wellbore** Main Wellbore

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010_14	3/11/2014	-8.62	67.02	52,443

**Design** As Drilled Surveys

**Audit Notes:**

<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.0
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Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	323.54

**Survey Program** Date 3/19/2014

From (')	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	5,791.0	514378 GyroData Gyros (Main Wellbore)	GYD_DP_MS	Gyrodata gyro-compassing and drop
0.00	7,515.0	514378 MWD (Main Wellbore)	MWD	MWD - Standard
0.00	11,570.0	514378 Bottom Curve MWD (Main Wellbor	MWD	MWD - Standard

**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)
0.0	0.00	0.00	0.0	-1,346.0	0.0	0.0	0.0	0.00	0.00	0.00
103.0	0.05	66.95	103.0	-1,243.0	0.0	0.0	0.0	0.05	0.05	0.00
203.0	0.09	133.17	203.0	-1,143.0	0.0	0.1	-0.1	0.08	0.04	66.22
303.0	0.13	165.48	303.0	-1,043.0	-0.2	0.2	-0.3	0.07	0.04	32.31
403.0	0.11	205.14	403.0	-943.0	-0.4	0.2	-0.4	0.08	-0.02	39.66
503.0	0.08	277.54	503.0	-843.0	-0.5	0.1	-0.4	0.11	-0.03	72.40
603.0	0.10	44.67	603.0	-743.0	-0.4	0.1	-0.4	0.16	0.02	127.13





103-02875

Phoenix Technology Services  
Survey Report



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<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Site Wetzel County 514378
<b>Company:</b>	EQT Production - Marcellus	<b>TVD Reference:</b>	KB @ 1346.0usft
<b>Project:</b>	Wetzel County, WV	<b>MD Reference:</b>	KB @ 1346.0usft
<b>Site:</b>	Wetzel County 514378	<b>North Reference:</b>	Grid
<b>Well:</b>	Well #514378	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Main Wellbore		
<b>Design:</b>	As Drilled Surveys		

