

103-02902

PHOENIX
TECHNOLOGY SERVICES



EQT Production - Geneseo Shale

Wetzel County, WV
Wetzel County 513726
Well #513726

Main Wellbore

Design: AS Drilled Surveys

Standard Survey Report

20 November, 2013



10/31/2014



103-02902

Phoenix Technologies, Inc.
Survey Report



Database:	EQT DB	Local Co-ordinate Reference:	Site Wetzel County 513726
Company:	EQT Production - Genesee Shale	TVD Reference:	KB @ 935.0usft
Project:	Wetzel County, WV	MD Reference:	KB @ 835.0usft
Site:	Wetzel County 513726	North Reference:	Grid
Well:	Well #513726	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		

Site Wetzel County 513726			
Site Position:		Northing:	385,078.80 usft
From:	Map	Easting:	1,710,279.80 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	39.55
		Longitude:	-80.53
		Grid Convergence:	-0.66 °

Well Well #513726						
Well Position	+N-S	0.0 usft	Northing:	385,078.80 usft	Latitude:	39° 33' 9.783 N
	+E-W	0.0 usft	Easting:	1,710,279.80 usft	Longitude:	80° 31' 38.987 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	919.0 usft

Wellbore Main Wellbore			
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010_14	10/30/2013	-8.69	67.04	52,477

Design AS Drilled Surveys			
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Audit Notes:

Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	152.73	

Survey Program	Date	11/15/2013		
From (')	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	5,103.0	513726 Final Gyro Survey (Main Wellbore)	GYD_DP_MS	Gyrodata gyro-compassing and drop
0.00	12,507.0	513726 MWD (Curve and Lateral) (Main We	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	-935.0	0.0	0.0	0.0	0.00	0.00	0.00
103.0	0.23	53.10	103.0	-832.0	0.1	0.2	0.0	0.22	0.22	0.00
203.0	0.08	55.64	203.0	-732.0	0.3	0.4	-0.1	0.15	-0.15	2.54
303.0	0.06	37.22	303.0	-632.0	0.4	0.5	-0.1	0.03	-0.02	-18.42
403.0	0.06	52.27	403.0	-532.0	0.4	0.5	-0.1	0.02	0.00	15.05
503.0	0.08	60.53	503.0	-432.0	0.5	0.6	-0.2	0.02	0.02	8.26
603.0	0.11	88.70	603.0	-332.0	0.5	0.8	-0.1	0.05	0.03	28.17
703.0	0.11	71.13	703.0	-232.0	0.6	1.0	-0.1	0.03	0.00	-17.57

