

Well Operator's Report of Well Work



Where energy meets innovation.

Well Number: 514375

API: 47 - 103 - 02873

Submission: Initial Amended

Notes: Amended Report with FB Data

Received
Office of Oil & Gas
DEC 18 2014

01/16/2015

103-02873

PHOENIX
TECHNOLOGY SERVICES



EQT Production - Marcellus

Wetzel County, WV

Wetzel County 514375

Well 514375

Main Wellbore

Design: As Drilled Surveys

Standard Survey Report

07 April, 2014

Received
Office of Oil & Gas

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01/16/2015



103-02873

Phoenix Technology Services

Survey Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Wetzel County 514375
Company:	EQT Production - Marcellus	TVD Reference:	KB @ 1346.0usft
Project:	Wetzel County, WV	MD Reference:	KB @ 1346.0usft
Site:	Wetzel County 514375	North Reference:	Grid
Well:	Well 514375	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	As Drilled Surveys		

Project Wetzel County, WV

Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	West Virginia North 4701		Using geodetic scale factor

Site Wetzel County 514375

Site Position:		Northing:	385,303.00 usft	Latitude:	39.55
From:	Map	Easting:	1,678,294.00 usft	Longitude:	-80.64
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.73 °

Well Well 514375

Well Position	+N/-S	0.0 usft	Northing:	385,303.00 usft	Latitude:	39° 33' 8.184 N
	+E/-W	0.0 usft	Easting:	1,678,294.00 usft	Longitude:	80° 38' 27.359 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	1,330.0 usft

Wellbore Main Wellbore

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010_14	3/20/2014	-8.62	67.02	52,440

Design As Drilled Surveys

Audit Notes:

Version:	1.0	Phase:	ACTUAL	Tie On Depth:	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	350.67

Survey Program Date 4/7/2014

From (')	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	4,903.0	514375 Gyrodata Gyros (5141 ft) (Main We	GYD_DP_MS	Gyrodata gyro-compassing and drop
0.00	13,419.0	514375 MWD (Main Wellbore)	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	0.07	209.25	103.0	-1,243.0	-0.1	0.0	0.0	0.07	0.07	0.00
203.0	0.12	195.20	203.0	-1,143.0	-0.2	-0.1	-0.2	0.05	0.05	-14.05
303.0	0.16	149.49	303.0	-1,043.0	-0.4	0.0	-0.4	0.11	0.04	-45.71
403.0	0.23	141.79	403.0	-943.0	-0.7	0.2	-0.7	0.07	0.07	-7.70
503.0	0.26	140.14	503.0	-843.0	-1.0	0.4	-1.1	0.03	0.03	-1.65
603.0	0.20	135.73	603.0	-743.0	-1.3	0.7	-1.4	0.06	-0.06	-4.41
703.0	0.16	130.05	703.0	-643.0	-1.6	0.9	-1.7	0.04	-0.04	-5.68