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)
703.0	0.11	168.54	703.0	-643.0	-0.4	0.2	-0.4	0.19	0.01	123.87
803.0	0.15	262.49	803.0	-543.0	-0.5	0.1	-0.5	0.19	0.04	93.95
903.0	0.10	302.39	903.0	-443.0	-0.5	-0.1	-0.3	0.10	-0.05	39.90
1,003.0	0.13	306.70	1,003.0	-343.0	-0.4	-0.3	-0.1	0.03	0.03	4.31
1,103.0	0.18	333.51	1,103.0	-243.0	-0.2	-0.5	0.1	0.09	0.05	26.81
1,203.0	0.21	298.81	1,203.0	-143.0	0.1	-0.7	0.5	0.12	0.03	-34.70
1,303.0	0.25	351.38	1,303.0	-43.0	0.4	-0.9	0.8	0.21	0.04	52.57
1,403.0	0.21	175.40	1,403.0	57.0	0.4	-0.9	0.9	0.46	-0.04	-175.98
1,503.0	0.33	157.86	1,503.0	157.0	-0.1	-0.8	0.4	0.14	0.12	-17.54
1,603.0	0.43	165.22	1,603.0	257.0	-0.7	-0.6	-0.2	0.11	0.10	7.36
1,703.0	0.51	147.79	1,703.0	357.0	-1.4	-0.2	-1.0	0.16	0.08	-17.43
1,803.0	0.50	153.68	1,803.0	457.0	-2.2	0.2	-1.9	0.05	-0.01	5.89
1,903.0	0.70	122.59	1,903.0	557.0	-2.9	0.9	-2.9	0.37	0.20	-31.09
2,003.0	0.96	128.35	2,003.0	657.0	-3.8	2.1	-4.3	0.27	0.26	5.76
2,103.0	0.97	117.79	2,103.0	757.0	-4.7	3.5	-5.8	0.18	0.01	-10.56
2,203.0	1.03	117.70	2,202.9	856.9	-5.5	5.0	-7.4	0.06	0.06	-0.09
2,303.0	1.08	117.29	2,302.9	956.9	-6.3	6.6	-9.1	0.05	0.05	-0.41
2,403.0	1.16	120.51	2,402.9	1,056.9	-7.3	8.4	-10.8	0.10	0.08	3.22
2,503.0	1.14	117.61	2,502.9	1,156.9	-8.3	10.1	-12.7	0.06	-0.02	-2.90
2,603.0	1.23	119.42	2,602.9	1,256.9	-9.3	11.9	-14.5	0.10	0.09	1.81
2,703.0	1.06	122.62	2,702.8	1,356.8	-10.3	13.6	-16.4	0.18	-0.17	3.20
2,803.0	0.96	123.56	2,802.8	1,456.8	-11.2	15.1	-18.0	0.10	-0.10	0.94
2,903.0	0.74	128.49	2,902.8	1,556.8	-12.1	16.3	-19.4	0.23	-0.22	4.93
3,003.0	0.75	126.68	3,002.8	1,656.8	-12.9	17.4	-20.7	0.03	0.01	-1.81
3,103.0	0.88	127.40	3,102.8	1,756.8	-13.8	18.5	-22.0	0.13	0.13	0.72
3,203.0	0.92	129.13	3,202.8	1,856.8	-14.7	19.7	-23.6	0.05	0.04	1.73
3,303.0	0.89	126.15	3,302.8	1,956.8	-15.7	21.0	-25.1	0.06	-0.03	-2.98
3,403.0	0.94	134.43	3,402.8	2,056.8	-16.7	22.2	-26.6	0.14	0.05	8.28
3,503.0	0.69	125.85	3,502.8	2,156.8	-17.7	23.3	-28.0	0.28	-0.25	-8.58
3,603.0	0.37	144.44	3,602.7	2,256.7	-18.3	23.9	-28.9	0.36	-0.32	18.59
3,703.0	0.29	142.93	3,702.7	2,356.7	-18.7	24.3	-29.5	0.08	-0.08	-1.51
3,803.0	0.20	165.28	3,802.7	2,456.7	-19.1	24.5	-29.9	0.13	-0.09	22.35
3,903.0	0.17	189.96	3,902.7	2,556.7	-19.4	24.5	-30.2	0.08	-0.03	24.68
4,003.0	0.08	310.22	4,002.7	2,656.7	-19.5	24.4	-30.2	0.22	-0.09	120.26
4,103.0	0.19	292.98	4,102.7	2,756.7	-19.4	24.2	-30.0	0.12	0.11	-17.24
4,203.0	0.20	315.80	4,202.7	2,856.7	-19.2	23.9	-29.7	0.08	0.01	22.82
4,303.0	0.29	317.73	4,302.7	2,956.7	-18.9	23.6	-29.3	0.09	0.09	1.93
4,403.0	0.13	15.45	4,402.7	3,056.7	-18.6	23.5	-28.9	0.25	-0.16	57.72
4,503.0	0.57	93.56	4,502.7	3,156.7	-18.5	24.0	-29.2	0.56	0.44	78.11
4,603.0	0.64	64.88	4,602.7	3,256.7	-18.3	25.0	-29.6	0.31	0.07	-28.68
4,703.0	0.74	66.61	4,702.7	3,356.7	-17.8	26.1	-29.9	0.10	0.10	1.73
4,803.0	0.87	67.85	4,802.7	3,456.7	-17.3	27.4	-30.2	0.13	0.13	1.24
4,903.0	0.81	59.13	4,902.7	3,556.7	-16.6	28.7	-30.5	0.14	-0.06	-8.72

Received



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<b>Company:</b>	EQT Production - Marcellus	<b>TVD Reference:</b>	KB @ 1346.0usft
<b>Project:</b>	Wetzel County, WV	<b>MD Reference:</b>	KB @ 1346.0usft
<b>Site:</b>	Wetzel County 514378	<b>North Reference:</b>	Grid
<b>Well:</b>	Well #51437B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Main Wellbore		
<b>Design:</b>	As Drilled Surveys		