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Site:	Wetzel County 513726	North Reference:	Grid
Well:	Well #513726	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	0.14	79.27	803.0	-132.0	0.6	1.2	0.0	0.03	0.03	8.14	
903.0	0.18	25.75	903.0	-32.0	0.8	1.4	-0.1	0.15	0.04	-53.52	
1,003.0	1.43	334.53	1,003.0	68.0	2.1	0.9	-1.4	1.32	1.25	-51.22	
1,103.0	3.49	333.85	1,102.9	167.9	5.9	-1.0	-5.7	2.06	2.06	-0.68	
1,203.0	6.10	337.40	1,202.5	267.5	13.6	-4.3	-14.0	2.63	2.61	3.55	
1,303.0	5.48	333.94	1,302.0	367.0	22.8	-8.5	-24.1	0.71	-0.62	-3.46	
1,403.0	3.39	320.22	1,401.7	466.7	29.3	-12.5	-31.8	2.33	-2.09	-13.72	
1,503.0	1.25	252.83	1,501.6	566.6	31.3	-15.4	-34.8	3.13	-2.14	-67.39	
1,603.0	1.00	236.65	1,601.6	666.6	30.5	-17.2	-34.9	0.40	-0.25	-16.18	
1,703.0	0.52	218.55	1,701.6	766.6	29.6	-18.2	-34.7	0.53	-0.48	-18.10	
1,803.0	0.26	150.31	1,801.6	866.6	29.1	-18.4	-34.3	0.49	-0.26	-68.24	
1,903.0	0.23	100.81	1,901.6	966.6	28.8	-18.0	-33.9	0.21	-0.03	-49.50	
2,003.0	0.34	87.46	2,001.6	1,066.6	28.8	-17.6	-33.7	0.13	0.11	-13.35	
2,103.0	0.47	81.10	2,101.6	1,166.6	28.9	-16.9	-33.4	0.14	0.13	-6.36	
2,203.0	0.11	56.04	2,201.6	1,266.6	29.0	-16.4	-33.3	0.37	-0.36	-25.06	
2,303.0	0.03	83.48	2,301.6	1,366.6	29.1	-16.3	-33.3	0.08	-0.08	27.44	
2,403.0	0.03	292.77	2,401.6	1,466.6	29.1	-16.3	-33.3	0.06	0.00	-150.71	
2,503.0	0.10	130.38	2,501.6	1,566.6	29.0	-16.2	-33.2	0.13	0.07	-162.39	
2,603.0	0.23	141.11	2,601.6	1,666.6	28.8	-16.0	-33.0	0.13	0.13	10.73	
2,703.0	0.08	104.89	2,701.6	1,766.6	28.6	-15.8	-32.7	0.17	-0.15	-36.22	
2,803.0	0.54	359.90	2,801.6	1,866.6	29.1	-15.8	-33.1	0.57	0.46	-104.99	
2,903.0	0.56	356.99	2,901.6	1,966.6	30.1	-15.8	-34.0	0.03	0.02	-2.91	
3,003.0	0.42	6.64	3,001.6	2,066.6	30.9	-15.8	-34.7	0.16	-0.14	9.65	
3,103.0	0.34	8.86	3,101.6	2,166.6	31.6	-15.7	-35.2	0.08	-0.08	2.22	
3,203.0	0.21	19.71	3,201.6	2,266.6	32.0	-15.6	-35.6	0.14	-0.13	10.85	
3,303.0	0.15	82.03	3,301.6	2,366.6	32.2	-15.4	-35.7	0.19	-0.06	62.32	
3,403.0	0.25	98.12	3,401.6	2,466.6	32.2	-15.0	-35.5	0.11	0.10	16.09	
3,503.0	0.27	101.67	3,501.6	2,566.6	32.1	-14.6	-35.3	0.03	0.02	3.55	
3,603.0	0.28	99.74	3,601.6	2,666.6	32.0	-14.1	-35.0	0.01	0.01	-1.93	
3,703.0	0.27	102.13	3,701.6	2,766.6	32.0	-13.7	-34.7	0.02	-0.01	2.39	
3,803.0	0.28	92.83	3,801.6	2,866.6	31.9	-13.2	-34.4	0.05	0.01	-9.30	
3,903.0	0.36	98.53	3,901.6	2,966.6	31.8	-12.6	-34.1	0.09	0.08	5.70	
4,003.0	0.41	93.35	4,001.6	3,066.6	31.8	-12.0	-33.7	0.06	0.05	-5.18	
4,103.0	0.37	92.93	4,101.6	3,166.6	31.7	-11.3	-33.4	0.04	-0.04	-0.42	
4,203.0	0.44	77.75	4,201.6	3,266.6	31.8	-10.6	-33.1	0.13	0.07	-15.18	
4,303.0	0.55	54.97	4,301.6	3,366.6	32.2	-9.8	-33.1	0.22	0.11	-22.78	
4,403.0	0.64	57.03	4,401.6	3,466.6	32.7	-8.9	-33.2	0.09	0.09	2.06	
4,503.0	0.64	49.57	4,501.6	3,566.6	33.4	-8.1	-33.4	0.08	0.00	-7.46	
4,603.0	0.66	47.67	4,601.6	3,666.6	34.1	-7.2	-33.7	0.03	0.02	-1.90	
4,703.0	0.67	45.12	4,701.6	3,766.6	34.9	-6.4	-34.0	0.03	0.01	-2.55	
4,803.0	0.67	46.44	4,801.5	3,866.5	35.8	-5.5	-34.3	0.02	0.00	1.32	
4,903.0	0.55	41.44	4,901.5	3,966.5	36.5	-4.8	-34.7	0.13	-0.12	-5.00	