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Site:	Wetzel County 514375	North Reference:	Grid
Well:	Well 514375	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	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)	
803.0	0.06	135.67	803.0	-543.0	-1.7	1.1	-1.8	0.10	-0.10	5.62	
903.0	0.09	120.75	903.0	-443.0	-1.8	1.2	-1.9	0.04	0.03	-14.92	
1,003.0	0.07	240.83	1,003.0	-343.0	-1.8	1.2	-2.0	0.14	-0.02	120.08	
1,103.0	0.10	251.18	1,103.0	-243.0	-1.9	1.0	-2.0	0.03	0.03	10.35	
1,203.0	0.14	277.03	1,203.0	-143.0	-1.9	0.8	-2.0	0.07	0.04	25.85	
1,303.0	0.05	257.94	1,303.0	-43.0	-1.9	0.7	-2.0	0.09	-0.09	-19.09	
1,403.0	0.04	131.16	1,403.0	57.0	-1.9	0.7	-2.0	0.08	-0.01	-126.78	
1,503.0	0.16	144.68	1,503.0	157.0	-2.1	0.8	-2.2	0.12	0.12	13.52	
1,603.0	0.22	146.38	1,603.0	257.0	-2.3	1.0	-2.5	0.06	0.06	1.70	
1,703.0	0.32	140.02	1,703.0	357.0	-2.7	1.2	-2.9	0.10	0.10	-6.36	
1,803.0	0.33	138.15	1,803.0	457.0	-3.1	1.6	-3.4	0.01	0.01	-1.87	
1,903.0	0.56	133.59	1,903.0	557.0	-3.7	2.2	-4.0	0.23	0.23	-4.56	
2,003.0	0.50	131.91	2,003.0	657.0	-4.3	2.8	-4.7	0.06	-0.06	-1.68	
2,103.0	0.46	122.26	2,103.0	757.0	-4.8	3.5	-5.3	0.09	-0.04	-9.65	
2,203.0	0.26	102.06	2,203.0	857.0	-5.1	4.1	-5.7	0.23	-0.20	-20.20	
2,303.0	0.23	96.43	2,303.0	957.0	-5.2	4.5	-5.8	0.04	-0.03	-5.63	
2,403.0	0.18	102.71	2,403.0	1,057.0	-5.2	4.8	-5.9	0.05	-0.05	6.28	
2,503.0	0.16	132.48	2,503.0	1,157.0	-5.3	5.1	-6.1	0.09	-0.02	29.77	
2,603.0	0.24	167.87	2,603.0	1,257.0	-5.6	5.2	-6.4	0.14	0.08	35.39	
2,703.0	0.35	157.23	2,703.0	1,357.0	-6.1	5.4	-6.9	0.12	0.11	-10.64	
2,803.0	0.36	150.31	2,803.0	1,457.0	-6.7	5.7	-7.5	0.04	0.01	-6.92	
2,903.0	0.30	161.01	2,903.0	1,557.0	-7.2	5.9	-8.1	0.09	-0.06	10.70	
3,003.0	0.34	161.17	3,003.0	1,657.0	-7.7	6.1	-8.6	0.04	0.04	0.16	
3,103.0	0.54	175.96	3,103.0	1,757.0	-8.5	6.2	-9.4	0.23	0.20	14.79	
3,203.0	0.57	169.94	3,203.0	1,857.0	-9.4	6.3	-10.3	0.07	0.03	-6.02	
3,303.0	0.58	169.85	3,303.0	1,957.0	-10.4	6.5	-11.3	0.01	0.01	-0.09	
3,403.0	0.58	169.81	3,403.0	2,057.0	-11.4	6.7	-12.4	0.00	0.00	-0.04	
3,503.0	0.47	160.91	3,502.9	2,156.9	-12.3	6.9	-13.3	0.14	-0.11	-8.90	
3,603.0	0.30	166.89	3,602.9	2,256.9	-13.0	7.1	-13.9	0.17	-0.17	5.98	
3,703.0	0.27	181.85	3,702.9	2,356.9	-13.4	7.2	-14.4	0.08	-0.03	14.96	
3,803.0	0.17	200.06	3,802.9	2,456.9	-13.8	7.1	-14.8	0.12	-0.10	18.21	
3,903.0	0.17	214.13	3,902.9	2,556.9	-14.1	7.0	-15.0	0.04	0.00	14.07	
4,003.0	0.16	275.62	4,002.9	2,656.9	-14.2	6.8	-15.1	0.17	-0.01	61.49	
4,103.0	0.13	281.23	4,102.9	2,756.9	-14.2	6.5	-15.0	0.03	-0.03	5.61	
4,203.0	0.19	248.76	4,202.9	2,856.9	-14.2	6.2	-15.0	0.11	0.06	-32.47	
4,303.0	0.12	132.09	4,302.9	2,956.9	-14.3	6.2	-15.1	0.27	-0.07	-116.67	
4,403.0	0.21	121.17	4,402.9	3,056.9	-14.5	6.4	-15.3	0.09	0.09	-10.92	
4,503.0	0.31	101.65	4,502.9	3,156.9	-14.6	6.8	-15.5	0.13	0.10	-19.52	
4,603.0	0.41	91.91	4,602.9	3,256.9	-14.7	7.4	-15.7	0.12	0.10	-9.74	
4,703.0	0.66	63.25	4,702.9	3,356.9	-14.5	8.3	-15.6	0.36	0.25	-28.66	
4,803.0	0.81	57.58	4,802.9	3,456.9	-13.8	9.4	-15.2	0.17	0.15	-5.67	
Gyro Tie In=4903' MD											
4,903.0	0.84	55.14	4,902.9	3,556.9	-13.0	10.6	-14.6	0.05	0.03	-2.44	