**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)
5,003.0	0.72	67.74	5,002.7	3,656.7	-16.0	29.9	-30.7	0.15	-0.09	8.61
5,103.0	0.76	64.16	5,102.7	3,756.7	-15.5	31.1	-31.0	0.06	0.04	-3.58
5,203.0	0.80	63.13	5,202.7	3,856.7	-14.9	32.3	-31.2	0.04	0.04	-1.03
5,303.0	0.67	71.18	5,302.7	3,956.7	-14.4	33.5	-31.5	0.17	-0.13	8.05
5,403.0	0.65	78.63	5,402.7	4,056.7	-14.1	34.6	-31.9	0.09	-0.02	7.45
5,503.0	0.69	85.42	5,502.7	4,156.7	-13.9	35.8	-32.5	0.09	0.04	6.79
5,603.0	0.45	76.19	5,602.7	4,256.7	-13.8	36.7	-32.9	0.26	-0.24	-9.23
5,703.0	0.56	79.51	5,702.6	4,356.6	-13.6	37.6	-33.3	0.11	0.11	3.32
<b>Gyro Tie In MD=5788'</b>										
5,791.0	0.55	92.88	5,790.6	4,444.6	-13.6	38.4	-33.8	0.15	-0.01	15.19
5,838.0	0.40	65.20	5,837.6	4,491.6	-13.5	38.8	-33.9	0.57	-0.32	-58.89
5,881.0	0.40	66.10	5,880.6	4,534.6	-13.4	39.1	-34.0	0.01	0.00	2.09
5,924.0	0.40	348.00	5,923.6	4,577.6	-13.2	39.2	-33.9	1.17	0.00	-181.63
5,967.0	5.70	270.10	5,966.6	4,620.6	-13.0	37.0	-32.5	13.09	12.33	-181.16
6,010.0	11.00	271.80	6,009.1	4,663.1	-12.9	30.8	-28.7	12.34	12.33	3.95
6,053.0	14.20	273.20	6,051.1	4,705.1	-12.5	21.4	-22.8	7.48	7.44	3.26
6,096.0	17.60	275.60	6,092.4	4,746.4	-11.5	9.7	-15.0	8.05	7.91	5.58
6,139.0	21.40	279.20	6,132.9	4,786.9	-9.6	-4.5	-5.1	9.26	8.84	8.37
6,182.0	25.00	280.80	6,172.5	4,826.5	-6.7	-21.2	7.2	8.50	8.37	3.72
6,225.0	27.90	281.60	6,210.9	4,864.9	-3.0	-40.0	21.4	6.79	6.74	1.86
6,268.0	30.20	281.70	6,248.5	4,902.5	1.3	-60.4	36.9	5.35	5.35	0.23
6,311.0	33.10	279.80	6,285.1	4,939.1	5.4	-82.6	53.5	7.13	6.74	-4.42
6,354.0	36.50	279.80	6,320.4	4,974.4	9.6	-106.8	71.2	7.91	7.91	0.00
6,397.0	37.00	281.90	6,354.9	5,008.9	14.5	-132.1	90.1	3.14	1.16	4.88
6,440.0	40.70	282.30	6,388.4	5,042.4	20.1	-158.4	110.3	8.62	8.60	0.93
6,483.0	40.90	282.30	6,420.9	5,074.9	26.1	-185.9	131.5	0.47	0.47	0.00
6,526.0	40.70	281.90	6,453.5	5,107.5	32.0	-213.3	152.5	0.77	-0.47	-0.93
6,568.0	40.30	281.50	6,485.4	5,139.4	37.5	-240.1	172.8	1.14	-0.95	-0.95
6,612.0	39.70	280.20	6,519.1	5,173.1	42.9	-267.8	193.6	2.34	-1.36	-2.95
6,655.0	39.30	279.40	6,552.3	5,206.3	47.5	-294.8	213.4	1.51	-0.93	-1.86
6,697.0	38.90	279.10	6,584.9	5,238.9	51.8	-320.9	232.4	1.05	-0.95	-0.71
6,740.0	39.10	283.60	6,618.3	5,272.3	57.1	-347.4	252.4	6.60	0.47	10.47
6,783.0	38.80	283.20	6,651.8	5,305.8	63.4	-373.7	273.1	0.91	-0.70	-0.93
6,826.0	38.80	282.20	6,685.3	5,339.3	69.3	-400.0	293.4	1.46	0.00	-2.33
6,869.0	40.60	282.00	6,718.4	5,372.4	75.0	-426.9	314.0	4.20	4.19	-0.47
6,913.0	40.20	281.50	6,751.9	5,405.9	80.8	-454.8	335.3	1.17	-0.91	-1.14
6,956.0	40.00	280.60	6,784.8	5,438.8	86.2	-482.0	355.7	1.43	-0.47	-2.09
6,999.0	39.70	280.30	6,817.8	5,471.8	91.2	-509.1	375.8	0.83	-0.70	-0.70
7,042.0	39.60	280.70	6,850.9	5,504.9	96.2	-536.1	395.9	0.64	-0.23	0.93
7,085.0	39.50	280.00	6,884.0	5,538.0	101.1	-563.0	415.9	1.06	-0.23	-1.63
7,128.0	41.30	280.20	6,916.8	5,570.8	106.0	-590.4	436.1	4.20	4.19	0.47
7,171.0	42.90	284.40	6,948.7	5,602.7	112.1	-618.6	457.8	7.53	3.72	9.77