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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)
5,003.0	0.60	45.11	5,001.5	4,066.5	37.3	-4.1	-35.0	0.06	0.05	3.67
5,103.0	0.70	51.66	5,101.5	4,166.5	38.0	-3.2	-35.3	0.12	0.10	6.55
5,123.0	0.70	53.70	5,121.5	4,186.5	38.2	-3.1	-35.3	0.12	0.00	10.20
5,155.0	0.70	30.50	5,153.5	4,218.5	38.4	-2.8	-35.4	0.88	0.00	-72.50
5,187.0	4.10	327.30	5,185.5	4,250.5	39.6	-3.3	-36.7	11.99	10.63	-197.50
5,218.0	8.60	328.70	5,216.3	4,281.3	42.5	-5.1	-40.1	14.52	14.52	4.52
5,250.0	12.40	331.50	5,247.8	4,312.8	47.5	-8.0	-45.9	11.98	11.88	8.75
5,282.0	14.10	331.80	5,278.9	4,343.9	54.0	-11.5	-53.3	5.32	5.31	0.94
5,314.0	15.80	328.90	5,309.8	4,374.8	61.2	-15.6	-61.5	5.80	5.31	-9.06
5,345.0	17.70	324.40	5,339.5	4,404.5	68.6	-20.5	-70.4	7.42	6.13	-14.52
5,377.0	21.10	325.30	5,369.7	4,434.7	77.3	-26.6	-80.9	10.67	10.63	2.81
5,409.0	23.40	329.30	5,399.3	4,464.3	87.5	-33.1	-93.0	8.60	7.19	12.50
5,440.0	26.20	331.60	5,427.4	4,492.4	98.8	-39.5	-106.0	9.55	9.03	7.42
5,472.0	28.70	332.60	5,455.8	4,520.8	111.9	-46.4	-120.7	7.94	7.81	3.13
5,504.0	31.40	331.40	5,483.5	4,548.5	126.0	-54.0	-136.7	8.64	8.44	-3.75
5,535.0	34.00	329.30	5,509.6	4,574.6	140.6	-62.3	-153.5	9.15	8.39	-6.77
5,567.0	37.70	327.80	5,535.5	4,600.5	156.5	-72.0	-172.1	11.88	11.56	-4.69
5,599.0	41.30	327.70	5,560.2	4,625.2	173.7	-82.9	-192.4	11.25	11.25	-0.31
5,630.0	41.90	328.20	5,583.4	4,648.4	191.2	-93.8	-212.9	2.21	1.94	1.61
5,662.0	40.70	327.40	5,607.5	4,672.5	209.1	-105.1	-234.0	4.10	-3.75	-2.50
5,694.0	41.10	324.50	5,631.6	4,696.6	226.4	-116.8	-254.8	6.06	1.25	-9.06
