

API 47-085-10134

**PHOENIX**  
TECHNOLOGY SERVICES



# **EQT Production - Geneseo Shale**

**Ritchie County, WV  
Ritchie County 513758  
Well #513758**

**Main Wellbore**

**Design: 513758 As Drilled Surveys**

## **Standard Survey Report**

**09 July, 2015**

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Phoenix Technology Services  
Survey Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Well #513758
Company:	EQT Production - Genesee Shale	TVD Reference:	KB@15 @ 1175.0usft
Project:	Ritchie County, WV	MD Reference:	KB@16 @ 1175.0usft
Site:	Ritchie County 513758	North Reference:	Grid
Well:	Well #513758	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	513758 As Drilled Surveys		

Project			Ritchie 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				Ritchie County 513758	
Site Position:		Northing:	234,477.30 usft	Latitude:	39.14
From:	Map	Easting:	1,619,107.10 usft	Longitude:	-80.84
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.86 °

Well						Well #513758
Well Position	+N/-S	0.0 usft	Northing:	234,477.30 usft	Latitude:	39° 8' 9.463 N
	+E/-W	0.0 usft	Easting:	1,619,107.10 usft	Longitude:	80° 50' 34.138 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	1,159.0 usft

Wellbore						Main Wellbore
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)	
	HDGM	6/15/2015	-7.72	66.57	52,062	

Design						513758 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	177.17		

Survey Program		Date	7/9/2015
From (')	To (usft)	Survey (Wellbore)	Tool Name
0.00	3,503.0	513758 Gyrodata (merged 5/30/15) (Main)	GYD_DP_MS
0.00	15,400.0	513758 PHX MWD (Main Wellbore)	PHX+MWD+HDGM
			Description
			Gyrodata gyro-compassing and drop
			PHX+OWSG MWD + HDGM

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	-1,175.0	0.0	0.0	0.0	0.00	0.00	0.00
103.0	0.43	107.72	103.0	-1,072.0	-0.1	0.4	0.1	0.42	0.42	0.00
128.0	0.43	112.00	128.0	-1,047.0	-0.2	0.5	0.2	0.13	0.00	0.00
153.0	0.39	111.48	153.0	-1,022.0	-0.2	0.7	0.3	0.16	0.00	0.00
178.0	0.42	111.44	178.0	-997.0	-0.3	0.9	0.4	0.12	0.12	-0.16
203.0	0.42	115.09	203.0	-972.0	-0.4	1.0	0.4	0.11	0.00	0.00
228.0	0.41	117.17	228.0	-947.0	-0.5	1.2	0.5	0.07	-0.04	8.32
253.0	0.42	116.13	253.0	-922.0	-0.5	1.4	0.6	0.05	0.00	-1.16

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Survey Report



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Company:	EQT Production - Genesee Shale	TVD Reference:	KB@16 @ 1175.0usft
Project:	Ritchie County, WV	MD Reference:	KB@16 @ 1175.0usft
Site:	Ritchie County 513758	North Reference:	Grid
Well:	Well #513758	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	513758 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)
278.0	0.36	123.65	278.0	-897.0	-0.6	1.5	0.7	0.31	-0.24	30.08
303.0	0.29	124.20	303.0	-872.0	-0.7	1.6	0.8	0.28	-0.28	2.20
328.0	0.24	142.00	328.0	-847.0	-0.8	1.7	0.9	0.38	-0.20	71.20
353.0	0.22	154.27	353.0	-822.0	-0.9	1.8	1.0	0.21	-0.08	49.08
378.0	0.24	163.84	378.0	-797.0	-1.0	1.8	1.1	0.17	0.08	38.28
403.0	0.27	165.07	403.0	-772.0	-1.1	1.8	1.2	0.12	0.12	4.92
428.0	0.20	169.31	428.0	-747.0	-1.2	1.9	1.3	0.29	-0.28	16.96
453.0	0.22	174.22	453.0	-722.0	-1.3	1.9	1.4	0.11	0.08	19.64
478.0	0.21	169.13	478.0	-697.0	-1.4	1.9	1.4	0.09	-0.04	-20.36
503.0	0.20	174.93	503.0	-672.0	-1.4	1.9	1.5	0.09	-0.04	23.20
528.0	0.16	176.27	528.0	-647.0	-1.5	1.9	1.6	0.16	-0.16	5.36
553.0	0.16	180.64	553.0	-622.0	-1.6	1.9	1.7	0.05	0.00	17.48
578.0	0.14	190.97	578.0	-597.0	-1.7	1.9	1.7	0.13	-0.08	41.32
603.0	0.14	181.37	603.0	-572.0	-1.7	1.9	1.8	0.09	0.00	-38.40
628.0	0.14	176.26	628.0	-547.0	-1.8	1.9	1.9	0.05	0.00	-20.44
653.0	0.10	158.22	653.0	-522.0	-1.8	1.9	1.9	0.22	-0.16	-72.16
678.0	0.09	84.28	678.0	-497.0	-1.8	1.9	1.9	0.46	-0.04	-295.76
703.0	0.09	54.38	703.0	-472.0	-1.8	2.0	1.9	0.19	0.00	-119.60
728.0	0.14	56.68	728.0	-447.0	-1.8	2.0	1.9	0.20	0.20	9.20
753.0	0.15	48.13	753.0	-422.0	-1.8	2.1	1.9	0.10	0.04	-34.20
778.0	0.15	50.30	778.0	-397.0	-1.7	2.1	1.8	0.02	0.00	8.68
803.0	0.16	58.67	803.0	-372.0	-1.7	2.2	1.8	0.10	0.04	33.48
828.0	0.17	53.27	828.0	-347.0	-1.6	2.2	1.8	0.07	0.04	-21.60
853.0	0.17	57.75	853.0	-322.0	-1.6	2.3	1.7	0.05	0.00	17.92
878.0	0.18	59.53	878.0	-297.0	-1.6	2.3	1.7	0.05	0.04	7.12
903.0	0.20	60.77	903.0	-272.0	-1.5	2.4	1.6	0.08	0.08	4.96
928.0	0.16	70.16	928.0	-247.0	-1.5	2.5	1.6	0.20	-0.16	37.56
953.0	0.17	68.43	953.0	-222.0	-1.5	2.6	1.6	0.04	0.04	-6.92
978.0	0.19	69.88	978.0	-197.0	-1.4	2.6	1.6	0.08	0.08	5.80
1,003.0	0.22	58.57	1,003.0	-172.0	-1.4	2.7	1.5	0.20	0.12	-45.24
1,028.0	0.20	49.10	1,028.0	-147.0	-1.3	2.8	1.5	0.16	-0.08	-37.88
1,053.0	0.29	26.66	1,053.0	-122.0	-1.3	2.8	1.4	0.52	0.36	-89.76
1,078.0	0.30	19.31	1,078.0	-97.0	-1.1	2.9	1.3	0.16	0.04	-29.40
1,103.0	0.34	19.39	1,103.0	-72.0	-1.0	2.9	1.2	0.16	0.16	0.32
1,128.0	0.36	20.48	1,128.0	-47.0	-0.9	3.0	1.0	0.08	0.08	4.36
1,153.0	0.36	14.76	1,153.0	-22.0	-0.7	3.0	0.9	0.14	0.00	-22.88
1,178.0	0.33	16.47	1,178.0	3.0	-0.6	3.1	0.7	0.13	-0.12	6.74
1,203.0	0.34	16.35	1,203.0	28.0	-0.4	3.1	0.6	0.04	0.04	-0.48
1,228.0	0.37	16.03	1,228.0	53.0	-0.3	3.2	0.4	0.12	0.12	-1.28
1,253.0	0.35	15.44	1,253.0	78.0	-0.1	3.2	0.3	0.08	-0.08	0.32
1,278.0	0.37	12.94	1,278.0	103.0	0.0	3.3	0.1	0.10	0.08	-10.00
1,303.0	0.36	16.47	1,303.0	128.0	0.2	3.3	0.0	0.10	-0.04	14.12