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<b>Company:</b>	EQT Production - Marcellus	<b>TVD Reference:</b>	KB @ 1346.0usft
<b>Project:</b>	Wetzel County, WV	<b>MD Reference:</b>	KB @ 1346.0usft
<b>Site:</b>	Wetzel County 514378	<b>North Reference:</b>	Grid
<b>Well:</b>	Well #514378	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Main Wellbore		
<b>Design:</b>	As Drilled Surveys		

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)
7,214.0	45.00	288.80	6,979.6	5,633.6	120.7	-647.2	481.6	8.62	4.88	10.23
7,257.0	47.10	292.40	7,009.5	5,663.5	131.6	-676.1	507.6	7.76	4.88	8.37
7,300.0	48.80	294.90	7,038.3	5,692.3	144.4	-705.4	535.3	5.85	3.95	5.81
7,343.0	50.90	297.10	7,066.0	5,720.0	158.8	-734.9	564.4	6.26	4.88	5.12
7,386.0	53.90	300.30	7,092.3	5,746.3	175.2	-764.7	595.3	9.13	6.98	7.44
7,429.0	56.40	302.80	7,116.8	5,770.8	193.6	-794.8	628.1	7.52	5.81	5.81
<b>Final Survey MD=7469'</b>										
7,472.0	58.20	305.10	7,140.1	5,794.1	213.8	-824.8	662.1	6.15	4.19	5.35
<b>Projection to TD MD=7512' - Plan Tie In=7515' MD</b>										
7,515.0	59.50	307.80	7,162.3	5,816.3	235.7	-854.4	697.3	6.17	3.02	6.28
7,556.0	60.70	309.80	7,182.8	5,836.8	258.0	-882.1	731.7	5.14	2.93	4.88
7,588.0	63.00	312.40	7,197.8	5,851.8	276.5	-903.4	759.2	10.15	7.19	8.13
7,620.0	63.90	312.60	7,212.2	5,866.2	295.9	-924.5	787.3	2.87	2.81	0.63
7,651.0	65.80	313.80	7,225.3	5,879.3	315.1	-944.9	814.9	7.06	6.13	3.87
7,683.0	67.30	314.50	7,238.1	5,892.1	335.5	-966.0	843.9	5.10	4.69	2.19
7,715.0	69.30	316.20	7,249.9	5,903.9	356.7	-986.9	873.3	7.96	6.25	5.31
7,746.0	71.80	319.30	7,260.2	5,914.2	378.3	-1,006.5	902.4	12.41	8.06	10.00
7,778.0	73.80	321.70	7,269.7	5,923.7	401.9	-1,025.9	932.9	9.51	6.25	7.50
7,810.0	75.30	323.80	7,278.2	5,932.2	426.5	-1,044.6	963.8	7.87	4.69	6.56
7,841.0	77.70	325.00	7,285.4	5,939.4	451.0	-1,062.2	993.9	8.61	7.74	3.87
7,873.0	78.50	325.70	7,292.0	5,946.0	476.7	-1,080.0	1,025.2	3.29	2.50	2.19
7,905.0	80.40	326.90	7,297.9	5,951.9	502.9	-1,097.4	1,056.6	6.99	5.94	3.75
7,936.0	81.80	328.40	7,302.7	5,956.7	528.8	-1,113.8	1,087.2	6.58	4.52	4.84
7,968.0	83.90	330.40	7,306.7	5,960.7	556.1	-1,130.0	1,118.7	9.03	6.56	6.25
8,000.0	86.40	330.70	7,309.4	5,963.4	583.9	-1,145.6	1,150.4	7.87	7.81	0.94
8,063.0	89.40	330.90	7,311.7	5,965.7	638.8	-1,176.3	1,212.8	4.77	4.76	0.32
8,126.0	90.40	330.70	7,311.8	5,965.8	693.8	-1,207.1	1,275.3	1.62	1.59	-0.32
8,189.0	91.10	330.70	7,311.0	5,965.0	748.7	-1,237.9	1,337.8	1.11	1.11	0.00
8,252.0	91.30	332.30	7,309.7	5,963.7	804.1	-1,268.0	1,400.2	2.56	0.32	2.54
8,315.0	91.30	332.80	7,308.2	5,962.2	860.0	-1,297.0	1,462.4	0.79	0.00	0.79
8,379.0	90.00	332.40	7,307.5	5,961.5	916.8	-1,326.4	1,525.6	2.13	-2.03	-0.63
8,442.0	89.40	332.30	7,307.8	5,961.8	972.6	-1,355.7	1,587.9	0.97	-0.95	-0.16
8,505.0	89.90	332.20	7,308.2	5,962.2	1,028.4	-1,385.0	1,650.1	0.81	0.79	-0.16
8,569.0	90.40	331.60	7,308.1	5,962.1	1,084.8	-1,415.2	1,713.5	1.22	0.78	-0.94
8,632.0	91.10	331.10	7,307.2	5,961.2	1,140.1	-1,445.4	1,775.9	1.37	1.11	-0.79
8,695.0	91.10	332.00	7,306.0	5,960.0	1,195.5	-1,475.4	1,838.2	1.43	0.00	1.43
8,759.0	91.10	334.10	7,304.8	5,958.8	1,252.5	-1,504.4	1,901.3	3.28	0.00	3.28
8,822.0	90.70	333.20	7,303.8	5,957.8	1,309.0	-1,532.3	1,963.4	1.56	-0.63	-1.43
8,886.0	88.20	333.00	7,304.4	5,958.4	1,366.0	-1,561.3	2,026.5	3.92	-3.91	-0.31
8,949.0	88.30	332.50	7,306.3	5,960.3	1,422.0	-1,590.1	2,088.6	0.81	0.16	-0.79
9,012.0	88.80	332.40	7,307.9	5,961.9	1,477.8	-1,619.2	2,150.8	0.81	0.79	-0.16
9,076.0	89.00	331.90	7,309.2	5,963.2	1,534.4	-1,649.1	2,214.1	0.84	0.31	-0.78
9,140.0	89.70	331.90	7,309.9	5,963.9	1,590.9	-1,679.3	2,277.4	1.09	1.09	0.00

