

103-02972

PHOENIX
TECHNOLOGY SERVICES



EQT Production - Geneseo Shale

Wetzel County, WV
Wetzel County 514386
Well #514386

Main Wellbore

Design: As Drilled Surveys

Standard Survey Report

28 January, 2014

RECEIVED
Office of Oil and Gas

DEC 19 2014

WV Department of
Environmental Protection



Where energy meets innovation.

01/23/2015



103-02972

Phoenix Technology Services
Survey Report

RECEIVED
Office of Oil and Gas
DEC 19 2014
WV Department of
Environmental Protection
Where energy meets innovation.

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Wetzel County 514386
Company:	EQT Production - Genesee Shale	TVD Reference:	KB @ 1346.0usft
Project:	Wetzel County, WV	MD Reference:	KB @ 1346.0usft
Site:	Wetzel County 514386	North Reference:	Grid
Well:	Well #514386	Survey Calculation Method:	WV 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 514386				
Site Position:		Northing:	385,197.99 usft	Latitude:	39.55
From:	Map	Easting:	1,678,300.00 usft	Longitude:	-80.64
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.73 °

Well	Well #514386					
Well Position	+N/-S	0.0 usft	Northing:	385,197.99 usft	Latitude:	39° 33' 7.147 N
	+E/-W	0.0 usft	Easting:	1,678,300.00 usft	Longitude:	80° 38' 27.265 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	1/7/2014	-8.61	67.04	52,464

Design	As Drilled Surveys				
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	166.42	

Survey Program	Date	1/28/2014			
From (')	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	4,650.0	514386 Gyrodata Gyros (Main Wellbore)	GYD_DP_MS	Gyrodata gyro-compassing and drop	
0.00	11,265.0	514386 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	
100.0	0.13	79.84	100.0	-1,246.0	0.0	0.1	0.0	0.13	0.13	0.00	
200.0	0.14	186.49	200.0	-1,146.0	-0.1	0.2	0.1	0.22	0.01	106.65	
300.0	0.23	184.10	300.0	-1,046.0	-0.4	0.2	0.4	0.09	0.09	-2.39	
400.0	0.20	187.16	400.0	-946.0	-0.8	0.1	0.8	0.03	-0.03	3.06	
500.0	0.19	202.30	500.0	-846.0	-1.1	0.1	1.1	0.05	-0.01	15.14	
600.0	0.14	206.80	600.0	-746.0	-1.4	-0.1	1.3	0.05	-0.05	4.50	
700.0	0.12	215.62	700.0	-646.0	-1.6	-0.2	1.5	0.03	-0.02	8.82	

01/23/2015



103-02972

Phoenix Technology Services
Survey Report

RECEIVED
Office of Oil and Gas
EQT
Where energy meets innovation.