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Phoenix Technology Services  
Survey Report



Database:	EDM 6000.1 Single User Db	Local Co-ordinate Reference:	Well Well #518758
Company:	EQT Production - Genesee State	TVD Reference:	KB@16 @ 1175.0usft
Project:	Ritchie County, WV	MD Reference:	KB@16 @ 1175.0usft
Site:	Ritchie County 513759	North Reference:	Grid
Well:	Well #513758	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	513759 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)
1,328.0	0.40	13.40	1,328.0	153.0	0.3	3.3	-0.2	0.18	0.16	-12.28
1,353.0	0.42	10.45	1,353.0	178.0	0.5	3.4	-0.3	0.12	0.08	-11.80
1,378.0	0.42	10.51	1,378.0	203.0	0.7	3.4	-0.5	0.00	0.00	0.24
1,403.0	0.43	13.68	1,403.0	228.0	0.9	3.4	-0.7	0.10	0.04	12.68
1,428.0	0.46	18.65	1,428.0	253.0	1.1	3.5	-0.9	0.20	0.12	19.88
1,453.0	0.47	20.59	1,453.0	278.0	1.3	3.6	-1.1	0.07	0.04	7.76
1,478.0	0.46	23.83	1,478.0	303.0	1.4	3.6	-1.3	0.11	-0.04	12.96
1,503.0	0.46	29.19	1,503.0	328.0	1.6	3.7	-1.4	0.17	0.00	21.44
1,528.0	0.49	42.82	1,528.0	353.0	1.8	3.9	-1.6	0.47	0.12	54.52
1,553.0	0.52	45.47	1,553.0	378.0	1.9	4.0	-1.7	0.15	0.12	10.60
1,578.0	0.56	52.87	1,578.0	403.0	2.1	4.2	-1.9	0.32	0.16	29.60
1,603.0	0.62	57.14	1,603.0	428.0	2.2	4.4	-2.0	0.30	0.24	17.08
1,628.0	0.67	63.12	1,628.0	453.0	2.4	4.6	-2.2	0.34	0.20	23.92
1,653.0	0.72	70.03	1,653.0	478.0	2.5	4.9	-2.3	0.39	0.20	27.64
1,678.0	0.85	84.43	1,678.0	503.0	2.6	5.2	-2.3	0.94	0.52	57.60
1,703.0	0.93	91.51	1,703.0	528.0	2.6	5.6	-2.3	0.54	0.32	28.32
1,728.0	0.97	89.33	1,728.0	553.0	2.6	6.1	-2.3	0.22	0.16	-8.72
1,753.0	0.99	92.67	1,753.0	578.0	2.6	6.5	-2.3	0.24	0.08	13.36
1,778.0	1.01	94.22	1,778.0	603.0	2.6	6.9	-2.2	0.13	0.08	6.20
1,803.0	1.04	95.07	1,803.0	628.0	2.5	7.4	-2.1	0.13	0.12	3.40
1,828.0	1.05	96.03	1,827.9	652.9	2.5	7.8	-2.1	0.08	0.04	3.84
1,853.0	1.06	94.58	1,852.9	677.9	2.4	8.3	-2.0	0.11	0.04	-5.80
1,878.0	1.06	93.67	1,877.9	702.9	2.4	8.7	-2.0	0.07	0.00	-3.64
1,903.0	1.10	96.03	1,902.9	727.9	2.4	9.2	-1.9	0.24	0.16	9.44
1,928.0	1.08	96.65	1,927.9	752.9	2.3	9.7	-1.8	0.09	-0.08	2.48
1,953.0	1.08	95.49	1,952.9	777.9	2.3	10.1	-1.7	0.09	0.00	-4.64
1,978.0	1.09	97.23	1,977.9	802.9	2.2	10.6	-1.7	0.14	0.04	6.96
2,003.0	1.01	99.82	2,002.9	827.9	2.1	11.1	-1.6	0.37	-0.32	10.36
2,028.0	1.10	97.67	2,027.9	852.9	2.1	11.5	-1.5	0.39	0.36	-8.60
2,053.0	1.00	101.74	2,052.9	877.9	2.0	12.0	-1.4	0.50	-0.40	16.28
2,078.0	0.95	105.73	2,077.9	902.9	1.9	12.4	-1.3	0.34	-0.20	15.96
2,103.0	1.01	105.58	2,102.9	927.9	1.8	12.8	-1.1	0.24	0.24	-0.60
2,128.0	0.93	107.46	2,127.9	952.9	1.7	13.2	-1.0	0.34	-0.32	7.52
2,153.0	1.00	103.69	2,152.9	977.9	1.5	13.6	-0.9	0.38	0.28	-15.08
2,178.0	1.00	105.99	2,177.9	1,002.9	1.4	14.0	-0.7	0.16	0.00	9.20
2,203.0	0.96	105.86	2,202.9	1,027.9	1.3	14.4	-0.6	0.16	-0.16	-0.52
2,228.0	1.03	109.11	2,227.9	1,052.9	1.2	14.9	-0.4	0.36	0.28	13.00
2,253.0	1.01	107.04	2,252.9	1,077.9	1.0	15.3	-0.3	0.17	-0.08	4.28
2,278.0	1.01	108.44	2,277.9	1,102.9	0.9	15.7	-0.1	0.10	0.00	5.60
2,303.0	1.02	107.79	2,302.9	1,127.9	0.8	16.1	0.0	0.06	0.04	-2.60
2,328.0	1.00	110.68	2,327.9	1,152.9	0.6	16.5	0.2	0.22	-0.08	6.60
2,353.0	0.97	110.14	2,352.9	1,177.9	0.5	16.9	0.4	0.13	-0.12	-2.16
2,378.0	0.96	113.71	2,377.9	1,202.9	0.3	17.3	0.5	0.24	-0.04	14.28

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Phoenix Technology Services  
Survey Report