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103.02875

# Phoenix Technology Services

## Survey Report



Where energy meets innovation.

Where energy meets innovation.

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Site Wetzel County 514378
<b>Company:</b>	EQT Production - Marcellus	<b>TVD Reference:</b>	KB @ 1346.0usft
<b>Project:</b>	Wetzel County, WV	<b>MD Reference:</b>	KB @ 1346.0usft
<b>Site:</b>	Wetzel County 514378	<b>North Reference:</b>	Grid
<b>Well:</b>	Well #514378	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Main Wellbore		
<b>Design:</b>	As Drilled Surveys		

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)
9,203.0	90.80	333.20	7,309.6	5,963.6	1,646.8	-1,708.3	2,339.6	2.70	1.75	2.06
9,266.0	91.00	332.70	7,308.6	5,962.6	1,702.9	-1,737.0	2,401.8	0.85	0.32	-0.79
9,329.0	91.40	331.70	7,307.3	5,961.3	1,758.6	-1,766.3	2,464.1	1.71	0.63	-1.59
9,392.0	92.40	332.20	7,305.2	5,959.2	1,814.2	-1,795.9	2,526.3	1.77	1.59	0.79
9,455.0	92.70	334.90	7,302.4	5,956.4	1,870.5	-1,824.0	2,588.3	4.31	0.48	4.29
9,518.0	91.70	334.90	7,300.0	5,954.0	1,927.5	-1,850.7	2,650.0	1.59	-1.59	0.00
9,582.0	90.80	333.80	7,298.6	5,952.6	1,985.2	-1,878.4	2,712.9	2.22	-1.41	-1.72
9,645.0	90.50	337.30	7,297.9	5,951.9	2,042.5	-1,904.5	2,774.5	5.58	-0.48	5.56
9,708.0	90.80	335.70	7,297.2	5,951.2	2,100.3	-1,929.6	2,835.9	2.58	0.48	-2.54
9,771.0	91.10	335.10	7,296.1	5,950.1	2,157.6	-1,955.8	2,897.5	1.06	0.48	-0.95
9,835.0	90.00	335.10	7,295.5	5,949.5	2,215.6	-1,982.7	2,960.2	1.72	-1.72	0.00
9,898.0	88.30	335.50	7,296.4	5,950.4	2,272.8	-2,009.1	3,021.9	2.77	-2.70	0.63
9,961.0	88.20	335.90	7,298.4	5,952.4	2,330.2	-2,035.0	3,083.4	0.65	-0.16	0.63
10,024.0	88.50	333.10	7,300.2	5,954.2	2,387.1	-2,062.1	3,145.3	4.47	0.48	-4.44
10,087.0	88.80	332.40	7,301.7	5,955.7	2,443.1	-2,090.9	3,207.4	1.21	0.48	-1.11
10,150.0	89.10	332.30	7,302.8	5,956.8	2,498.9	-2,120.1	3,269.7	0.50	0.48	-0.16
10,214.0	89.60	332.20	7,303.5	5,957.5	2,555.5	-2,149.9	3,332.9	0.80	0.78	-0.16