DEC 19 2014

WV Department of Environmental Protection

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Wetzel County 514386
Company:	EQT Production - Genesee Shale	TVD Reference:	KB @ 1346.0usft
Project:	Wetzel County, WV	MD Reference:	KB @ 1346.0usft
Site:	Wetzel County 514386	North Reference:	Grid
Well:	Well #514386	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)	
800.0	0.04	300.17	800.0	-546.0	-1.6	-0.3	1.5	0.12	-0.08	84.55	
900.0	0.09	20.06	900.0	-446.0	-1.5	-0.3	1.4	0.09	0.05	79.89	
1,000.0	0.04	25.50	1,000.0	-346.0	-1.4	-0.2	1.3	0.05	-0.05	5.44	
1,100.0	0.09	32.86	1,100.0	-246.0	-1.3	-0.2	1.3	0.05	0.05	7.36	
1,200.0	0.10	49.34	1,200.0	-146.0	-1.2	-0.1	1.2	0.03	0.01	16.48	
1,300.0	0.14	54.53	1,300.0	-46.0	-1.1	0.1	1.1	0.04	0.04	5.19	
1,400.0	0.17	64.06	1,400.0	54.0	-0.9	0.3	1.0	0.04	0.03	9.53	
1,500.0	0.25	72.30	1,500.0	154.0	-0.8	0.7	1.0	0.09	0.08	8.24	
1,600.0	0.31	84.84	1,600.0	254.0	-0.7	1.2	1.0	0.09	0.06	12.54	
1,700.0	0.37	85.85	1,700.0	354.0	-0.7	1.7	1.1	0.06	0.06	1.01	
1,800.0	0.61	85.11	1,800.0	454.0	-0.6	2.6	1.2	0.24	0.24	-0.74	
1,900.0	0.81	95.35	1,900.0	554.0	-0.6	3.8	1.5	0.24	0.20	10.24	
2,000.0	0.77	99.24	2,000.0	654.0	-0.8	5.2	2.0	0.07	-0.04	3.89	
2,100.0	0.72	102.35	2,100.0	754.0	-1.0	6.5	2.5	0.06	-0.05	3.11	
2,200.0	0.56	108.47	2,200.0	854.0	-1.3	7.6	3.1	0.17	-0.16	6.12	
2,300.0	0.55	103.79	2,300.0	954.0	-1.6	8.5	3.6	0.05	-0.01	-4.68	
2,400.0	0.58	111.07	2,399.9	1,053.9	-1.9	9.4	4.1	0.08	0.03	7.28	
2,500.0	0.60	113.96	2,499.9	1,153.9	-2.3	10.4	4.7	0.04	0.02	2.89	
2,600.0	0.64	118.15	2,599.9	1,253.9	-2.8	11.3	5.4	0.06	0.04	4.19	
2,700.0	0.68	127.20	2,699.9	1,353.9	-3.4	12.3	6.2	0.11	0.04	9.05	
2,800.0	0.78	160.67	2,799.9	1,453.9	-4.4	13.0	7.3	0.43	0.10	33.47	
2,900.0	0.89	204.11	2,899.9	1,553.9	-5.7	12.9	8.6	0.63	0.11	43.44	
3,000.0	1.07	211.39	2,999.9	1,653.9	-7.3	12.1	9.9	0.22	0.18	7.28	
3,100.0	1.45	222.06	3,099.9	1,753.9	-9.0	10.8	11.3	0.45	0.38	10.67	
3,200.0	1.72	230.75	3,199.8	1,853.8	-10.9	8.8	12.6	0.36	0.27	8.69	
3,300.0	2.00	239.49	3,299.8	1,953.8	-12.7	6.1	13.8	0.40	0.28	8.74	
3,400.0	2.10	242.14	3,399.7	2,053.7	-14.5	3.0	14.7	0.14	0.10	2.65	
3,500.0	1.40	239.29	3,499.7	2,153.7	-15.9	0.3	15.6	0.71	-0.70	-2.85	
3,600.0	0.60	227.42	3,599.7	2,253.7	-16.9	-1.1	16.2	0.82	-0.80	-11.87	
3,700.0	0.29	202.05	3,699.7	2,353.7	-17.5	-1.6	16.6	0.36	-0.31	-25.37	
3,800.0	0.19	126.74	3,799.7	2,453.7	-17.8	-1.6	17.0	0.30	-0.10	-75.31	
3,900.0	0.11	175.71	3,899.7	2,553.7	-18.0	-1.4	17.2	0.14	-0.08	48.97	
4,000.0	0.38	283.08	3,999.7	2,653.7	-18.1	-1.7	17.1	0.43	0.27	107.37	
4,100.0	0.48	296.08	4,099.6	2,753.6	-17.8	-2.4	16.7	0.14	0.10	13.00	
4,200.0	0.41	300.86	4,199.6	2,853.6	-17.4	-3.1	16.2	0.08	-0.07	4.78	
4,300.0	0.17	333.25	4,299.6	2,953.6	-17.1	-3.5	15.8	0.28	-0.24	32.39	
4,400.0	0.07	84.48	4,399.6	3,053.6	-17.0	-3.5	15.7	0.21	-0.10	111.23	
4,500.0	0.40	102.01	4,499.6	3,153.6	-17.0	-3.1	15.8	0.33	0.33	17.53	
4,600.0	0.61	86.03	4,599.6	3,253.6	-17.1	-2.2	16.1	0.25	0.21	-15.98	
Gyro Tie In MD=4650'											
4,650.0	0.64	71.41	4,649.6	3,303.6	-17.0	-1.7	16.1	0.32	0.06	-29.24	
4,683.0	0.70	61.40	4,682.6	3,336.6	-16.8	-1.3	16.0	0.40	0.18	-30.33	
4,714.0	1.90	318.40	4,713.6	3,367.6	-16.3	-1.5	15.5	6.99	3.87	-332.26	