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Site:	Wetzel County 514375	North Reference:	Grid
Well:	Well 514375	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	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)
4,930.0	0.80	62.90	4,929.9	3,583.9	-12.8	10.9	-14.4	0.44	-0.15	28.74
4,961.0	0.60	62.20	4,960.9	3,614.9	-12.6	11.3	-14.3	0.65	-0.65	-2.26
KOP=4993' MD										
4,993.0	0.80	41.80	4,992.9	3,646.9	-12.4	11.6	-14.1	0.99	0.63	-63.75
5,025.0	4.30	39.30	5,024.9	3,678.9	-11.3	12.5	-13.2	10.94	10.94	-7.81
5,057.0	8.80	44.00	5,056.7	3,710.7	-8.6	15.0	-10.9	14.15	14.06	14.69
5,088.0	12.30	44.00	5,087.1	3,741.1	-4.5	18.9	-7.5	11.29	11.29	0.00
5,120.0	12.60	40.90	5,118.4	3,772.4	0.6	23.5	-3.3	2.29	0.94	-9.69
5,152.0	11.80	37.30	5,149.7	3,803.7	5.8	27.8	1.2	3.45	-2.50	-11.25
5,183.0	10.90	34.00	5,180.0	3,834.0	10.7	31.4	5.5	3.58	-2.90	-10.65
5,215.0	10.80	39.70	5,211.5	3,865.5	15.6	35.0	9.7	3.37	-0.31	17.81
5,247.0	13.60	54.30	5,242.8	3,896.8	20.1	40.0	13.3	12.96	8.75	45.63
5,278.0	14.10	59.30	5,272.9	3,926.9	24.1	46.2	16.3	4.18	1.61	16.13
5,310.0	12.90	55.70	5,304.0	3,958.0	28.1	52.5	19.2	4.58	-3.75	-11.25
5,342.0	12.60	59.30	5,335.2	3,989.2	31.9	58.4	22.0	2.65	-0.94	11.25
5,374.0	11.80	69.50	5,366.5	4,020.5	34.8	64.5	23.9	7.17	-2.50	31.88
5,405.0	12.80	78.40	5,396.8	4,050.8	36.6	70.8	24.7	6.91	3.23	28.71
5,437.0	14.00	83.90	5,427.9	4,081.9	37.8	78.1	24.6	5.47	3.75	17.19
5,469.0	14.80	89.10	5,458.9	4,112.9	38.2	86.1	23.8	4.75	2.50	16.25
5,501.0	15.40	97.00	5,489.8	4,143.8	37.8	94.4	22.0	6.69	1.88	24.69
5,532.0	17.60	108.40	5,519.5	4,173.5	35.8	102.9	18.7	12.60	7.10	36.77
5,564.0	21.20	114.40	5,549.7	4,203.7	31.9	112.8	13.2	12.85	11.25	18.75
5,595.0	24.70	117.70	5,578.2	4,232.2	26.6	123.6	6.2	12.03	11.29	10.65
5,627.0	28.40	119.10	5,606.9	4,260.9	19.8	136.2	-2.6	11.73	11.56	4.38
5,659.0	30.20	120.70	5,634.8	4,288.8	11.9	149.8	-12.5	6.13	5.63	5.00
5,690.0	33.40	121.50	5,661.1	4,315.1	3.5	163.8	-23.1	10.41	10.32	2.58
5,722.0	36.40	122.20	5,687.3	4,341.3	-6.2	179.3	-35.1	9.46	9.38	2.19
5,785.0	41.30	124.00	5,736.4	4,390.4	-27.8	212.4	-61.8	7.98	7.78	2.86
5,848.0	40.00	122.10	5,784.2	4,438.2	-50.1	246.8	-89.5	2.85	-2.06	-3.02
5,911.0	40.40	122.00	5,832.3	4,486.3	-71.7	281.2	-116.4	0.64	0.63	-0.16
5,974.0	41.40	127.60	5,879.9	4,533.9	-95.3	315.1	-145.1	6.03	1.59	8.89
6,037.0	40.50	126.10	5,927.5	4,581.5	-120.0	348.1	-174.9	2.12	-1.43	-2.38
6,101.0	40.70	126.80	5,976.1	4,630.1	-144.8	381.6	-204.7	0.78	0.31	1.09
6,164.0	39.90	127.50	6,024.2	4,678.2	-169.4	414.1	-234.3	1.46	-1.27	1.11
6,227.0	41.00	125.30	6,072.1	4,726.1	-193.6	447.0	-263.5	2.86	1.75	-3.49
6,291.0	42.20	125.30	6,120.0	4,774.0	-218.2	481.7	-293.4	1.88	1.88	0.00
6,353.0	41.00	122.50	6,166.3	4,820.3	-241.1	515.8	-321.6	3.57	-1.94	-4.52
6,417.0	41.50	121.50	6,214.5	4,868.5	-263.5	551.6	-349.4	1.29	0.78	-1.56
6,480.0	41.40	123.50	6,261.7	4,915.7	-285.9	586.8	-377.2	2.11	-0.16	3.17
6,543.0	42.20	122.80	6,308.6	4,962.6	-308.9	621.9	-405.6	1.47	1.27	-1.11
6,606.0	43.00	123.90	6,355.0	5,009.0	-332.3	657.5	-434.5	1.73	1.27	1.75
6,669.0	42.10	121.60	6,401.4	5,055.4	-355.4	693.4	-463.0	2.85	-1.43	-3.65