10,277.0	89.50	332.70	7,304.0	5,958.0	2,611.3	-2,179.1	3,395.2	0.81	-0.16	0.79
10,340.0	89.80	332.30	7,304.4	5,958.4	2,667.2	-2,208.2	3,457.4	0.79	0.48	-0.63
10,403.0	90.30	333.60	7,304.4	5,958.4	2,723.3	-2,236.8	3,519.6	2.21	0.79	2.06
10,467.0	90.90	335.20	7,303.7	5,957.7	2,781.0	-2,264.5	3,582.4	2.67	0.94	2.50
10,530.0	91.30	335.10	7,302.5	5,956.5	2,838.2	-2,290.9	3,644.1	0.65	0.63	-0.16
10,594.0	90.60	335.00	7,301.4	5,955.4	2,896.2	-2,317.9	3,706.8	1.10	-1.09	-0.16
10,657.0	90.20	333.50	7,301.0	5,955.0	2,953.0	-2,345.3	3,768.7	2.46	-0.63	-2.38
10,720.0	90.70	334.50	7,300.5	5,954.5	3,009.6	-2,372.9	3,830.7	1.77	0.79	1.59
10,783.0	90.20	333.90	7,300.0	5,954.0	3,066.3	-2,400.3	3,892.6	1.24	-0.79	-0.95
10,847.0	89.40	331.20	7,300.2	5,954.2	3,123.1	-2,429.8	3,955.8	4.40	-1.25	-4.22
10,910.0	89.70	330.30	7,300.7	5,954.7	3,178.1	-2,460.6	4,018.3	1.51	0.48	-1.43
10,973.0	90.20	330.20	7,300.8	5,954.8	3,232.8	-2,491.9	4,080.8	0.81	0.79	-0.16
11,037.0	90.90	329.80	7,300.2	5,954.2	3,288.2	-2,523.9	4,144.4	1.26	1.09	-0.63
11,100.0	91.90	330.60	7,298.6	5,952.6	3,342.8	-2,555.2	4,207.0	2.03	1.59	1.27
11,163.0	90.30	331.80	7,297.4	5,951.4	3,398.0	-2,585.5	4,269.4	3.17	-2.54	1.90
11,226.0	91.10	331.20	7,296.6	5,950.6	3,453.4	-2,615.6	4,331.8	1.59	1.27	-0.95
11,289.0	90.90	332.30	7,295.5	5,949.5	3,508.9	-2,645.4	4,394.1	1.77	-0.32	1.75
11,353.0	88.30	332.10	7,296.0	5,950.0	3,565.5	-2,675.2	4,457.4	4.07	-4.06	-0.31
11,416.0	88.70	331.80	7,297.6	5,951.6	3,621.1	-2,704.9	4,519.7	0.79	0.63	-0.48
11,479.0	89.20	332.00	7,298.8	5,952.8	3,676.6	-2,734.5	4,582.0	0.85	0.79	0.32
<b>Last Survey=11515' MD/ 7299' TVD</b>										
11,515.0	89.40	331.40	7,299.2	5,953.2	3,708.3	-2,751.6	4,617.7	1.76	0.56	-1.67
<b>Projection to TD=11570' MD/ 7300' TVD</b>										
11,570.0	89.40	331.40	7,299.8	5,953.8	3,756.6	-2,777.9	4,672.1	0.00	0.00	0.00



103-02875

# Phoenix Technology Services

Survey Report



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Where energy meets innovation.