Database:	EOM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Well #513758
Company:	EQT Production - Genesee State	TVD Reference:	KB@16 @ 1175.0usft
Project:	Ritchie County, WV	MD Reference:	KB@16 @ 1175.0usft
Site:	Ritchie County 513758	North Reference:	Grid
Well:	Well #513758	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	513758 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)
2,403.0	0.95	113.83	2,402.9	1,227.9	0.1	17.7	0.7	0.04	-0.04	0.48
2,428.0	0.93	113.14	2,427.9	1,252.9	0.0	18.1	0.9	0.09	-0.08	-2.76
2,453.0	0.86	117.81	2,452.9	1,277.9	-0.2	18.4	1.1	0.40	-0.28	18.68
2,478.0	0.90	117.69	2,477.8	1,302.8	-0.4	18.8	1.3	0.16	0.16	-0.48
2,503.0	0.88	114.59	2,502.8	1,327.8	-0.5	19.1	1.5	0.21	-0.08	-12.40
2,528.0	0.87	116.27	2,527.8	1,352.8	-0.7	19.5	1.7	0.11	-0.04	6.72
2,553.0	0.84	119.38	2,552.8	1,377.8	-0.9	19.8	1.8	0.22	-0.12	12.44
2,578.0	0.86	118.42	2,577.8	1,402.8	-1.0	20.1	2.0	0.10	0.08	-3.84
2,603.0	0.81	121.00	2,602.8	1,427.8	-1.2	20.4	2.2	0.25	-0.20	10.32
2,628.0	0.85	122.00	2,627.8	1,452.8	-1.4	20.8	2.4	0.17	0.16	4.00
2,653.0	0.84	121.37	2,652.8	1,477.8	-1.6	21.1	2.7	0.05	-0.04	-2.52
2,678.0	0.87	122.72	2,677.8	1,502.8	-1.8	21.4	2.9	0.14	0.12	5.40
2,703.0	0.86	125.53	2,702.8	1,527.8	-2.0	21.7	3.1	0.17	-0.04	11.24
2,728.0	0.87	124.22	2,727.8	1,552.8	-2.2	22.0	3.3	0.09	0.04	-5.24
2,753.0	0.86	123.36	2,752.8	1,577.8	-2.4	22.3	3.5	0.07	-0.04	-3.44
2,778.0	0.84	127.34	2,777.8	1,602.8	-2.7	22.6	3.8	0.25	-0.08	15.92
2,803.0	0.86	125.12	2,802.8	1,627.8	-2.9	22.9	4.0	0.15	0.08	-8.88
2,828.0	0.83	128.88	2,827.8	1,652.8	-3.1	23.2	4.2	0.25	-0.12	15.04
2,853.0	0.90	126.88	2,852.8	1,677.8	-3.3	23.5	4.5	0.30	0.28	-8.00
2,878.0	0.80	133.61	2,877.8	1,702.8	-3.6	23.8	4.7	0.56	-0.40	26.92
2,903.0	0.80	132.55	2,902.8	1,727.8	-3.8	24.0	5.0	0.06	0.00	-4.24
2,928.0	0.76	134.11	2,927.8	1,752.8	-4.0	24.3	5.2	0.18	-0.16	6.24
2,953.0	0.54	128.72	2,952.8	1,777.8	-4.2	24.5	5.4	0.91	-0.88	-21.56
2,978.0	0.51	126.34	2,977.8	1,802.8	-4.4	24.7	5.6	0.15	-0.12	-9.52
3,003.0	0.45	111.08	3,002.8	1,827.8	-4.5	24.9	5.7	0.56	-0.24	-61.04
3,028.0	0.35	39.96	3,027.8	1,852.8	-4.5	25.0	5.7	1.89	-0.40	-284.48
3,053.0	0.62	345.94	3,052.8	1,877.8	-4.3	25.0	5.5	2.01	1.08	-216.08
3,078.0	0.30	252.23	3,077.8	1,902.8	-4.2	24.9	5.4	2.82	-1.28	-374.84
3,103.0	0.77	182.12	3,102.8	1,927.8	-4.3	24.9	5.6	2.90	1.88	-280.44
3,128.0	0.44	158.24	3,127.8	1,952.8	-4.6	24.9	5.8	1.63	-1.32	-95.52
3,153.0	0.44	155.65	3,152.8	1,977.8	-4.8	25.0	6.0	0.08	0.00	-10.36
3,178.0	0.37	152.34	3,177.8	2,002.8	-4.9	25.0	6.2	0.30	-0.28	-13.24
3,203.0	0.32	143.05	3,202.8	2,027.8	-5.1	25.1	6.3	0.30	-0.20	-37.16
3,228.0	0.34	140.77	3,227.8	2,052.8	-5.2	25.2	6.4	0.10	0.08	-9.12
3,253.0	0.34	128.31	3,252.8	2,077.8	-5.3	25.3	6.5	0.30	0.00	-49.84
3,278.0	0.35	132.57	3,277.8	2,102.8	-5.4	25.4	6.6	0.11	0.04	17.04
3,303.0	0.33	136.21	3,302.8	2,127.8	-5.5	25.5	6.7	0.12	-0.08	-14.40
3,328.0	0.32	132.88	3,327.8	2,152.8	-5.6	25.6	6.8	0.09	-0.04	-13.20
3,353.0	0.32	130.76	3,352.8	2,177.8	-5.7	25.7	6.9	0.05	0.00	-8.48
3,378.0	0.29	131.87	3,377.8	2,202.8	-5.8	25.8	7.0	0.12	-0.12	-14.40
3,403.0	0.32	134.19	3,402.8	2,227.8	-5.8	25.9	7.1	0.13	0.12	9.28
3,428.0	0.26	137.79	3,427.8	2,252.8	-5.9	26.0	7.2	0.25	-0.24	14.40