DEC 19 2014

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Wetzel County 514386
Company:	EQT Production - Genesee Shale	TVD Reference:	KB @ 1346.0usft
Project:	Wetzel County, WV	MD Reference:	KB @ 1346.0usft
Site:	Wetzel County 514386	North Reference:	Grid
Well:	Well #514386	Survey Calculation Method:	Minimum
Wellbore:	Main Wellbore		
Design:	As Drilled Surveys		

WV Department of
Environmental Protection

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)
4,746.0	5.50	309.40	4,745.6	3,399.6	-15.0	-3.1	13.8	11.36	11.25	-28.13
4,778.0	8.00	308.60	4,777.3	3,431.3	-12.6	-6.0	10.8	7.82	7.81	-2.50
4,809.0	9.70	308.40	4,808.0	3,462.0	-9.6	-9.7	7.1	5.48	5.48	-0.65
4,841.0	11.30	309.30	4,839.4	3,493.4	-6.0	-14.3	2.5	5.03	5.00	2.81
4,873.0	13.20	310.40	4,870.7	3,524.7	-1.6	-19.5	-3.0	5.98	5.94	3.44
4,904.0	15.00	310.10	4,900.8	3,554.8	3.3	-25.2	-9.1	5.81	5.81	-0.97
4,936.0	17.50	311.30	4,931.5	3,585.5	9.1	-32.0	-16.4	7.88	7.81	3.75
4,967.0	20.70	310.90	4,960.8	3,614.8	15.8	-39.7	-24.6	10.33	10.32	-1.29
4,999.0	24.20	310.40	4,990.3	3,644.3	23.7	-48.9	-34.5	10.95	10.94	-1.56
5,030.0	27.60	311.00	5,018.2	3,672.2	32.6	-59.2	-45.5	11.00	10.97	1.94
5,062.0	29.90	312.70	5,046.3	3,700.3	42.8	-70.7	-58.2	7.63	7.19	5.31
5,094.0	32.00	314.10	5,073.7	3,727.7	54.1	-82.6	-72.0	6.94	6.56	4.38
5,125.0	34.10	315.40	5,099.7	3,753.7	66.0	-94.6	-86.4	7.15	6.77	4.19
5,157.0	37.40	314.20	5,125.7	3,779.7	79.2	-107.9	-102.3	10.54	10.31	-3.75
5,189.0	41.10	312.60	5,150.4	3,804.4	93.1	-122.6	-119.3	11.99	11.56	-5.00
5,220.0	42.70	311.40	5,173.5	3,827.5	107.0	-138.0	-136.4	5.77	5.16	-3.87
5,284.0	40.90	309.00	5,221.2	3,875.2	134.5	-170.5	-170.8	3.76	-2.81	-3.75
5,347.0	39.40	307.10	5,269.4	3,923.4	159.5	-202.5	-202.6	3.07	-2.38	-3.02
5,410.0	42.40	309.20	5,317.0	3,971.0	185.0	-234.9	-235.0	5.24	4.76	3.33
5,474.0	41.30	308.70	5,364.7	4,018.7	211.9	-268.1	-268.9	1.80	-1.72	-0.78
5,540.0	44.40	311.30	5,413.1	4,067.1	240.7	-302.5	-305.0	5.41	4.70	3.94
5,603.0	42.70	309.30	5,458.7	4,112.7	268.8	-335.6	-340.1	3.47	-2.70	-3.17
5,666.0	43.80	312.20	5,504.6	4,158.6	297.0	-368.3	-375.2	3.60	1.75	4.60
5,730.0	44.80	315.30	5,550.4	4,204.4	327.9	-400.5	-412.8	3.73	1.56	4.84
5,793.0	43.50	312.60	5,595.6	4,249.6	358.4	-432.1	-449.8	3.63	-2.06	-4.29
5,856.0	43.10	315.10	5,641.5	4,295.5	388.3	-463.3	-486.2	2.79	-0.63	3.97
5,920.0	42.60	317.50	5,688.4	4,342.4	419.8	-493.3	-523.8	2.67	-0.78	3.75
5,983.0	41.50	316.30	5,735.2	4,389.2	450.6	-522.2	-560.6	2.16	-1.75	-1.90
6,046.0	40.20	314.20	5,782.8	4,436.8	479.8	-551.2	-595.8	3.00	-2.06	-3.33
6,110.0	40.20	314.90	5,831.7	4,485.7	508.8	-580.6	-630.9	0.71	0.00	1.09
6,173.0	39.80	315.00	5,880.0	4,534.0	537.4	-609.3	-665.4	0.64	-0.63	0.16
6,236.0	39.30	310.40	5,928.6	4,582.6	564.6	-638.7	-698.8	4.72	-0.79	-7.30
6,300.0	38.60	307.10	5,978.3	4,632.3	589.8	-670.1	-730.6	3.42	-1.09	-5.16
6,363.0	38.20	307.50	6,027.7	4,681.7	613.5	-701.2	-761.0	0.75	-0.63	0.63
6,427.0	39.90	310.50	6,077.4	4,731.4	638.9	-732.5	-793.0	3.97	2.66	4.69
6,490.0	38.50	308.70	6,126.2	4,780.2	664.3	-763.2	-824.9	2.86	-2.22	-2.86
6,554.0	39.10	308.60	6,176.1	4,830.1	689.3	-794.5	-856.6	0.94	0.94	-0.16
6,617.0	40.40	309.60	6,224.6	4,878.6	714.7	-825.8	-888.6	2.30	2.06	1.59
6,649.0	40.00	309.80	6,249.0	4,903.0	727.9	-841.7	-905.2	1.31	-1.25	0.63
6,680.0	36.30	308.80	6,273.4	4,927.4	740.1	-856.5	-920.4	12.10	-11.94	-3.23
6,712.0	32.70	304.70	6,299.7	4,953.7	750.9	-871.0	-934.4	13.38	-11.25	-12.81
6,744.0	29.80	300.60	6,327.1	4,981.1	759.9	-884.9	-946.4	11.23	-9.06	-12.81