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6,733.0	42.50	122.00	6,448.8	5,102.8	-378.1	730.0	-491.4	0.75	0.63	0.63
6,796.0	42.50	125.90	6,495.2	5,149.2	-401.8	765.3	-520.5	4.18	0.00	6.19
6,860.0	42.80	128.50	6,542.3	5,196.3	-428.0	799.8	-552.0	2.79	0.47	4.06
6,923.0	41.60	129.90	6,589.0	5,243.0	-454.8	832.6	-583.7	2.42	-1.90	2.22
6,955.0	40.80	129.60	6,613.1	5,267.1	-468.2	848.8	-599.6	2.58	-2.50	-0.94
6,986.0	40.00	129.20	6,636.7	5,290.7	-481.0	864.3	-614.7	2.71	-2.58	-1.29
7,018.0	39.60	128.80	6,661.2	5,315.2	-493.9	880.2	-630.0	1.48	-1.25	-1.25
7,050.0	38.20	124.60	6,686.2	5,340.2	-505.9	896.3	-644.5	9.33	-4.38	-13.13
7,081.0	37.40	118.90	6,710.7	5,364.7	-515.9	912.5	-657.0	11.56	-2.58	-13.39
7,113.0	38.10	112.70	6,736.0	5,390.0	-524.4	930.1	-668.2	12.06	2.19	-19.38
7,145.0	38.20	108.00	6,761.1	5,415.1	-531.3	948.6	-678.0	9.08	0.31	-14.69
7,176.0	37.80	103.00	6,785.6	5,439.6	-536.4	967.0	-686.0	10.01	-1.29	-16.13
7,208.0	38.40	97.90	6,810.8	5,464.8	-540.0	986.4	-692.7	10.01	1.88	-15.94
7,240.0	39.70	91.20	6,835.6	5,489.6	-541.5	1,006.5	-697.5	13.80	4.06	-20.94
7,271.0	41.10	83.80	6,859.2	5,513.2	-540.6	1,026.5	-699.9	16.11	4.52	-23.87
7,303.0	40.90	78.00	6,883.4	5,537.4	-537.3	1,047.2	-700.0	11.90	-0.63	-18.13
7,334.0	40.70	71.70	6,906.9	5,560.9	-532.0	1,066.7	-697.9	13.29	-0.65	-20.32
7,366.0	39.80	66.30	6,931.3	5,585.3	-524.6	1,086.0	-693.7	11.26	-2.81	-16.88
7,398.0	39.10	60.50	6,956.0	5,610.0	-515.6	1,104.2	-687.7	11.72	-2.19	-18.13
7,429.0	38.80	55.90	6,980.1	5,634.1	-505.3	1,120.8	-680.3	9.38	-0.97	-14.84
7,461.0	39.20	51.50	7,005.0	5,659.0	-493.4	1,137.0	-671.1	8.74	1.25	-13.75
7,493.0	40.10	48.60	7,029.7	5,683.7	-480.3	1,152.6	-660.7	6.43	2.81	-9.06
7,524.0	41.80	46.10	7,053.1	5,707.1	-466.5	1,167.6	-649.6	7.62	5.48	-8.06
7,556.0	44.00	43.20	7,076.5	5,730.5	-451.0	1,182.9	-636.8	9.24	6.88	-9.06
7,587.0	45.30	41.40	7,098.6	5,752.6	-434.9	1,197.5	-623.2	5.85	4.19	-5.81
7,619.0	46.80	39.30	7,120.8	5,774.8	-417.3	1,212.4	-608.3	6.65	4.69	-5.56
7,651.0	49.20	36.80	7,142.2	5,796.2	-398.6	1,227.1	-592.2	9.48	7.50	-7.81
7,682.0	52.10	33.10	7,161.8	5,815.8	-378.9	1,240.8	-575.0	13.14	9.35	-11.94
7,714.0	53.50	31.80	7,181.2	5,835.2	-357.4	1,254.5	-556.0	5.44	4.38	-4.06
7,745.0	55.10	28.80	7,199.3	5,853.3	-335.7	1,267.1	-536.7	9.40	5.16	-9.68
7,777.0	58.70	27.10	7,216.8	5,870.8	-312.0	1,279.7	-515.3	12.10	11.25	-5.31
7,809.0	62.80	24.10	7,232.4	5,886.4	-286.8	1,291.7	-492.4	15.20	12.81	-9.38
7,840.0	64.80	23.40	7,246.1	5,900.1	-261.4	1,302.9	-469.1	6.76	6.45	-2.26
7,872.0	66.60	20.80	7,259.2	5,913.2	-234.4	1,313.9	-444.2	9.30	5.63	-8.13
7,903.0	68.60	17.00	7,271.1	5,925.1	-207.3	1,323.2	-419.0	13.04	6.45	-12.26
7,935.0	70.40	13.60	7,282.3	5,936.3	-178.4	1,331.1	-391.7	11.43	5.63	-10.63
7,966.0	72.20	8.80	7,292.2	5,946.2	-149.6	1,336.8	-364.3	15.77	5.81	-15.48
Top of Marcellus@7301' TVD										
7,996.4	74.19	6.42	7,301.0	5,955.0	-120.7	1,340.6	-336.4	9.95	6.56	-7.82
7,998.0	74.30	6.30	7,301.4	5,955.4	-119.2	1,340.8	-334.9	9.95	6.61	-7.73
8,030.0	76.70	6.50	7,309.4	5,963.4	-88.4	1,344.3	-305.1	7.52	7.50	0.63
8,061.0	79.20	5.00	7,315.9	5,969.9	-58.2	1,347.3	-275.8	9.35	8.06	-4.84
8,093.0	81.60	2.70	7,321.3	5,975.3	-26.8	1,349.4	-245.1	10.32	7.50	-7.19