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Phoenix Technology Services  
Survey Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well: Well #513758
Company:	EQT Production - Genesee Shale	TVD Reference:	KB@16 @ 1175.0usft
Project:	Ritchie County, WV	MD Reference:	KB@16 @ 1175.0usft
Site:	Ritchie County 513758	North Reference:	Grid
Well:	Well #513758	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	513758 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)	
3,453.0	0.26	141.13	3,452.8	2,277.8	-6.0	26.1	7.3	0.06	0.00	13.36	
3,478.0	0.25	127.51	3,477.8	2,302.8	-6.1	26.2	7.4	0.25	-0.04	-54.48	
Gyro Tie On=3503' MD											
3,503.0	0.27	137.42	3,502.8	2,327.8	-6.2	26.3	7.5	0.20	0.08	39.64	
3,631.0	0.10	174.80	3,630.8	2,455.8	-6.5	26.5	7.8	0.16	-0.13	29.20	
3,680.0	0.40	246.50	3,679.8	2,504.8	-6.6	26.3	7.9	0.78	0.61	146.33	
3,711.0	2.00	255.10	3,710.8	2,535.8	-6.8	25.7	8.1	5.18	5.16	27.74	
3,742.0	4.20	260.20	3,741.7	2,566.7	-7.1	24.1	8.3	7.15	7.10	16.45	
3,774.0	6.50	263.90	3,773.6	2,598.6	-7.5	21.1	8.6	7.26	7.19	11.56	
3,805.0	8.80	264.00	3,804.3	2,629.3	-8.0	17.0	8.8	7.42	7.42	0.32	
3,837.0	11.50	261.80	3,835.8	2,660.8	-8.7	11.4	9.2	8.52	8.44	-6.88	
3,868.0	14.40	259.20	3,866.0	2,691.0	-9.8	4.6	10.1	9.54	9.35	-8.39	
3,900.0	17.10	257.20	3,896.8	2,721.8	-11.6	-3.9	11.4	8.61	8.44	-6.25	
3,931.0	19.50	255.50	3,926.2	2,751.2	-13.9	-13.4	13.3	7.93	7.74	-5.48	
3,963.0	22.00	254.70	3,956.2	2,781.2	-16.9	-24.3	15.6	7.86	7.81	-2.50	
3,994.0	24.60	253.60	3,984.6	2,809.6	-20.2	-36.1	18.4	8.50	8.39	-3.55	
4,026.0	27.30	253.20	4,013.4	2,838.4	-24.2	-49.6	21.7	8.46	8.44	-1.25	
4,057.0	29.80	254.00	4,040.6	2,865.6	-28.4	-63.8	25.2	8.16	8.06	2.58	
4,089.0	32.80	255.40	4,068.0	2,893.0	-32.8	-79.8	28.8	9.65	9.38	4.38	
4,120.0	35.40	256.00	4,093.6	2,918.6	-37.1	-96.6	32.2	8.46	8.39	1.94	
4,152.0	37.90	256.50	4,119.3	2,944.3	-41.6	-115.2	35.8	7.87	7.81	1.56	
4,183.0	40.20	256.10	4,143.4	2,968.4	-46.2	-134.2	39.5	7.46	7.42	-1.29	
4,246.0	44.20	255.50	4,190.0	3,015.0	-56.6	-175.2	47.9	6.38	6.35	-0.95	
4,308.0	43.00	254.60	4,234.9	3,059.9	-67.6	-216.5	56.8	2.18	-1.94	-1.45	
4,371.0	41.10	253.00	4,281.7	3,106.7	-79.4	-257.0	66.6	3.46	-3.02	-2.54	
4,434.0	40.90	252.90	4,329.3	3,154.3	-91.5	-296.5	76.7	0.33	-0.32	-0.16	
4,498.0	41.50	256.30	4,377.4	3,202.4	-102.7	-337.2	85.9	3.62	0.94	5.31	
4,561.0	41.80	257.30	4,424.5	3,249.5	-112.3	-377.9	93.4	1.16	0.48	1.59	
4,624.0	43.80	257.30	4,470.7	3,295.7	-121.7	-419.7	100.8	3.17	3.17	0.00	
4,687.0	43.50	257.10	4,516.3	3,341.3	-131.3	-462.1	108.3	0.52	-0.48	-0.32	
4,750.0	43.30	256.20	4,562.1	3,387.1	-141.3	-504.2	116.2	1.03	-0.32	-1.43	
4,813.0	43.20	256.50	4,608.0	3,433.0	-151.5	-546.1	124.3	0.36	-0.16	0.48	
4,876.0	43.30	255.20	4,653.9	3,478.9	-162.0	-588.0	132.8	1.42	0.16	-2.06	
4,939.0	42.50	254.90	4,700.0	3,525.0	-173.1	-629.4	141.8	1.31	-1.27	-0.48	
5,001.0	41.80	254.50	4,746.0	3,571.0	-184.1	-669.6	150.7	1.21	-1.13	-0.32	
5,064.0	43.20	255.40	4,792.4	3,617.4	-195.1	-710.7	159.7	2.42	2.22	0.32	
5,127.0	42.50	255.60	4,838.6	3,663.6	-205.8	-752.1	168.4	1.13	-1.17	0.32	
5,190.0	42.60	255.10	4,885.0	3,710.0	-216.6	-793.4	177.1	0.56	0.16	0.70	
5,253.0	41.50	255.40	4,931.8	3,756.8	-227.4	-834.2	185.8	1.77	-1.75	0.48	
5,317.0	41.10	255.10	4,979.9	3,804.9	-238.1	-875.0	194.6	0.70	-0.63	-0.47	
5,379.0	42.50	257.00	5,026.1	3,851.1	-248.1	-915.1	202.5	3.04	2.26	0.32	
5,442.0	42.30	257.20	5,072.6	3,897.6	-257.6	-956.5	209.9	0.38	-0.32	0.32	
5,505.0	42.80	255.90	5,119.0	3,944.0	-267.5	-998.0	217.8	1.61	0.70	-2.06	

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Phoenix Technology Services  
Survey Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well: Well #513758
<b>Company:</b>	EQT Production - Genesee State	<b>TVD Reference:</b>	KB@16 @ 1175.0usft
<b>Project:</b>	Ritchie County, WV	<b>MD Reference:</b>	KB@16 @ 1175.0usft
<b>Site:</b>	Ritchie County 513758	<b>North Reference:</b>	Gnd
<b>Well:</b>	Well #513758	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Main Wellbore		
<b>Design:</b>	513758 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)
5,568.0	43.10	255.40	5,165.2	3,990.2	-278.1	-1,039.5	226.4	0.72	0.48	-0.79
5,632.0	41.40	254.80	5,212.5	4,037.5	-289.2	-1,081.1	235.3	2.73	-2.66	-0.94
5,695.0	41.50	256.00	5,259.7	4,084.7	-299.7	-1,121.5	243.8	1.27	0.16	1.90
5,758.0	42.80	257.20	5,306.5	4,131.5	-309.5	-1,162.6	251.6	2.43	2.06	1.90
5,821.0	41.50	257.00	5,353.2	4,178.2	-318.9	-1,203.8	259.0	2.07	-2.06	-0.32
5,884.0	38.90	255.90	5,401.3	4,226.3	-328.4	-1,243.3	266.5	4.28	-4.13	-1.75
5,946.0	38.60	255.70	5,449.6	4,274.6	-337.9	-1,281.0	274.2	0.52	-0.48	-0.32
6,009.0	40.20	256.20	5,498.3	4,323.3	-347.6	-1,319.8	282.0	2.59	2.54	0.79
6,072.0	42.10	257.40	5,545.7	4,370.7	-357.1	-1,360.1	289.4	3.27	3.02	1.90
6,136.0	44.40	257.40	5,592.4	4,417.4	-366.7	-1,402.9	296.8	3.59	3.59	0.00
6,198.0	45.00	257.90	5,636.4	4,461.4	-376.0	-1,445.5	304.0	1.12	0.97	0.81
6,262.0	44.00	258.60	5,682.1	4,507.1	-385.1	-1,489.4	311.0	1.74	-1.56	1.09
6,325.0	43.20	255.30	5,727.7	4,552.7	-394.9	-1,531.7	318.7	3.83	-1.27	-5.24
6,388.0	41.90	253.60	5,774.1	4,599.1	-406.3	-1,572.8	328.1	2.75	-2.06	-2.70
6,451.0	42.30	254.70	5,820.9	4,645.9	-417.9	-1,613.4	337.6	1.33	0.63	1.75
6,514.0	43.80	255.80	5,866.9	4,691.9	-428.8	-1,655.0	346.4	2.66	2.38	1.75
6,577.0	43.30	255.70	5,912.6	4,737.6	-439.5	-1,697.1	355.0	0.80	-0.79	-0.16
6,640.0	41.80	253.60	5,959.0	4,784.0	-450.8	-1,738.2	364.3	3.28	-2.38	-3.33
6,672.0	40.90	250.70	5,983.0	4,808.0	-457.2	-1,758.3	369.7	6.61	-2.81	-9.06
6,703.0	40.70	247.00	6,006.5	4,831.5	-464.5	-1,777.2	376.1	7.82	-0.65	-11.94
6,735.0	41.10	242.40	6,030.7	4,855.7	-473.5	-1,796.1	384.1	9.49	1.25	-14.38
6,766.0	41.70	238.50	6,053.9	4,878.9	-483.6	-1,813.9	393.3	8.54	1.94	-12.58
6,798.0	42.50	234.00	6,077.7	4,902.7	-495.5	-1,831.7	404.3	9.75	2.50	-14.06
6,829.0	42.90	229.80	6,100.5	4,925.5	-508.5	-1,848.3	416.5	9.28	1.29	-13.55
6,861.0	43.00	225.60	6,123.9	4,948.9	-523.2	-1,864.4	430.3	8.95	0.31	-13.13
6,892.0	43.40	221.90	6,146.5	4,971.5	-538.5	-1,879.1	444.9	8.27	1.29	-11.94
6,924.0	43.50	218.10	6,169.7	4,994.7	-555.3	-1,893.2	461.0	8.17	0.31	-11.88
6,955.0	44.00	214.60	6,192.1	5,017.1	-572.6	-1,905.9	477.6	7.97	1.61	-11.29
6,987.0	44.90	211.00	6,215.0	5,040.0	-591.4	-1,918.0	495.9	8.36	2.81	-11.25
7,018.0	46.80	207.90	6,236.6	5,061.6	-610.8	-1,929.0	514.7	9.44	6.13	-10.00
7,049.0	49.10	206.30	6,257.3	5,082.3	-631.3	-1,939.4	534.6	8.35	7.42	-5.16
7,081.0	51.10	205.60	6,277.8	5,102.8	-653.4	-1,950.2	556.1	6.47	6.25	-2.19
7,112.0	53.50	204.10	6,296.8	5,121.8	-675.6	-1,960.5	577.8	8.64	7.74	-4.84
7,143.0	56.40	202.00	6,314.6	5,139.6	-699.0	-1,970.4	600.7	10.87	9.35	-6.77
7,175.0	58.70	200.00	6,331.8	5,156.8	-724.2	-1,980.1	625.4	8.91	7.19	-6.25
7,207.0	60.20	197.20	6,348.0	5,173.0	-750.3	-1,988.9	651.0	8.87	4.69	-6.23
7,238.0	61.90	194.10	6,363.0	5,188.0	-776.4	-1,996.2	676.7	10.33	5.48	-10.00
7,269.0	63.50	191.00	6,377.3	5,202.3	-803.3	-2,002.1	703.3	10.28	5.16	-10.00
7,301.0	65.00	188.30	6,391.2	5,216.2	-831.7	-2,007.0	731.4	8.93	4.69	-8.44
7,332.0	66.80	186.00	6,403.8	5,228.8	-859.8	-2,010.5	759.3	8.92	5.81	-7.42
7,364.0	69.10	183.60	6,415.8	5,240.8	-889.3	-2,013.0	788.7	10.00	7.19	-7.50
7,395.0	72.00	181.30	6,426.2	5,251.2	-918.5	-2,014.2	817.8	11.68	9.35	-7.25
7,426.0	74.20	178.50	6,435.2	5,260.2	-948.2	-2,014.2	847.4	11.18	7.10	-9.03