103-02972

Phoenix Technology Services
Survey Report



Where energy meets innovation.

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Wetzel County 514386
Company:	EQT Production - Genesee Shale	TVD Reference:	KB @ 1346.0usft
Project:	Wetzel County, WV	MD Reference:	KB @ 1346.0usft
Site:	Wetzel County 514386	North Reference:	Grid
Well:	Well #514386	Survey Calculation Method:	Min
Wellbore:	Main Wellbore		
Design:	As Drilled Surveys		

DEC 10 2014

WV Department of
Environmental Protection

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)
6,775.0	26.90	298.90	6,354.4	5,008.4	767.2	-897.7	-956.5	9.71	-9.35	-5.48
6,807.0	24.00	293.40	6,383.3	5,037.3	773.3	-910.0	-965.3	11.68	-9.06	-17.19
6,839.0	23.40	286.30	6,412.6	5,066.6	777.7	-922.1	-972.4	9.11	-1.88	-22.19
6,870.0	23.70	280.80	6,441.0	5,095.0	780.6	-934.1	-978.0	7.15	0.97	-17.74
6,902.0	21.60	272.80	6,470.5	5,124.5	782.1	-946.3	-982.3	11.64	-6.56	-25.00
6,934.0	19.10	263.30	6,500.6	5,154.6	781.7	-957.4	-984.6	12.92	-7.81	-29.69
6,965.0	18.20	254.70	6,529.9	5,183.9	779.9	-967.1	-985.1	9.32	-2.90	-27.74
6,997.0	18.60	246.60	6,560.3	5,214.3	776.5	-976.6	-984.1	8.08	1.25	-25.31
7,029.0	18.70	239.90	6,590.6	5,244.6	771.9	-985.8	-981.7	6.70	0.31	-20.94
7,060.0	18.00	237.30	6,620.1	5,274.1	766.8	-994.1	-978.8	3.47	-2.26	-8.39
7,092.0	18.30	231.70	6,650.5	5,304.5	761.0	-1,002.2	-975.0	5.53	0.94	-17.50
7,124.0	19.50	224.60	6,680.7	5,334.7	754.1	-1,009.9	-970.1	8.10	3.75	-22.19
7,156.0	19.60	216.90	6,710.9	5,364.9	746.0	-1,016.9	-963.9	8.05	0.31	-24.06
7,187.0	20.50	208.20	6,740.0	5,394.0	737.1	-1,022.5	-956.5	10.04	2.90	-28.06
7,219.0	22.80	200.50	6,769.8	5,423.8	726.3	-1,027.4	-947.2	11.41	7.19	-24.06
7,251.0	24.70	197.30	6,799.1	5,453.1	714.1	-1,031.5	-936.3	7.17	5.94	-10.00
7,282.0	26.50	195.00	6,827.0	5,481.0	701.3	-1,035.2	-924.7	6.63	5.81	-7.42