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Wetzel County 514375
Company:	EQT Production - Marcellus	TVD Reference:	KB @ 1346.0usft
Project:	Wetzel County, WV	MD Reference:	KB @ 1346.0usft
Site:	Wetzel County 514375	North Reference:	Grid
Well:	Well 514375	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	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)
8,125.0	82.10	359.90	7,325.8	5,979.8	4.9	1,350.1	-214.0	8.80	1.56	-8.75
514375 LP5										
8,140.6	83.31	0.12	7,327.8	5,981.8	20.4	1,350.1	-198.7	7.91	7.78	1.44
8,188.0	87.00	0.80	7,331.8	5,985.8	67.6	1,350.5	-152.2	7.91	7.78	1.43
8,251.0	88.90	1.30	7,334.0	5,988.0	130.5	1,351.7	-90.3	3.12	3.02	0.79
LP/Deepest Point of Well=8314' MD/ 7335' TVD										
8,314.0	89.40	0.60	7,335.0	5,989.0	193.5	1,352.7	-28.3	1.37	0.79	-1.11
8,377.0	91.10	359.70	7,334.7	5,988.7	256.5	1,352.9	33.8	3.05	2.70	-1.43
514375 Turn Pt										
8,415.4	90.98	358.92	7,334.0	5,988.0	294.9	1,352.4	71.8	2.05	-0.31	-2.03
8,441.0	90.90	358.40	7,333.6	5,987.6	320.5	1,351.8	97.2	2.05	-0.31	-2.03
8,504.0	90.80	356.90	7,332.6	5,986.6	383.4	1,349.2	159.7	2.39	-0.16	-2.38
8,567.0	91.30	354.50	7,331.5	5,985.5	446.2	1,344.5	222.4	3.89	0.79	-3.81
8,630.0	91.60	351.10	7,329.9	5,983.9	508.7	1,336.6	285.3	5.42	0.48	-5.40
8,694.0	91.80	348.50	7,328.0	5,982.0	571.7	1,325.3	349.3	4.07	0.31	-4.06
8,757.0	90.60	346.00	7,326.7	5,980.7	633.1	1,311.4	412.2	4.40	-1.90	-3.97
8,820.0	88.80	345.40	7,327.0	5,981.0	694.1	1,295.8	474.9	3.01	-2.86	-0.95
514375 Plat LP1										
8,881.9	88.80	345.40	7,328.3	5,982.3	754.0	1,280.2	536.5	0.00	0.00	0.00
8,883.0	88.80	345.40	7,328.3	5,982.3	755.1	1,280.0	537.7	0.00	0.00	0.00
8,946.0	89.10	343.50	7,329.5	5,983.5	815.8	1,263.1	600.3	3.05	0.48	-3.02
9,010.0	89.80	342.20	7,330.1	5,984.1	876.9	1,244.2	663.7	2.31	1.09	-2.03
9,073.0	90.00	340.40	7,330.2	5,984.2	936.6	1,224.0	725.8	2.87	0.32	-2.86
9,136.0	89.90	340.60	7,330.3	5,984.3	996.0	1,203.0	787.8	0.35	-0.16	0.32
9,200.0	89.90	339.10	7,330.4	5,984.4	1,056.1	1,180.9	850.7	2.34	0.00	-2.34
9,263.0	90.70	336.10	7,330.0	5,984.0	1,114.3	1,156.9	912.1	4.93	1.27	-4.76
9,326.0	91.10	333.80	7,329.0	5,983.0	1,171.4	1,130.3	972.7	3.71	0.63	-3.65
9,390.0	91.10	332.00	7,327.8	5,981.8	1,228.3	1,101.1	1,033.6	2.81	0.00	-2.81
9,453.0	90.90	333.40	7,326.7	5,980.7	1,284.3	1,072.2	1,093.5	2.24	-0.32	2.22
9,516.0	90.60	332.30	7,325.9	5,979.9	1,340.4	1,043.5	1,153.5	1.81	-0.48	-1.75
9,579.0	89.80	332.30	7,325.7	5,979.7	1,396.1	1,014.2	1,213.3	1.27	-1.27	0.00
9,643.0	89.40	331.50	7,326.1	5,980.1	1,452.6	984.0	1,273.9	1.40	-0.63	-1.25
9,706.0	89.80	331.50	7,326.6	5,980.6	1,508.0	954.0	1,333.4	0.63	0.63	0.00
9,769.0	90.40	332.00	7,326.5	5,980.5	1,563.5	924.2	1,393.0	1.24	0.95	0.79
9,833.0	90.00	333.40	7,326.2	5,980.2	1,620.3	894.8	1,453.9	2.28	-0.63	2.19
9,896.0	89.90	332.30	7,326.3	5,980.3	1,676.4	866.1	1,513.8	1.75	-0.16	-1.75
9,960.0	89.90	331.00	7,326.4	5,980.4	1,732.7	835.7	1,574.3	2.03	0.00	-2.03
10,023.0	89.70	331.20	7,326.6	5,980.6	1,787.9	805.2	1,633.7	0.45	-0.32	0.32
10,086.0	89.90	331.10	7,326.8	5,980.8	1,843.0	774.8	1,693.1	0.35	0.32	-0.16
10,149.0	90.20	330.20	7,326.8	5,980.8	1,897.9	743.9	1,752.3	1.51	0.48	-1.43
10,213.0	90.10	330.80	7,326.6	5,980.6	1,953.7	712.4	1,812.3	0.95	-0.16	0.94
10,276.0	89.50	331.60	7,326.8	5,980.8	2,008.9	682.1	1,871.7	1.59	-0.95	1.27
10,339.0	89.70	330.80	7,327.3	5,981.3	2,064.1	651.7	1,931.1	1.31	0.32	-1.27