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Site Wetzel County 514378
<b>Company:</b>	EQT Production - Marcellus	<b>TVD Reference:</b>	KB @ 1346.0usft
<b>Project:</b>	Wetzel County, WV	<b>MD Reference:</b>	KB @ 1346.0usft
<b>Site:</b>	Wetzel County 514378	<b>North Reference:</b>	Grid
<b>Well:</b>	Well #514378	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Main Wellbore		
<b>Design:</b>	As Drilled Surveys		

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
5,791.0	5,790.6	-13.6	38.4	Gyro Tie In MD=5788'	
7,472.0	7,140.1	213.8	-824.8	Final Survey MD=7469'	
7,515.0	7,162.3	235.7	-854.4	Projection to TD MD=7512'	
7,515.0	7,162.3	235.7	-854.4	Plan Tie In=7515' MD	
11,515.0	7,299.2	3,708.3	-2,751.6	Last Survey=11515' MD/ 7299' TVD	
11,570.0	7,299.8	3,756.6	-2,777.9	Projection to TD=11570' MD/ 7300' TVD	

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

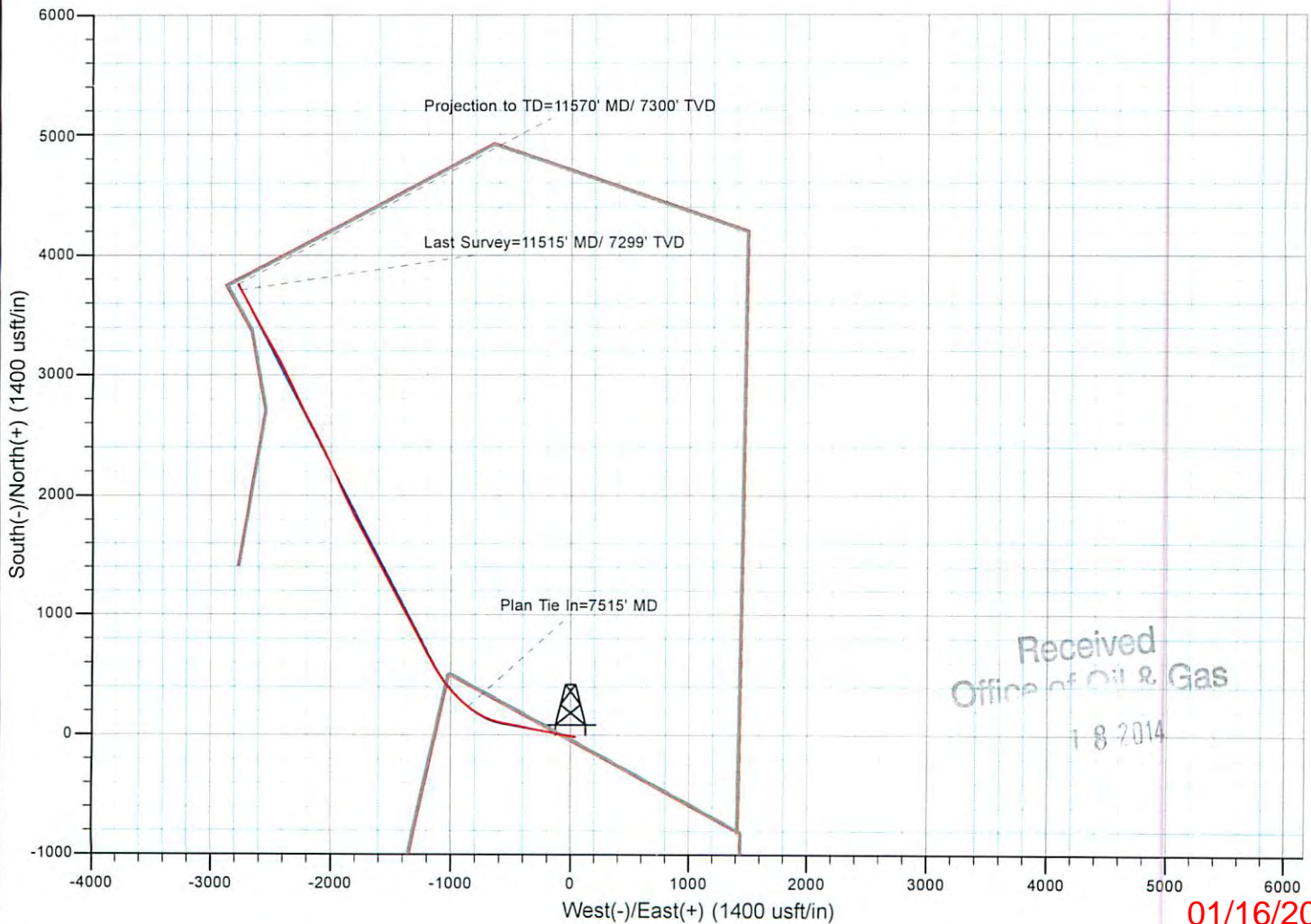
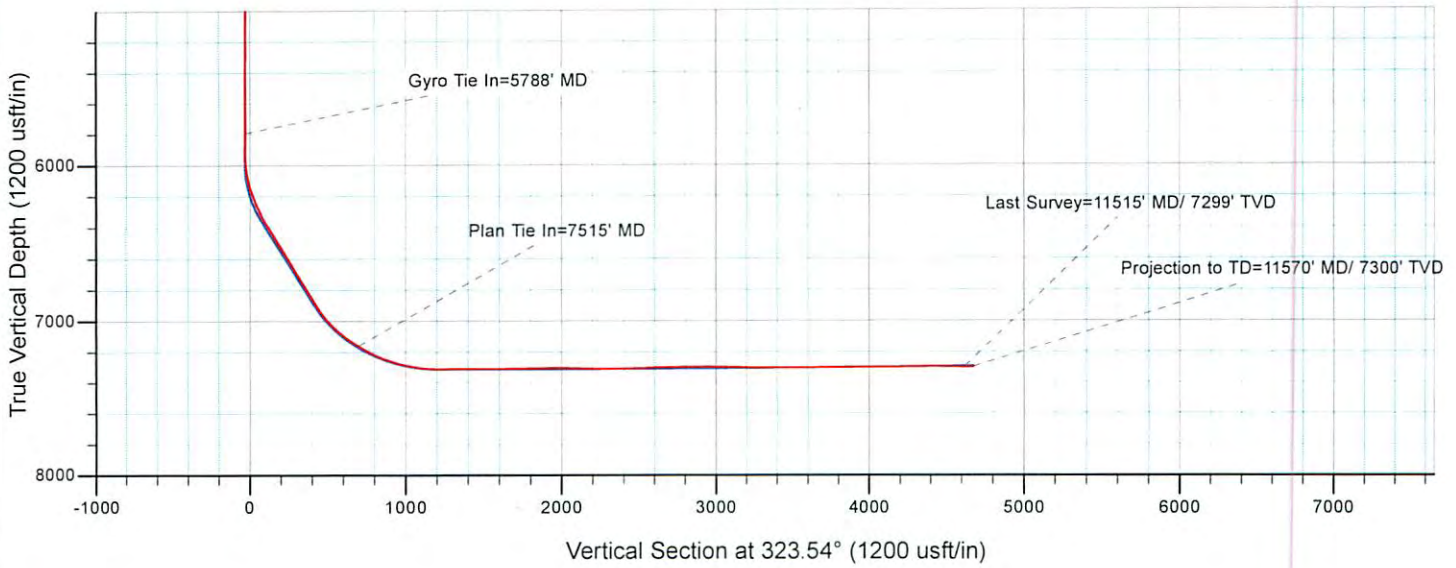
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# EQT Production - Marcellus

Project: Wetzel County, WV  
 Site: Wetzel County 514378  
 Well: Well #514378  
 Wellbore: Main Wellbore  
 Design: As Drilled Surveys



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