7,314.0	28.70	191.90	6,855.4	5,509.4	686.9	-1,038.7	-911.5	8.21	6.88	-9.69
7,346.0	30.80	185.20	6,883.2	5,537.2	671.2	-1,041.0	-896.8	12.28	6.56	-20.94
7,377.0	33.80	181.10	6,909.4	5,563.4	654.6	-1,041.9	-880.9	11.98	9.68	-13.23
7,409.0	36.00	175.80	6,935.6	5,589.6	636.4	-1,041.4	-863.0	11.70	6.88	-16.56
7,441.0	38.10	171.70	6,961.2	5,615.2	617.2	-1,039.3	-843.9	10.13	6.56	-12.81
7,472.0	41.70	168.80	6,984.9	5,638.9	597.6	-1,035.9	-824.1	13.07	11.61	-9.35
7,504.0	45.40	166.80	7,008.1	5,662.1	576.1	-1,031.2	-802.0	12.34	11.56	-6.25
7,536.0	48.40	165.70	7,030.0	5,684.0	553.4	-1,025.6	-778.7	9.70	9.38	-3.44
7,567.0	51.70	166.40	7,049.9	5,703.9	530.3	-1,019.9	-754.9	10.78	10.65	2.26
7,599.0	55.40	163.90	7,068.9	5,722.9	505.5	-1,013.3	-729.2	13.16	11.56	-7.81
7,631.0	58.40	162.40	7,086.4	5,740.4	479.8	-1,005.5	-702.4	10.16	9.38	-4.69
7,662.0	61.80	161.80	7,101.8	5,755.8	454.2	-997.3	-675.6	11.10	10.97	-1.94
7,694.0	65.40	161.60	7,116.1	5,770.1	427.0	-988.3	-647.1	11.26	11.25	-0.63
7,726.0	69.00	160.80	7,128.5	5,782.5	399.1	-978.8	-617.7	11.48	11.25	-2.50
7,758.0	72.50	159.30	7,139.0	5,793.0	370.7	-968.5	-587.7	11.80	10.94	-4.69
7,789.0	75.40	158.60	7,147.6	5,801.6	342.9	-957.8	-558.2	9.60	9.35	-2.26
7,821.0	77.80	158.10	7,155.0	5,809.0	314.0	-946.3	-527.3	7.65	7.50	-1.56
7,852.0	79.60	157.70	7,161.1	5,815.1	285.8	-934.8	-497.3	5.94	5.81	-1.29
7,884.0	80.70	157.80	7,166.5	5,820.5	256.6	-922.9	-466.1	3.45	3.44	0.31
7,915.0	82.40	157.20	7,171.1	5,825.1	228.3	-911.2	-435.8	5.81	5.48	-1.94
7,947.0	85.40	155.60	7,174.5	5,828.5	199.2	-898.4	-404.5	10.61	9.38	-5.00
514386 Plat LP										
7,970.1	86.65	155.20	7,176.1	5,830.1	178.2	-888.8	-381.8	5.67	5.40	-1.75
514386 LP p3										
7,972.7	86.78	155.15	7,176.2	5,830.2	175.9	-887.8	-379.4	5.67	5.40	-1.75
8,010.0	88.80	154.50	7,177.7	5,831.7	142.1	-871.9	-342.8	5.67	5.40	-1.74