103-02873

Phoenix Technology Services

Survey Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Wetzel County 514375
Company:	EQT Production - Marcellus	TVD Reference:	KB @ 1346.0usft
Project:	Wetzel County, WV	MD Reference:	KB @ 1346.0usft
Site:	Wetzel County 514375	North Reference:	Grid
Well:	Well 514375	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	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)	
10,402.0	90.00	330.90	7,327.4	5,981.4	2,119.1	621.0	1,990.4	0.50	0.48	0.16	
10,466.0	90.30	331.80	7,327.3	5,981.3	2,175.2	590.4	2,050.8	1.48	0.47	1.41	
10,529.0	90.50	332.00	7,326.8	5,980.8	2,230.8	560.7	2,110.4	0.45	0.32	0.32	
10,592.0	90.60	331.60	7,326.2	5,980.2	2,286.3	530.9	2,170.0	0.65	0.16	-0.63	
10,656.0	90.60	330.40	7,325.6	5,979.6	2,342.3	499.9	2,230.3	1.87	0.00	-1.88	
10,719.0	91.40	330.80	7,324.5	5,978.5	2,397.2	469.0	2,289.5	1.42	1.27	0.63	
10,782.0	89.60	332.50	7,323.9	5,977.9	2,452.6	439.1	2,349.0	3.93	-2.86	2.70	
10,845.0	89.30	331.40	7,324.5	5,978.5	2,508.2	409.4	2,408.7	1.81	-0.48	-1.75	
10,909.0	89.40	331.70	7,325.2	5,979.2	2,564.5	379.0	2,469.2	0.49	0.16	0.47	
10,972.0	89.70	331.60	7,325.7	5,979.7	2,619.9	349.0	2,528.7	0.50	0.48	-0.16	
11,035.0	89.40	332.40	7,326.2	5,980.2	2,675.6	319.5	2,588.4	1.36	-0.48	1.27	
11,099.0	89.30	333.20	7,327.0	5,981.0	2,732.5	290.2	2,649.3	1.26	-0.16	1.25	
11,162.0	89.70	333.00	7,327.5	5,981.5	2,788.7	261.7	2,709.4	0.71	0.63	-0.32	
11,225.0	90.30	334.00	7,327.5	5,981.5	2,845.0	233.6	2,769.5	1.85	0.95	1.59	
11,289.0	90.90	334.30	7,326.8	5,980.8	2,902.6	205.7	2,830.9	1.05	0.94	0.47	
11,352.0	91.20	334.50	7,325.7	5,979.7	2,959.4	178.5	2,891.4	0.57	0.48	0.32	
11,415.0	90.90	334.00	7,324.5	5,978.5	3,016.2	151.1	2,951.8	0.93	-0.48	-0.79	
11,479.0	90.20	331.60	7,323.9	5,977.9	3,073.1	121.9	3,012.7	3.91	-1.09	-3.75	
11,542.0	90.80	331.60	7,323.4	5,977.4	3,128.5	91.9	3,072.2	0.95	0.95	0.00	
11,605.0	90.40	332.20	7,322.7	5,976.7	3,184.1	62.2	3,131.9	1.14	-0.63	0.95	
11,669.0	90.10	331.50	7,322.4	5,976.4	3,240.5	32.0	3,192.5	1.19	-0.47	-1.09	
11,732.0	90.10	331.30	7,322.3	5,976.3	3,295.8	1.9	3,251.9	0.32	0.00	-0.32	
11,795.0	90.60	331.00	7,321.9	5,975.9	3,351.0	-28.5	3,311.3	0.93	0.79	-0.48	
11,858.0	90.40	332.00	7,321.4	5,975.4	3,406.4	-58.6	3,370.8	1.62	-0.32	1.59	
11,922.0	90.20	332.70	7,321.0	5,975.0	3,463.0	-88.3	3,431.6	1.14	-0.31	1.09	
11,985.0	90.20	332.00	7,320.8	5,974.8	3,518.8	-117.5	3,491.4	1.11	0.00	-1.11	
12,048.0	89.80	332.80	7,320.8	5,974.8	3,574.7	-146.7	3,551.2	1.42	-0.63	1.27	
12,111.0	89.50	332.30	7,321.2	5,975.2	3,630.6	-175.7	3,611.1	0.93	-0.48	-0.79	
12,175.0	89.70	332.50	7,321.6	5,975.6	3,687.3	-205.4	3,671.8	0.44	0.31	0.31	
12,238.0	89.80	332.30	7,321.9	5,975.9	3,743.1	-234.6	3,731.7	0.35	0.16	-0.32	
12,301.0	90.10	333.60	7,322.0	5,976.0	3,799.2	-263.2	3,791.7	2.12	0.48	2.06	
12,365.0	90.60	334.30	7,321.6	5,975.6	3,856.7	-291.3	3,853.0	1.34	0.78	1.09	
12,428.0	90.90	334.40	7,320.8	5,974.8	3,913.5	-318.6	3,913.4	0.50	0.48	0.16	
12,491.0	90.70	334.10	7,319.9	5,973.9	3,970.3	-346.0	3,973.8	0.57	-0.32	-0.48	
12,555.0	90.30	334.00	7,319.3	5,973.3	4,027.8	-374.0	4,035.2	0.64	-0.63	-0.16	
12,618.0	90.60	331.90	7,318.8	5,972.8	4,083.9	-402.6	4,095.2	3.37	0.48	-3.33	
12,682.0	91.30	330.80	7,317.8	5,971.8	4,140.1	-433.3	4,155.5	2.04	1.09	-1.72	
12,745.0	90.60	331.40	7,316.7	5,970.7	4,195.2	-463.8	4,214.9	1.46	-1.11	0.95	
12,808.0	89.80	330.80	7,316.5	5,970.5	4,250.4	-494.2	4,274.3	1.59	-1.27	-0.95	
12,871.0	89.60	330.70	7,316.8	5,970.8	4,305.3	-525.0	4,333.5	0.35	-0.32	-0.16	
12,934.0	89.70	329.60	7,317.2	5,971.2	4,360.0	-556.3	4,392.5	1.75	0.16	-1.75	
12,998.0	90.00	329.90	7,317.4	5,971.4	4,415.3	-588.6	4,452.3	0.66	0.47	0.47	
13,061.0	90.20	329.90	7,317.3	5,971.3	4,469.8	-620.2	4,511.2	0.32	0.32	0.00	