5,725.0	42.70	325.40	5,654.7	4,719.7	243.4	-128.7	-275.3	5.51	5.16	2.90
5,757.0	43.80	328.20	5,678.0	4,743.0	261.7	-140.7	-297.1	6.91	3.44	8.75
5,788.0	42.80	329.90	5,700.6	4,765.6	279.9	-151.6	-318.3	4.95	-3.23	5.48
5,820.0	39.70	330.50	5,724.6	4,789.6	298.2	-162.1	-339.4	9.77	-9.69	1.88
5,852.0	36.90	329.60	5,749.8	4,814.8	315.4	-172.0	-359.2	8.92	-8.75	-2.81
5,884.0	33.80	328.00	5,775.9	4,840.9	331.3	-181.6	-377.7	10.11	-9.69	-5.00
5,915.0	30.60	325.10	5,802.1	4,867.1	345.1	-190.7	-394.1	11.46	-10.32	-9.35
5,947.0	26.80	321.70	5,830.2	4,895.2	357.4	-199.8	-409.2	12.92	-11.88	-10.63
5,979.0	23.90	320.20	5,859.1	4,924.1	368.0	-208.4	-422.6	9.28	-9.06	-4.69
6,010.0	20.90	320.90	5,887.7	4,952.7	377.2	-215.9	-434.2	9.72	-9.68	2.26
6,042.0	17.80	322.80	5,917.9	4,982.9	385.5	-222.5	-444.6	9.88	-9.69	5.94
6,074.0	14.50	321.60	5,948.6	5,013.6	392.5	-227.9	-453.3	10.36	-10.31	-3.75
6,105.0	11.90	315.00	5,978.8	5,043.8	397.8	-232.6	-460.2	9.68	-8.39	-21.29
6,137.0	9.30	306.90	6,010.3	5,075.3	401.7	-237.0	-465.7	9.35	-8.13	-25.31
6,169.0	6.90	291.30	6,042.0	5,107.0	404.0	-240.9	-469.4	10.11	-7.50	-48.75
6,200.0	5.70	264.30	6,072.8	5,137.8	404.5	-244.1	-471.4	10.19	-3.87	-87.10
6,232.0	5.90	251.50	6,104.6	5,169.6	403.8	-247.3	-472.2	4.08	0.63	-40.00
6,264.0	5.40	236.40	6,136.5	5,201.5	402.5	-250.1	-472.3	4.88	-1.56	-47.19
6,295.0	3.90	213.40	6,167.4	5,232.4	400.8	-251.9	-471.6	7.63	-4.84	-74.19
6,327.0	2.50	182.20	6,199.3	5,264.3	399.2	-252.5	-470.5	6.83	-4.38	-97.50
6,359.0	2.20	187.70	6,231.3	5,296.3	397.9	-252.6	-469.4	1.17	-0.94	17.19
6,390.0	2.00	193.90	6,262.3	5,327.3	396.7	-252.8	-468.5	0.98	-0.65	20.00