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Wetzel County, WV 26060
Company:	EQT Production - Genesee Shale	TVD Reference:	KB @ 1346.0usft
Project:	Wetzel County, WV	MD Reference:	KB @ 1340.0usft
Site:	Wetzel County 514386	North Reference:	Grid
Well:	Well #514386	Survey Calculation Method:	Mini
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)
8,074.0	88.90	154.70	7,179.0	5,833.0	84.3	-844.4	-280.2	0.35	0.16	0.31
8,137.0	89.50	153.00	7,179.8	5,833.8	27.8	-816.7	-218.7	2.86	0.95	-2.70
8,201.0	89.70	150.60	7,180.3	5,834.3	-28.6	-786.4	-156.8	3.76	0.31	-3.75
8,264.0	89.70	150.10	7,180.6	5,834.6	-83.4	-755.3	-96.3	0.79	0.00	-0.79
8,327.0	89.70	149.60	7,181.0	5,835.0	-137.8	-723.6	-35.9	0.79	0.00	-0.79
8,391.0	89.70	149.60	7,181.3	5,835.3	-193.0	-691.2	25.4	0.00	0.00	0.00
8,454.0	89.60	152.20	7,181.7	5,835.7	-248.1	-660.6	86.1	4.13	-0.16	4.13
8,517.0	89.80	152.60	7,182.0	5,836.0	-303.9	-631.4	147.2	0.71	0.32	0.63
8,580.0	90.50	152.80	7,181.8	5,835.8	-359.9	-602.5	208.4	1.16	1.11	0.32
8,644.0	90.70	152.00	7,181.2	5,835.2	-416.6	-572.9	270.5	1.29	0.31	-1.25
8,707.0	90.40	151.30	7,180.6	5,834.6	-472.0	-543.0	331.4	1.21	-0.48	-1.11
8,770.0	89.80	149.40	7,180.5	5,834.5	-526.8	-511.8	391.9	3.16	-0.95	-3.02
8,834.0	90.50	150.40	7,180.3	5,834.3	-582.2	-479.7	453.3	1.91	1.09	1.56
8,897.0	90.70	151.30	7,179.6	5,833.6	-637.2	-449.0	514.0	1.46	0.32	1.43
8,960.0	90.70	150.90	7,178.9	5,832.9	-692.3	-418.6	574.7	0.63	0.00	-0.63
9,024.0	90.80	150.30	7,178.0	5,832.0	-748.1	-387.2	636.3	0.95	0.16	-0.94
9,087.0	91.10	150.30	7,177.0	5,831.0	-802.8	-356.0	696.8	0.48	0.48	0.00
9,150.0	90.50	151.10	7,176.1	5,830.1	-857.7	-325.1	757.5	1.59	-0.95	1.27
9,214.0	90.30	150.90	7,175.6	5,829.6	-913.7	-294.1	819.1	0.44	-0.31	-0.31
9,277.0	89.10	151.10	7,176.0	5,830.0	-968.8	-263.6	879.9	1.93	-1.90	0.32
9,340.0	88.30	151.60	7,177.4	5,831.4	-1,024.1	-233.4	940.7	1.50	-1.27	0.79
9,403.0	88.40	152.00	7,179.2	5,833.2	-1,079.6	-203.6	1,001.6	0.65	0.16	0.63
9,467.0	88.60	151.80	7,180.9	5,834.9	-1,136.0	-173.5	1,063.6	0.44	0.31	-0.31
9,530.0	89.30	152.90	7,182.0	5,836.0	-1,191.8	-144.2	1,124.7	2.07	1.11	1.75
9,593.0	90.30	154.30	7,182.3	5,836.3	-1,248.2	-116.2	1,186.1	2.73	1.59	2.22
9,657.0	90.50	153.60	7,181.8	5,835.8	-1,305.7	-88.1	1,248.6	1.14	0.31	-1.09
9,720.0	89.50	154.30	7,181.8	5,835.8	-1,362.3	-60.5	1,310.1	1.94	-1.59	1.11
9,783.0	89.00	154.80	7,182.6	5,836.6	-1,419.2	-33.4	1,371.7	1.12	-0.79	0.79
9,847.0	89.10	154.10	7,183.7	5,837.7	-1,476.9	-5.8	1,434.3	1.10	0.16	-1.09
9,910.0	89.10	154.30	7,184.7	5,838.7	-1,533.7	21.6	1,495.9	0.32	0.00	0.32
9,973.0	89.40	154.10	7,185.5	5,839.5	-1,590.4	49.0	1,557.5	0.57	0.48	-0.32
10,037.0	89.80	152.80	7,186.0	5,840.0	-1,647.6	77.7	1,619.8	2.13	0.63	-2.03
10,100.0	88.80	152.90	7,186.7	5,840.7	-1,703.7	106.4	1,681.1	1.60	-1.59	0.16
10,163.0	87.60	152.40	7,188.7	5,842.7	-1,759.6	135.3	1,742.2	2.06	-1.90	-0.79
10,226.0	88.20	153.30	7,191.0	5,845.0	-1,815.6	164.1	1,803.4	1.72	0.95	1.43
10,289.0	88.70	151.00	7,192.7	5,846.7	-1,871.3	193.5	1,864.4	3.73	0.79	-3.65
10,353.0	88.60	146.60	7,194.2	5,848.2	-1,926.0	226.6	1,925.4	6.87	-0.16	-6.88
10,416.0	90.40	146.50	7,194.8	5,848.8	-1,978.6	261.3	1,984.6	2.86	2.86	-0.16
10,479.0	90.70	145.80	7,194.2	5,848.2	-2,030.9	296.4	2,043.7	1.21	0.48	-1.11
10,543.0	90.90	146.70	7,193.3	5,847.3	-2,084.1	332.0	2,103.8	1.44	0.31	1.41
10,606.0	90.50	145.70	7,192.5	5,846.5	-2,136.5	367.0	2,162.9	1.71	-0.63	-1.59
10,669.0	91.50	147.70	7,191.4	5,845.4	-2,189.1	401.6	2,222.2	3.55	1.59	3.17