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<b>Database:</b> EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b> Well Well #513758
<b>Company:</b> EQT Production - Genesee State	<b>TVD Reference:</b> KB@16 @ 1175.0usft
<b>Project:</b> Ritchie County WV	<b>MD Reference:</b> KB@16 @ 1175.0usft
<b>Site:</b> Ritchie County 513758	<b>North Reference:</b> Grid
<b>Well:</b> Well #513758	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Wellbore:</b> Main Wellbore	
<b>Design:</b> 513758 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)
7,457.0	75.70	176.00	6,443.2	5,268.2	-978.1	-2,012.7	877.4	9.17	4.84	-8.06
7,489.0	77.30	173.40	6,450.7	5,275.7	-1,009.1	-2,009.8	908.4	9.35	5.00	-8.13
7,520.0	78.90	170.60	6,457.1	5,282.1	-1,039.1	-2,005.6	938.6	10.23	5.16	-9.03
7,551.0	81.00	168.40	6,462.5	5,287.5	-1,069.1	-2,000.0	968.9	9.73	6.77	-7.10
7,583.0	83.20	167.20	6,466.9	5,291.9	-1,100.1	-1,993.4	1,000.2	7.81	6.88	-3.75
7,614.0	85.40	165.30	6,470.0	5,295.0	-1,130.1	-1,986.0	1,030.5	9.36	7.10	-6.13
<b>513758 LP 1038 VS</b>										
7,622.5	85.85	164.74	6,470.6	5,295.6	-1,138.3	-1,983.8	1,038.8	8.43	5.31	-6.57
7,646.0	87.10	163.20	6,472.1	5,297.1	-1,160.8	-1,977.4	1,061.6	8.43	5.31	-6.56
<b>LP=7709' MD/6473' TVD</b>										
7,709.0	90.70	161.50	6,473.3	5,298.3	-1,220.8	-1,958.3	1,122.5	6.32	5.71	-2.70
7,772.0	90.30	159.60	6,472.7	5,297.7	-1,280.2	-1,937.3	1,182.8	3.08	-0.63	-3.02
7,835.0	90.00	159.20	6,472.6	5,297.6	-1,339.2	-1,915.1	1,242.8	0.79	-0.48	-0.63
7,898.0	90.90	160.30	6,472.1	5,297.1	-1,398.3	-1,893.3	1,302.9	2.26	1.43	1.75
7,960.0	91.20	161.00	6,470.9	5,295.9	-1,456.8	-1,872.8	1,362.4	1.23	0.48	1.13
8,023.0	91.60	162.50	6,469.4	5,294.4	-1,516.6	-1,853.0	1,423.1	2.46	0.63	2.38
8,087.0	91.40	161.60	6,467.7	5,292.7	-1,577.4	-1,833.3	1,484.8	1.44	-0.31	-1.41
8,150.0	92.00	161.80	6,465.9	5,290.9	-1,637.2	-1,813.6	1,545.5	1.00	0.95	0.32
<b>513758 Plat LP</b>										
8,173.0	91.78	161.73	6,465.1	5,290.1	-1,659.0	-1,806.4	1,567.6	1.00	-0.95	-0.32
8,213.0	91.40	161.60	6,464.0	5,289.0	-1,697.0	-1,793.8	1,606.2	1.00	-0.95	-0.32
8,276.0	88.20	161.80	6,464.2	5,289.2	-1,756.8	-1,774.0	1,666.9	5.09	-5.08	0.32
8,339.0	88.70	161.50	6,465.9	5,290.9	-1,816.6	-1,754.2	1,727.6	0.93	0.79	-0.48
8,402.0	89.00	162.20	6,467.2	5,292.2	-1,876.4	-1,734.6	1,788.4	1.21	0.48	1.11
8,465.0	89.10	161.20	6,468.2	5,293.2	-1,936.2	-1,714.8	1,849.1	1.60	0.16	-1.59
8,528.0	89.00	160.70	6,469.3	5,294.3	-1,995.8	-1,694.2	1,909.6	0.81	-0.16	-0.79
8,591.0	89.40	160.70	6,470.1	5,295.1	-2,055.2	-1,673.4	1,970.0	0.63	0.63	0.00
8,654.0	88.40	161.40	6,471.4	5,296.4	-2,114.8	-1,652.9	2,030.5	1.94	-1.59	1.11
8,717.0	89.10	162.00	6,472.7	5,297.7	-2,174.6	-1,633.2	2,091.2	1.46	1.11	0.95
8,780.0	89.30	162.20	6,473.6	5,298.6	-2,234.6	-1,613.8	2,152.0	0.45	0.32	0.32
8,843.0	89.40	161.70	6,474.3	5,299.3	-2,294.4	-1,594.3	2,212.8	0.81	0.16	-0.79
8,906.0	89.30	160.90	6,475.0	5,300.0	-2,354.1	-1,574.1	2,273.4	1.28	-0.16	-1.27
8,970.0	90.50	161.50	6,475.1	5,300.1	-2,414.7	-1,553.5	2,334.9	2.10	1.88	0.94
9,032.0	91.30	163.60	6,474.2	5,299.2	-2,473.8	-1,534.9	2,394.9	3.62	1.29	3.39
9,095.0	91.20	162.90	6,472.8	5,297.8	-2,534.2	-1,516.7	2,456.0	1.12	-0.16	-1.11
9,158.0	91.60	163.00	6,471.3	5,296.3	-2,594.4	-1,498.3	2,517.1	0.65	0.63	-2.22
9,221.0	91.40	161.60	6,469.6	5,294.6	-2,654.4	-1,479.1	2,578.0	2.24	-0.32	0.59
9,284.0	91.80	162.60	6,467.9	5,292.9	-2,714.3	-1,459.8	2,638.8	1.71	0.63	0.59
9,347.0	91.40	163.60	6,466.1	5,291.1	-2,774.5	-1,441.4	2,699.9	1.71	-0.63	1.59
9,410.0	90.60	162.50	6,465.0	5,290.0	-2,834.8	-1,423.1	2,760.9	2.16	-1.27	1.75
9,472.0	90.80	161.80	6,464.2	5,289.2	-2,893.8	-1,404.1	2,820.8	1.17	0.32	-1.13
9,535.0	91.30	161.50	6,463.1	5,288.1	-2,953.6	-1,384.3	2,881.5	0.93	0.79	0.93
9,598.0	91.60	160.90	6,461.5	5,286.5	-3,013.2	-1,364.0	2,942.1	1.06	0.48	-0.95