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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)
6,422.0	1.50	201.50	6,294.3	5,359.3	395.8	-253.1	-467.8	1.72	-1.56	23.75
6,454.0	1.50	216.40	6,326.2	5,391.2	395.1	-253.5	-467.3	1.22	0.00	46.56
6,485.0	2.10	189.00	6,357.2	5,422.2	394.2	-253.9	-466.7	3.33	1.94	-88.39
6,517.0	5.60	166.40	6,389.2	5,454.2	392.1	-253.6	-464.7	11.72	10.94	-70.63
6,549.0	9.30	165.00	6,420.9	5,485.9	388.1	-252.5	-460.7	11.58	11.56	-4.38
6,580.0	12.30	164.60	6,451.3	5,516.3	382.5	-251.0	-455.0	9.68	9.68	-1.29
6,612.0	14.60	163.40	6,482.4	5,547.4	375.3	-249.0	-447.7	7.24	7.19	-3.75
6,644.0	16.60	165.10	6,513.3	5,578.3	367.0	-246.6	-439.3	6.41	6.25	5.31
6,675.0	17.70	162.10	6,542.9	5,607.9	358.3	-244.1	-430.3	4.55	3.55	-9.68
6,707.0	20.80	161.90	6,573.1	5,638.1	348.2	-240.8	-419.9	9.69	9.69	-0.63
6,739.0	24.20	160.90	6,602.7	5,667.7	336.6	-236.9	-407.8	10.69	10.63	-3.13
6,770.0	27.40	158.30	6,630.6	5,695.6	324.0	-232.2	-394.4	10.95	10.32	-8.39
6,802.0	29.50	153.50	6,658.7	5,723.7	310.1	-225.9	-379.2	9.70	6.56	-15.00
6,834.0	32.40	149.70	6,686.1	5,751.1	295.7	-218.1	-362.7	10.92	9.06	-11.88
6,866.0	35.10	148.30	6,712.7	5,777.7	280.4	-208.9	-345.0	8.78	8.44	-4.38
6,897.0	38.80	148.20	6,737.5	5,802.5	264.6	-199.1	-326.4	11.94	11.94	-0.32
6,929.0	41.90	149.40	6,761.9	5,826.9	246.9	-188.4	-305.7	9.99	9.69	3.75
6,960.0	45.70	151.10	6,784.3	5,849.3	228.2	-177.7	-284.3	12.83	12.26	5.48
6,992.0	49.60	151.60	6,805.8	5,870.8	207.5	-166.4	-260.7	12.24	12.19	1.56
7,024.0	53.70	152.40	6,825.7	5,890.7	185.3	-154.6	-235.6	12.96	12.81	2.50
7,055.0	57.70	153.50	6,843.1	5,908.1	162.5	-143.0	-210.0	13.23	12.90	3.55
7,087.0	60.30	154.80	6,859.6	5,924.6	137.8	-131.0	-182.6	8.84	8.13	4.06
7,119.0	62.20	154.20	6,875.0	5,940.0	112.5	-119.0	-154.5	6.16	5.94	-1.88
7,150.0	65.10	155.10	6,888.8	5,953.8	87.4	-107.1	-126.8	9.71	9.35	2.90
7,182.0	68.30	155.60	6,901.4	5,966.4	60.7	-94.8	-97.4	10.10	10.00	1.56
7,214.0	72.80	156.50	6,912.1	5,977.1	33.1	-82.6	-67.3	14.31	14.06	2.81
7,245.0	75.60	157.50	6,920.5	5,985.5	5.7	-70.9	-37.6	9.55	9.03	3.23
7,277.0	79.00	158.90	6,927.6	5,992.6	-23.3	-59.3	-6.5	11.45	10.63	4.38
7,309.0	80.60	158.20	6,933.2	5,998.2	-52.6	-47.8	24.8	5.44	5.00	-2.19
7,340.0	83.30	156.50	6,937.6	6,002.6	-80.9	-36.0	55.4	10.26	8.71	-5.48
7,372.0	86.40	155.30	6,940.4	6,005.4	-110.0	-23.0	87.3	10.38	9.69	-3.75
7,435.0	89.90	156.50	6,942.5	6,007.5	-167.5	2.7	150.1	5.87	5.56	1.90
7,499.0	90.20	155.20	6,942.4	6,007.4	-225.9	28.9	214.0	2.08	0.47	-2.03
7,562.0	91.60	152.20	6,941.4	6,006.4	-282.4	56.8	277.0	5.25	2.22	-4.76
7,625.0	92.10	151.30	6,939.4	6,004.4	-337.8	86.6	340.0	1.63	0.79	-1.43
7,689.0	92.10	151.60	6,937.0	6,002.0	-394.0	117.2	403.9	0.47	0.00	0.47
7,752.0	92.10	150.30	6,934.7	5,999.7	-449.0	147.7	466.8	2.06	0.00	-2.06
7,815.0	90.30	150.00	6,933.4	5,998.4	-503.7	179.1	529.7	2.90	-2.86	-0.48
7,879.0	90.00	150.30	6,933.2	5,998.2	-559.2	210.9	593.7	0.66	-0.47	0.47
7,942.0	89.50	151.10	6,933.5	5,998.5	-614.1	241.8	656.6	1.50	-0.79	1.27
8,006.0	87.90	149.60	6,935.0	6,000.0	-669.7	273.4	720.6	3.43	-2.50	-2.34
8,069.0	88.00	149.30	6,937.2	6,002.2	-723.9	305.4	783.4	0.50	0.16	-0.48