103-02972

Phoenix Technology Services
Survey Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Wetzel County 514386
Company:	EQT Production - Genesee Shale	TVD Reference:	KB @ 1346.0usft
Project:	Wetzel County, WV	MD Reference:	KB @ 1346.0usft
Site:	Wetzel County 514386	North Reference:	Grid
Well:	Well #514386	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)
10,732.0	92.00	150.20	7,189.5	5,843.5	-2,243.0	434.1	2,282.3	4.05	0.79	3.97
10,795.0	91.60	150.90	7,187.5	5,841.5	-2,297.9	465.0	2,342.8	1.28	-0.63	1.11
10,859.0	90.90	152.60	7,186.1	5,840.1	-2,354.2	495.3	2,404.7	2.87	-1.09	2.66
10,922.0	91.20	152.80	7,185.0	5,839.0	-2,410.2	524.2	2,465.9	0.57	0.48	0.32
10,985.0	89.90	152.90	7,184.4	5,838.4	-2,466.3	553.0	2,527.2	2.07	-2.06	0.16
11,049.0	88.80	152.20	7,185.1	5,839.1	-2,523.1	582.5	2,589.3	2.04	-1.72	-1.09
11,112.0	88.90	152.60	7,186.4	5,840.4	-2,578.9	611.6	2,650.4	0.65	0.16	0.63
11,175.0	89.30	153.20	7,187.3	5,841.3	-2,634.9	640.3	2,711.6	1.14	0.63	0.95
Last Survey MD=11212'										
11,212.0	89.50	153.10	7,187.7	5,841.7	-2,668.0	657.0	2,747.6	0.60	0.54	-0.27
Projection to TD MD=11265' - 514386 Plat TD										
11,265.0	89.50	153.10	7,188.2	5,842.2	-2,715.2	681.0	2,799.2	0.00	0.00	0.00

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
4,650.0	4,649.6	-17.0	-1.7	Gyro Tie In MD=4650'
11,212.0	7,187.7	-2,668.0	657.0	Last Survey MD=11212'
11,265.0	7,188.2	-2,715.2	681.0	Projection to TD MD=11265'

Checked By: _____ Approved By: _____ Date: _____

RECEIVED
Office of Oil and Gas
DEC 19 2014
WV Department of
Environmental Protection

EQT Production - Geneseo Shale

Project: Wetzel County, WV
 Site: Wetzel County 514386
 Well: Well #514386
 Wellbore: Main Wellbore
 Design: As Drilled Surveys