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# Phoenix Technology Services

## Survey Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well Well #513758
<b>Company:</b>	EQT Production - Genesee State	<b>TVD Reference:</b>	KB@15 @ 1175.0usft
<b>Project:</b>	Ritchie County, WV	<b>MD Reference:</b>	KB@15 @ 1175.0usft
<b>Site:</b>	Ritchie County 513758	<b>North Reference:</b>	Grid
<b>Well:</b>	Well #513758	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Main Wellbore		
<b>Design:</b>	513758 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)
9,660.0	90.10	161.10	6,460.6	5,285.6	-3,071.8	-1,343.8	3,001.6	2.44	-2.42	0.32
9,723.0	89.00	160.90	6,461.1	5,286.1	-3,131.4	-1,323.3	3,062.1	1.77	-1.75	-0.32
9,786.0	89.90	161.80	6,461.7	5,286.7	-3,191.1	-1,303.1	3,122.7	2.02	1.43	1.43
9,849.0	90.40	161.50	6,461.5	5,286.5	-3,250.9	-1,283.3	3,183.4	0.93	0.79	-0.48
9,912.0	90.40	160.90	6,461.1	5,286.1	-3,310.5	-1,263.0	3,244.0	0.95	0.00	-0.95
9,975.0	90.80	163.50	6,460.4	5,285.4	-3,370.5	-1,243.7	3,304.9	4.18	0.63	4.13
10,038.0	90.90	163.40	6,459.5	5,284.5	-3,430.9	-1,225.8	3,366.0	0.22	0.16	-0.16
10,101.0	91.00	163.10	6,458.4	5,283.4	-3,491.2	-1,207.6	3,427.2	0.50	0.16	-0.48
10,163.0	90.80	162.40	6,457.5	5,282.5	-3,550.4	-1,189.2	3,487.2	1.17	-0.32	-1.13
10,226.0	89.20	162.60	6,457.5	5,282.5	-3,610.5	-1,170.3	3,548.2	2.56	-2.54	0.32
10,289.0	88.90	161.70	6,458.5	5,283.5	-3,670.4	-1,151.0	3,609.0	1.51	-0.48	-1.43
10,352.0	88.80	161.40	6,459.8	5,284.8	-3,730.2	-1,131.1	3,669.7	0.50	-0.16	-0.48
10,415.0	88.80	160.70	6,461.1	5,286.1	-3,789.8	-1,110.6	3,730.2	1.11	0.00	-1.11
10,477.0	89.00	161.20	6,462.3	5,287.3	-3,848.3	-1,090.4	3,789.7	0.87	0.32	0.81
10,540.0	88.00	162.70	6,463.9	5,288.9	-3,908.2	-1,070.9	3,850.5	2.86	-1.59	2.38
10,603.0	87.90	162.20	6,466.2	5,291.2	-3,968.3	-1,051.9	3,911.4	0.81	-0.16	-0.79
10,666.0	87.90	161.80	6,468.5	5,293.5	-4,028.1	-1,032.4	3,972.1	0.63	0.00	-0.63
10,729.0	88.10	161.70	6,470.7	5,295.7	-4,087.9	-1,012.7	4,032.8	0.35	0.32	-0.16
10,793.0	88.30	162.50	6,472.7	5,297.7	-4,148.8	-993.0	4,094.6	1.29	0.31	1.25
10,855.0	88.70	162.40	6,474.3	5,299.3	-4,207.9	-974.4	4,154.6	0.67	0.65	-0.16
<b>Deepest Point=10918' MD/6474' TVD</b>										
10,918.0	91.30	162.60	6,474.3	5,299.3	-4,268.0	-955.4	4,215.5	4.14	4.13	0.32
10,981.0	91.60	161.70	6,472.7	5,297.7	-4,327.9	-936.1	4,276.3	1.51	0.48	-1.43
11,045.0	91.60	161.10	6,470.9	5,295.9	-4,388.5	-915.7	4,337.9	0.94	0.00	-0.94
11,108.0	91.30	160.30	6,469.3	5,294.3	-4,448.0	-894.9	4,398.3	1.36	-0.48	-1.27
11,171.0	91.20	160.20	6,468.0	5,293.0	-4,507.3	-873.6	4,458.5	0.22	-0.16	-0.16
11,234.0	91.50	161.50	6,466.5	5,291.5	-4,566.8	-852.9	4,519.0	2.12	0.48	2.06
11,297.0	92.00	162.20	6,464.6	5,289.6	-4,626.6	-833.3	4,579.7	1.37	0.79	1.11
11,360.0	92.70	164.10	6,462.0	5,287.0	-4,686.8	-815.1	4,640.8	3.21	1.11	3.02
11,423.0	92.10	163.10	6,459.3	5,284.3	-4,747.2	-797.3	4,702.0	1.85	-0.95	-1.59
11,486.0	92.00	162.30	6,457.1	5,282.1	-4,807.3	-778.6	4,762.9	1.28	-0.16	-1.27
11,549.0	91.90	161.80	6,454.9	5,279.9	-4,867.2	-759.2	4,823.7	0.81	-0.16	-0.79
11,612.0	91.30	160.60	6,453.2	5,278.2	-4,926.8	-738.9	4,884.3	2.13	-0.95	-1.90
11,674.0	91.50	160.90	6,451.7	5,276.7	-4,985.4	-718.5	4,943.7	0.58	0.32	0.48
11,737.0	91.20	163.00	6,450.2	5,275.2	-5,045.2	-698.9	5,004.5	3.37	-0.48	3.33
11,800.0	90.60	161.60	6,449.2	5,274.2	-5,105.3	-679.8	5,065.4	2.42	-0.95	-2.22
11,863.0	90.20	160.30	6,448.7	5,273.7	-5,164.8	-659.2	5,125.9	2.16	-0.63	-1.00
11,926.0	90.30	163.20	6,448.5	5,273.5	-5,224.6	-639.5	5,186.6	4.61	0.16	4.60
11,989.0	90.40	163.30	6,448.1	5,273.1	-5,284.9	-621.3	5,247.8	0.22	0.16	0.16
12,052.0	90.20	165.20	6,447.8	5,272.8	-5,345.6	-604.2	5,309.2	3.03	-0.32	3.00
12,115.0	89.80	164.40	6,447.8	5,272.8	-5,406.4	-587.7	5,370.7	1.42	-0.63	-1.27
12,178.0	89.50	163.50	6,448.1	5,273.1	-5,466.9	-570.3	5,432.0	1.51	-0.48	1.48