103-02902

Phoenix Technologies, Inc.
Survey Report



Database:	EQT DB	Local Co-ordinate Reference:	Site Wetzel County 513726
Company:	EQT Production - Genesee Shale	TVD Reference:	KB @ 935.0usft
Project:	Wetzel County, WV	MD Reference:	KB @ 935.0usft
Site:	Wetzel County 513726	North Reference:	Grid
Well:	Well #513726	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)	
8,132.0	88.20	149.40	6,939.3	6,004.3	-778.1	337.5	846.3	0.35	0.32	0.16	
8,196.0	88.40	149.10	6,941.2	6,006.2	-833.1	370.2	910.1	0.56	0.31	-0.47	
8,259.0	88.30	149.50	6,943.0	6,008.0	-887.2	402.4	973.0	0.65	-0.16	0.63	
8,322.0	88.50	149.60	6,944.8	6,009.8	-941.5	434.3	1,035.9	0.35	0.32	0.16	
8,386.0	89.30	150.90	6,946.0	6,011.0	-997.1	466.1	1,099.8	2.38	1.25	2.03	
8,449.0	89.50	151.70	6,946.7	6,011.7	-1,052.3	496.3	1,162.8	1.31	0.32	1.27	
8,513.0	91.10	153.00	6,946.3	6,011.3	-1,109.0	526.0	1,226.8	3.22	2.50	2.03	
8,576.0	91.80	152.50	6,944.7	6,009.7	-1,165.0	554.8	1,289.7	1.37	1.11	-0.79	
8,640.0	92.10	151.70	6,942.6	6,007.6	-1,221.5	584.8	1,353.7	1.33	0.47	-1.25	
8,703.0	91.60	151.30	6,940.5	6,005.5	-1,276.9	614.8	1,416.7	1.02	-0.79	-0.63	
8,766.0	91.30	150.90	6,938.9	6,003.9	-1,332.0	645.3	1,479.6	0.79	-0.48	-0.63	
8,830.0	90.90	150.40	6,937.7	6,002.7	-1,387.8	676.6	1,543.6	1.00	-0.63	-0.78	
8,893.0	90.10	151.00	6,937.2	6,002.2	-1,442.7	707.4	1,606.5	1.59	-1.27	0.95	
8,957.0	88.60	148.50	6,937.9	6,002.9	-1,498.0	739.7	1,670.4	4.56	-2.34	-3.91	
9,020.0	88.40	148.50	6,939.5	6,004.5	-1,551.7	772.6	1,733.2	0.32	-0.32	0.00	
9,083.0	88.20	151.40	6,941.4	6,006.4	-1,606.2	804.1	1,796.1	4.61	-0.32	4.60	
9,147.0	87.60	151.10	6,943.8	6,008.8	-1,662.3	834.9	1,860.0	1.05	-0.94	-0.47	
9,210.0	87.30	151.80	6,946.6	6,011.6	-1,717.6	865.0	1,923.0	1.21	-0.48	1.11	
9,274.0	87.00	153.80	6,949.7	6,014.7	-1,774.4	894.2	1,986.9	3.16	-0.47	3.13	
9,337.0	86.90	153.60	6,953.1	6,018.1	-1,830.8	922.1	2,049.8	0.35	-0.16	-0.32	