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Wetzel County 514375
Company:	EQT Production - Marcellus	TVD Reference:	KB @ 1346.0usft
Project:	Wetzel County, WV	MD Reference:	KB @ 1346.0usft
Site:	Wetzel County 514375	North Reference:	Grid
Well:	Well 514375	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	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)
13,124.0	90.60	329.10	7,316.8	5,970.8	4,524.0	-652.1	4,569.9	1.42	0.63	-1.27
13,187.0	90.80	329.20	7,316.1	5,970.1	4,578.1	-684.4	4,628.5	0.35	0.32	0.16
13,250.0	91.10	328.90	7,315.0	5,969.0	4,632.1	-716.8	4,687.1	0.67	0.48	-0.48
13,314.0	91.00	328.60	7,313.9	5,967.9	4,686.8	-750.0	4,746.4	0.49	-0.16	-0.47
Final Survey=13362' MD/ 7313' TVD										
13,362.0	91.40	328.60	7,312.8	5,966.8	4,727.8	-775.0	4,790.9	0.83	0.83	0.00
514375 TD1										
13,411.1	91.40	328.60	7,311.6	5,965.6	4,769.7	-800.6	4,836.4	0.00	0.00	0.00
Projection to TD=13419' MD/ 7312' TVD										
13,419.0	91.40	328.60	7,311.5	5,965.5	4,776.4	-804.7	4,843.7	0.00	0.00	0.00

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,996.4	7,301.0	Top of Marcellus@7301' TVD		0.00	