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Phoenix Technology Services  
Survey Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well Well #513758
<b>Company:</b>	EQT Production - Genesee Shale	<b>TVD Reference:</b>	KB@16 @ 1175.0usft
<b>Project:</b>	Ritchie County, WV	<b>MD Reference:</b>	KB@16 @ 1175.0usft
<b>Site:</b>	Ritchie County 513758	<b>North Reference:</b>	Grid
<b>Well:</b>	Well #513758	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Main Wellbore		
<b>Design:</b>	513758 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)
12,241.0	89.60	162.60	6,448.6	5,273.6	-5,527.2	-551.9	5,493.1	1.44	0.16	-1.43
12,304.0	90.20	163.60	6,448.7	5,273.7	-5,587.5	-533.6	5,554.2	1.85	0.95	1.59
12,367.0	90.80	164.10	6,448.2	5,273.2	-5,648.0	-516.1	5,615.5	1.24	0.95	0.79
12,430.0	90.10	162.80	6,447.7	5,272.7	-5,708.4	-498.2	5,676.7	2.34	-1.11	-2.06
12,493.0	88.70	162.20	6,448.4	5,273.4	-5,768.4	-479.2	5,737.7	2.42	-2.22	-0.95
12,556.0	88.40	161.30	6,450.0	5,275.0	-5,828.2	-459.5	5,798.4	1.51	-0.48	-1.43
12,619.0	89.10	160.80	6,451.3	5,276.3	-5,887.8	-439.0	5,858.9	1.37	1.11	-0.79
12,682.0	90.30	162.70	6,451.7	5,276.7	-5,947.6	-419.3	5,919.6	3.57	1.90	3.02
12,745.0	90.20	164.80	6,451.4	5,276.4	-6,008.1	-401.7	5,980.9	3.34	-0.16	3.33
12,808.0	90.10	164.80	6,451.2	5,276.2	-6,068.9	-385.2	6,042.4	0.16	-0.16	0.00
12,871.0	89.90	164.50	6,451.2	5,276.2	-6,129.7	-368.5	6,103.9	0.57	-0.32	-0.48
12,934.0	89.80	164.50	6,451.4	5,276.4	-6,190.4	-351.7	6,165.4	0.16	-0.16	0.00
12,997.0	90.30	165.40	6,451.3	5,276.3	-6,251.2	-335.3	6,227.0	1.63	0.79	1.43
13,060.0	90.50	164.50	6,450.9	5,275.9	-6,312.1	-318.9	6,288.6	1.46	0.32	-1.43
13,123.0	90.10	162.80	6,450.6	5,275.6	-6,372.5	-301.2	6,349.8	2.77	-0.63	-2.70
13,186.0	90.20	162.30	6,450.4	5,275.4	-6,432.6	-282.3	6,410.8	0.81	0.16	-0.79
13,249.0	90.10	160.70	6,450.2	5,275.2	-6,492.3	-262.3	6,471.4	2.54	-0.16	-2.54
13,311.0	90.20	161.90	6,450.1	5,275.1	-6,551.1	-242.4	6,531.1	1.94	0.16	1.94
13,374.0	90.70	161.00	6,449.6	5,274.6	-6,610.8	-222.4	6,591.7	1.63	0.79	-1.43
13,438.0	90.20	158.60	6,449.1	5,274.1	-6,670.9	-200.3	6,652.8	3.83	-0.78	-3.75
13,501.0	89.80	160.00	6,449.1	5,274.1	-6,729.8	-178.0	6,712.7	2.31	-0.63	2.22
13,563.0	90.00	160.60	6,449.2	5,274.2	-6,788.2	-157.1	6,772.1	1.02	0.32	0.97
13,626.0	89.80	160.80	6,449.3	5,274.3	-6,847.6	-136.3	6,832.5	0.45	-0.32	0.32
13,689.0	89.80	161.10	6,449.5	5,274.5	-6,907.2	-115.8	6,893.0	0.48	0.00	0.48
13,752.0	90.00	160.50	6,449.6	5,274.6	-6,966.7	-95.0	6,953.4	1.00	0.32	-0.95
13,815.0	89.80	160.30	6,449.7	5,274.7	-7,026.0	-73.9	7,013.8	0.45	-0.32	-0.32
13,878.0	90.20	160.00	6,449.7	5,274.7	-7,085.3	-52.5	7,074.0	0.79	0.63	-0.48
13,941.0	90.20	160.00	6,449.5	5,274.5	-7,144.5	-31.0	7,134.2	0.00	0.00	0.00
14,004.0	89.80	161.00	6,449.5	5,274.5	-7,203.8	-9.9	7,194.5	1.71	-0.63	1.59
14,067.0	90.20	161.70	6,449.5	5,274.5	-7,263.5	10.2	7,255.2	1.28	0.63	1.11
14,130.0	90.00	162.90	6,449.4	5,274.4	-7,323.6	29.4	7,316.0	1.93	-0.32	1.90
14,193.0	89.40	160.70	6,449.7	5,274.7	-7,383.4	49.0	7,376.8	3.62	-0.95	-3.49
14,256.0	89.10	159.00	6,450.6	5,275.6	-7,442.5	70.7	7,436.9	2.74	-0.48	-2.70
14,319.0	88.70	159.30	6,451.8	5,276.8	-7,501.4	93.2	7,496.8	0.79	-0.63	0.48
14,382.0	88.80	159.80	6,453.1	5,278.1	-7,560.4	115.2	7,556.9	0.81	0.16	0.79
14,445.0	89.30	159.60	6,454.2	5,279.2	-7,619.5	137.0	7,616.9	0.85	0.79	-0.32
14,508.0	89.60	159.30	6,454.8	5,279.8	-7,678.5	159.1	7,677.0	0.67	0.48	-0.48
14,571.0	90.20	160.40	6,454.9	5,279.9	-7,737.6	180.8	7,737.1	1.99	0.95	3.33
14,634.0	89.50	162.50	6,455.1	5,280.1	-7,797.3	200.9	7,797.7	3.51	-1.11	3.33
14,697.0	89.20	161.40	6,455.8	5,280.8	-7,857.2	220.4	7,858.5	1.81	0.48	-1.75
14,760.0	89.90	162.10	6,456.3	5,281.3	-7,917.1	240.1	7,919.3	1.57	1.11	1.11
14,823.0	89.80	162.00	6,456.4	5,281.4	-7,977.0	259.5	7,980.1	0.22	-0.16	-0.16
14,886.0	89.70	161.80	6,456.7	5,281.7	-8,036.9	279.1	8,040.9	0.35	-0.16	-0.32