9,400.0	86.90	153.70	6,956.5	6,021.5	-1,887.2	950.0	2,112.7	0.16	0.00	0.16	
9,463.0	86.30	152.90	6,960.2	6,025.2	-1,943.4	978.2	2,175.6	1.59	-0.95	-1.27	
9,527.0	87.10	153.60	6,963.9	6,028.9	-2,000.4	1,007.0	2,239.5	1.66	1.25	1.09	
9,590.0	88.00	154.70	6,966.6	6,031.6	-2,057.1	1,034.4	2,302.4	2.25	1.43	1.75	
9,653.0	88.60	155.80	6,968.5	6,033.5	-2,114.2	1,060.8	2,365.3	1.99	0.95	1.75	
9,716.0	89.30	156.30	6,969.6	6,034.6	-2,171.8	1,086.4	2,428.2	1.37	1.11	0.79	
9,779.0	89.30	155.00	6,970.4	6,035.4	-2,229.2	1,112.3	2,491.1	2.06	0.00	-2.06	
9,842.0	88.90	152.80	6,971.4	6,036.4	-2,285.8	1,140.0	2,554.1	3.55	-0.63	-3.49	
9,905.0	88.60	152.60	6,972.8	6,037.8	-2,341.7	1,168.9	2,617.0	0.57	-0.48	-0.32	
9,969.0	88.30	152.00	6,974.5	6,039.5	-2,398.4	1,198.7	2,681.0	1.05	-0.47	-0.94	
10,032.0	88.00	151.30	6,976.5	6,041.5	-2,453.8	1,228.6	2,744.0	1.21	-0.48	-1.11	
10,096.0	87.50	150.60	6,979.0	6,044.0	-2,509.7	1,259.6	2,807.9	1.34	-0.78	-1.09	
10,159.0	87.90	151.40	6,981.6	6,046.6	-2,564.7	1,290.1	2,870.8	1.42	0.63	1.27	
10,222.0	87.70	152.20	6,984.0	6,049.0	-2,620.2	1,319.9	2,933.8	1.31	-0.32	1.27	
10,285.0	87.30	153.00	6,986.7	6,051.7	-2,676.1	1,348.9	2,996.7	1.42	-0.63	1.27	
10,348.0	88.20	153.40	6,989.2	6,054.2	-2,732.3	1,377.2	3,059.7	1.56	1.43	0.63	
10,411.0	89.50	155.80	6,990.5	6,055.5	-2,789.2	1,404.3	3,122.6	4.33	2.06	3.81	
10,474.0	88.20	154.50	6,991.7	6,056.7	-2,846.3	1,430.7	3,185.5	2.92	-2.06	-2.06	
10,538.0	87.30	154.60	6,994.3	6,059.3	-2,904.1	1,458.2	3,249.4	1.41	-1.41	0.16	
10,601.0	87.20	154.80	6,997.3	6,062.3	-2,961.0	1,485.1	3,312.3	0.35	-0.16	0.32	
10,665.0	87.10	154.60	7,000.5	6,065.5	-3,018.8	1,512.4	3,376.2	0.35	-0.16	-0.31	
10,728.0	86.70	153.60	7,003.9	6,068.9	-3,075.4	1,539.9	3,439.1	1.71	-0.63	-1.59	
10,791.0	87.00	153.20	7,007.3	6,072.3	-3,131.6	1,568.1	3,502.0	0.79	0.48	-0.63	