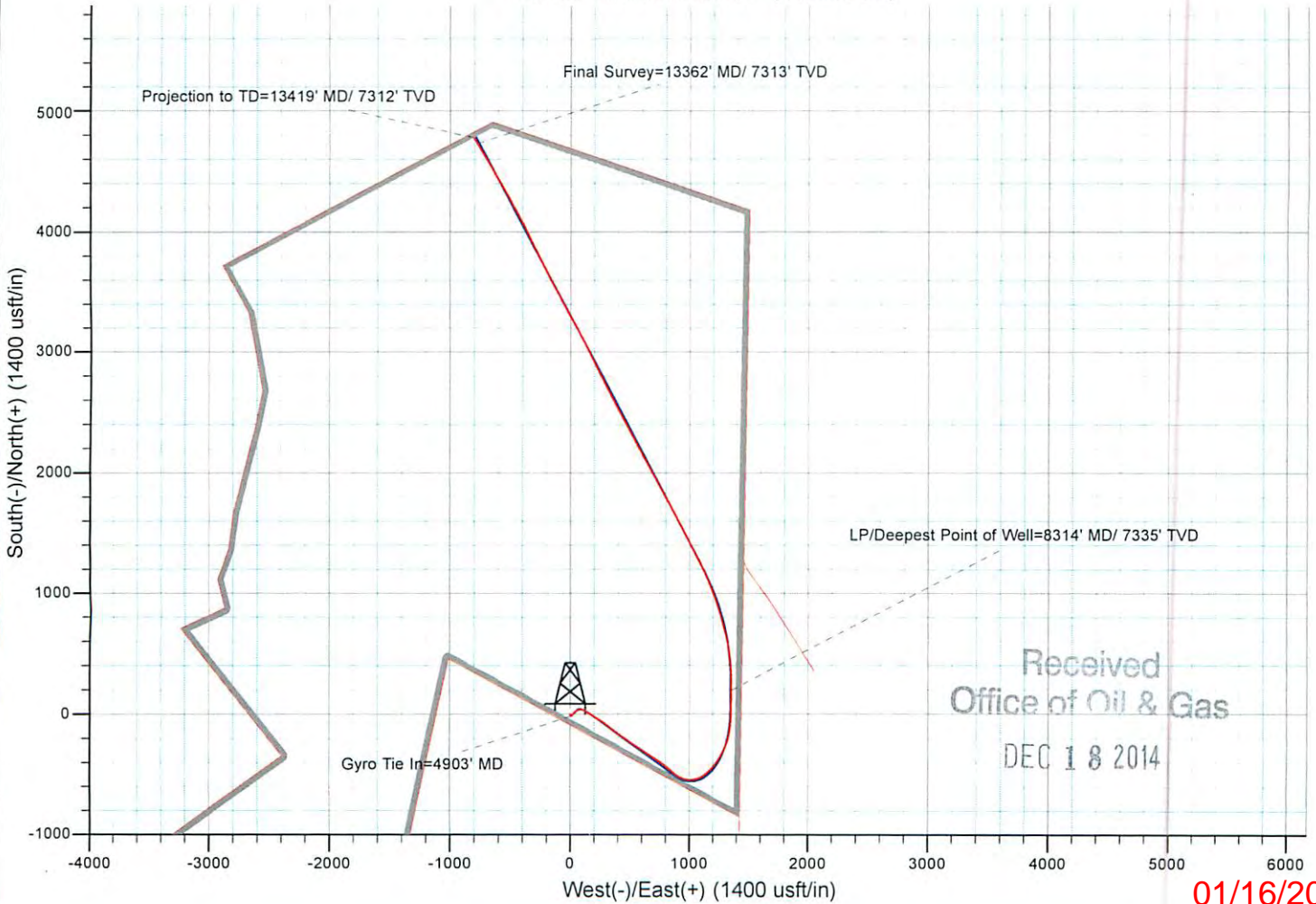
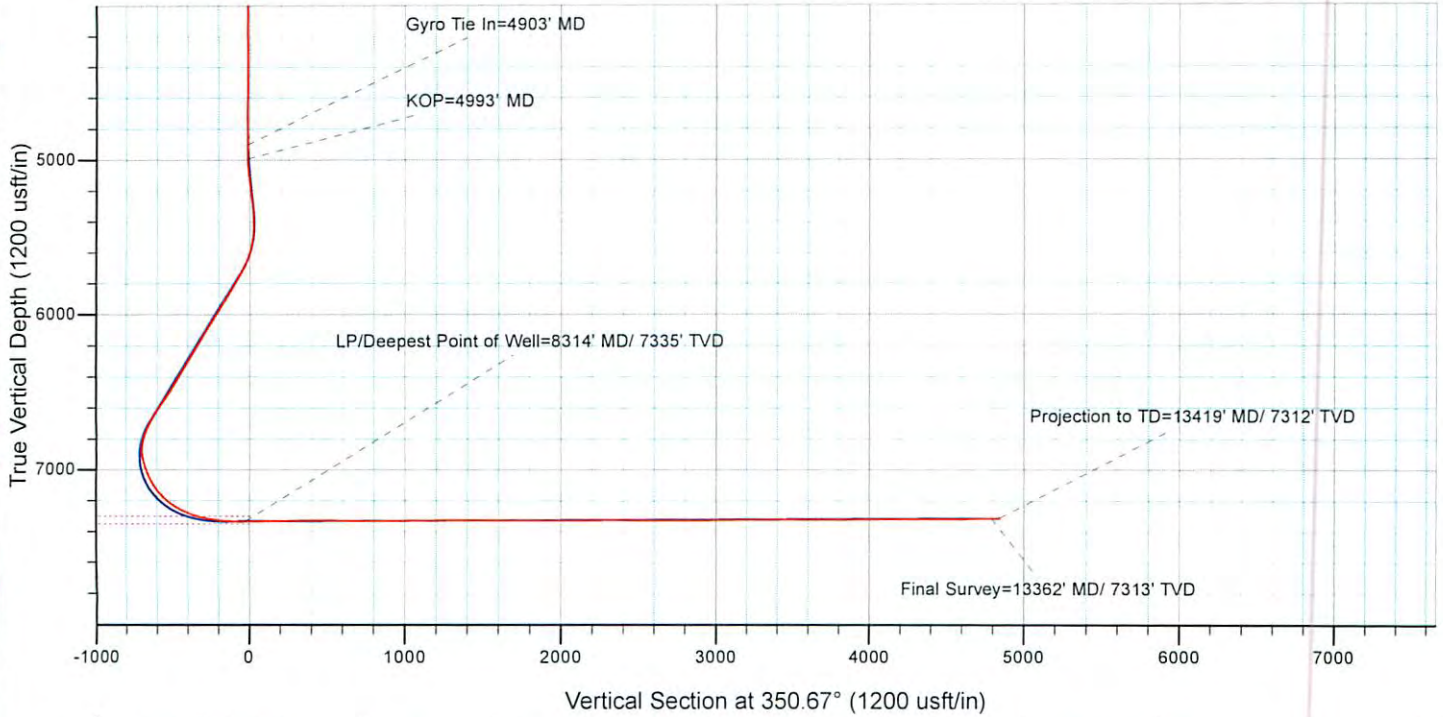
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
4,903.0	4,902.9	-13.0	10.6	Gyro Tie In=4903' MD
4,993.0	4,992.9	-12.4	11.6	KOP=4993' MD
8,314.0	7,335.0	193.5	1,352.7	LP/Deepest Point of Well=8314' MD/ 7335' TVD
13,362.0	7,312.8	4,727.8	-775.0	Final Survey=13362' MD/ 7313' TVD
13,419.0	7,311.5	4,776.4	-804.7	Projection to TD=13419' MD/ 7312' TVD

Checked By: _____ Approved By: _____ Date: _____

Received
JAS
Dec 18 2014



Project: Wetzel County, WV
Site: Wetzel County 514375
Well: Well 514375
Wellbore: Main Wellbore
Design: As Drilled Surveys



Received
Office of Oil & Gas
DEC 18 2014