103.02902

Phoenix Technologies, Inc.
Survey Report



Database:	EQT DB	Local Co-ordinate Reference:	Site Wetzel County 513726
Company:	EQT Production - Genesee Shale	TVD Reference:	KB @ 935.0usft
Project:	Wetzel County, WV	MD Reference:	KB @ 935.0usft
Site:	Wetzel County 513726	North Reference:	Grid
Well:	Well #513726	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)
10,855.0	86.70	152.00	7,010.8	6,075.8	-3,188.3	1,597.5	3,565.9	1.93	-0.47	-1.88
10,918.0	86.70	151.90	7,014.5	6,079.5	-3,243.8	1,627.0	3,628.8	0.16	0.00	-0.16
10,981.0	85.50	152.20	7,018.8	6,083.8	-3,299.4	1,656.5	3,691.6	1.96	-1.90	0.48
11,044.0	85.10	152.80	7,023.9	6,088.9	-3,355.1	1,685.5	3,754.4	1.14	-0.63	0.95
11,108.0	83.60	151.80	7,030.2	6,095.2	-3,411.4	1,715.1	3,818.1	2.81	-2.34	-1.56
11,171.0	82.20	151.20	7,038.0	6,103.0	-3,466.4	1,744.9	3,880.6	2.41	-2.22	-0.95
11,235.0	82.00	151.30	7,046.8	6,111.8	-3,522.0	1,775.4	3,944.0	0.35	-0.31	0.16
11,298.0	82.30	150.10	7,055.4	6,120.4	-3,576.4	1,806.0	4,006.4	1.95	0.48	-1.90
11,361.0	83.70	149.60	7,063.1	6,128.1	-3,630.5	1,837.4	4,068.8	2.36	2.22	-0.79
11,425.0	83.40	149.60	7,070.3	6,135.3	-3,685.3	1,869.5	4,132.3	0.47	-0.47	0.00
11,488.0	85.80	151.10	7,076.2	6,141.2	-3,739.8	1,900.6	4,195.0	4.49	3.81	2.38
11,551.0	85.80	150.50	7,080.8	6,145.8	-3,794.7	1,931.2	4,257.8	0.95	0.00	-0.95
11,615.0	85.50	149.80	7,085.7	6,150.7	-3,850.0	1,963.0	4,321.5	1.19	-0.47	-1.09
11,678.0	84.60	149.80	7,091.1	6,156.1	-3,904.3	1,994.6	4,384.2	1.43	-1.43	0.00
11,742.0	84.10	149.00	7,097.4	6,162.4	-3,959.1	2,027.0	4,447.8	1.47	-0.78	-1.25
11,805.0	83.40	150.00	7,104.3	6,169.3	-4,013.0	2,058.8	4,510.3	1.93	-1.11	1.59
11,868.0	82.80	151.80	7,111.8	6,176.8	-4,067.7	2,089.2	4,572.8	2.99	-0.95	2.86
11,932.0	83.80	153.80	7,119.3	6,184.3	-4,124.2	2,118.2	4,636.4	3.47	1.56	3.13
11,995.0	86.60	154.40	7,124.6	6,189.6	-4,180.7	2,145.6	4,699.1	4.54	4.44	0.95
12,059.0	88.30	155.30	7,127.4	6,192.4	-4,238.5	2,172.8	4,763.0	3.00	2.66	1.41
12,122.0	88.40	154.70	7,129.2	6,194.2	-4,295.6	2,199.4	4,825.9	0.97	0.16	-0.95
12,186.0	88.20	154.20	7,131.1	6,196.1	-4,353.3	2,227.0	4,889.9	0.84	-0.31	-0.78
12,249.0	86.80	154.30	7,133.9	6,198.9	-4,410.0	2,254.4	4,952.8	2.23	-2.22	0.16
12,312.0	85.70	154.90	7,138.0	6,203.0	-4,466.8	2,281.3	5,015.6	1.99	-1.75	0.95
12,376.0	85.60	154.70	7,142.9	6,207.9	-4,524.6	2,308.5	5,079.4	0.35	-0.16	-0.31
12,439.0	85.80	154.50	7,147.6	6,212.6	-4,581.3	2,335.4	5,142.2	0.45	0.32	-0.32
Final Survey MD=12451'										
12,451.0	85.50	154.00	7,148.5	6,213.5	-4,592.1	2,340.6	5,154.2	4.85	-2.50	-4.17
12,507.0	85.50	154.00	7,152.9	6,217.9	-4,642.3	2,365.1	5,210.0	0.00	0.00	0.00

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
12,451.0	7,148.5	-4,592.1	2,340.6	Final Survey MD=12451'
12,507.0	7,152.9	-4,642.3	2,365.1	Projection to TD MD=12507'

Checked By: _____ Approved By: _____ Date: _____



103-02902

Project: Wetzel County, WV
Site: Wetzel County 513726
Well: Well #513726
Wellbore: Main Wellbore
Design: AS Drilled Surveys