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Phoenix Technology Services  
Survey Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Well #513758
Company:	EQT Production - Genesee Shale	TVD Reference:	KB@16 @ 1175.0usft
Project:	Ritchie County, WV	MD Reference:	KB@16 @ 1175.0usft
Site:	Ritchie County 513758	North Reference:	Gnd
Well:	Well #513758	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	513758 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)
14,948.0	89.90	161.90	6,456.9	5,281.9	-8,095.8	298.4	8,100.7	0.36	0.32	0.16
15,011.0	90.20	161.60	6,456.9	5,281.9	-8,155.6	318.2	8,161.4	0.67	0.48	-0.48
15,074.0	90.20	161.50	6,456.7	5,281.7	-8,215.4	338.1	8,222.1	0.16	0.00	-0.16
15,136.0	89.60	159.30	6,456.8	5,281.8	-8,273.8	358.9	8,281.4	3.68	-0.97	-3.55
15,199.0	89.80	158.60	6,457.1	5,282.1	-8,332.6	381.5	8,341.3	1.16	0.32	-1.11
15,262.0	90.10	158.50	6,457.1	5,282.1	-8,391.2	404.6	8,401.0	0.50	0.48	-0.16
15,324.0	89.60	157.60	6,457.3	5,282.3	-8,448.7	427.7	8,459.5	1.66	-0.81	-1.45
Final Survey=16343' MD/6458' TVD										
15,343.0	89.40	156.80	6,457.5	5,282.5	-8,466.2	435.1	8,477.4	4.34	-1.05	-4.21
513758 Plat TD3										
15,393.5	89.40	156.80	6,458.0	5,283.0	-8,512.7	455.0	8,524.8	0.00	0.00	0.00
PROJ to Bit=16400' MD/6458' TVD										
15,400.0	89.40	156.80	6,458.1	5,283.1	-8,518.6	457.5	8,530.8	0.00	0.00	0.00

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
3,503.0	3,502.8	-6.2	26.3	Gyro Tie On=3503' MD
7,709.0	6,473.3	-1,220.8	-1,958.3	LP=7709' MD/6473' TVD
10,918.0	6,474.3	-4,268.0	-955.4	Deepest Point=10918' MD/6474' TVD
15,343.0	6,457.5	-8,466.2	435.1	Final Survey=15343' MD/6458' TVD
15,400.0	6,458.1	-8,518.6	457.5	PROJ to Bit=15400' MD/6458' TVD

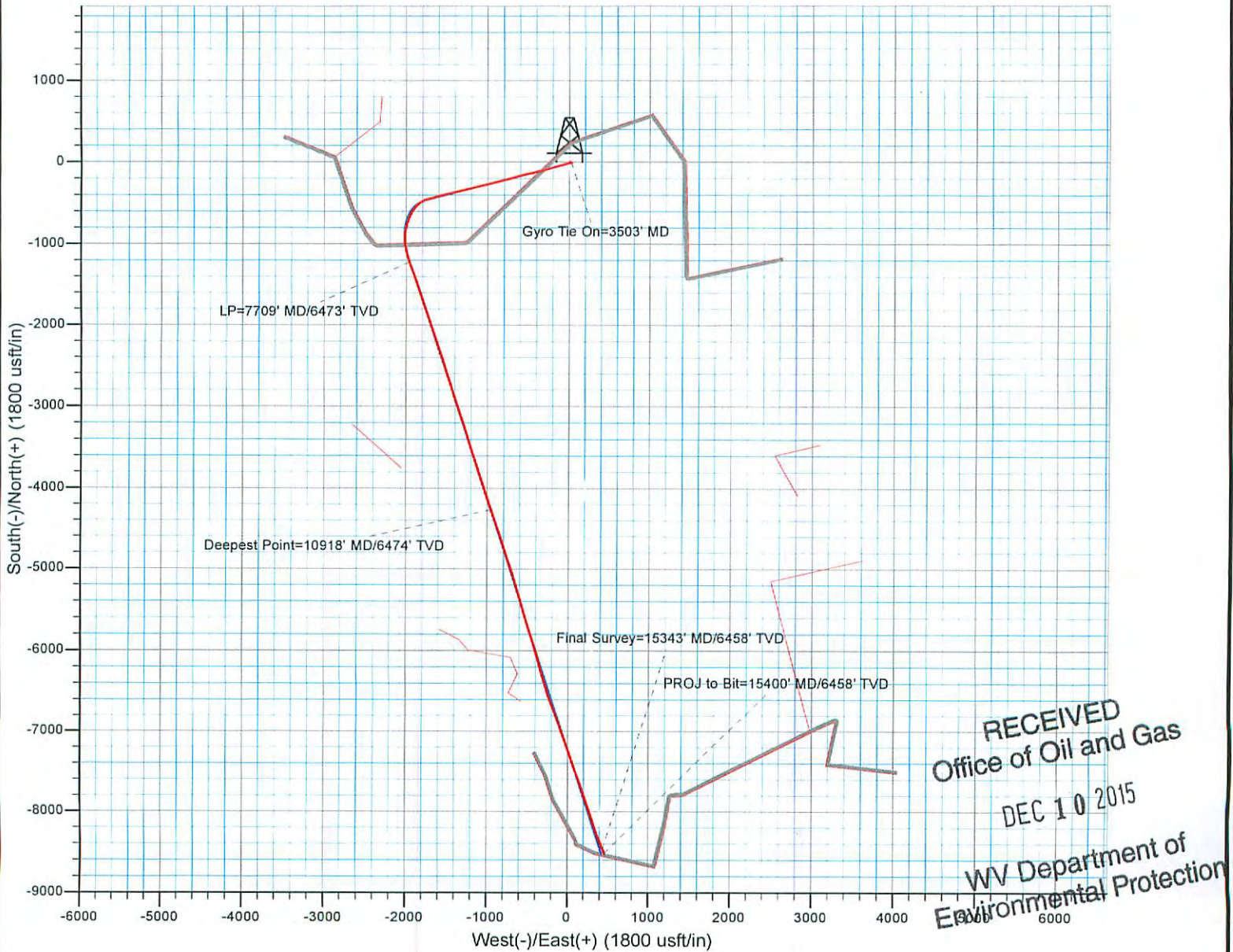
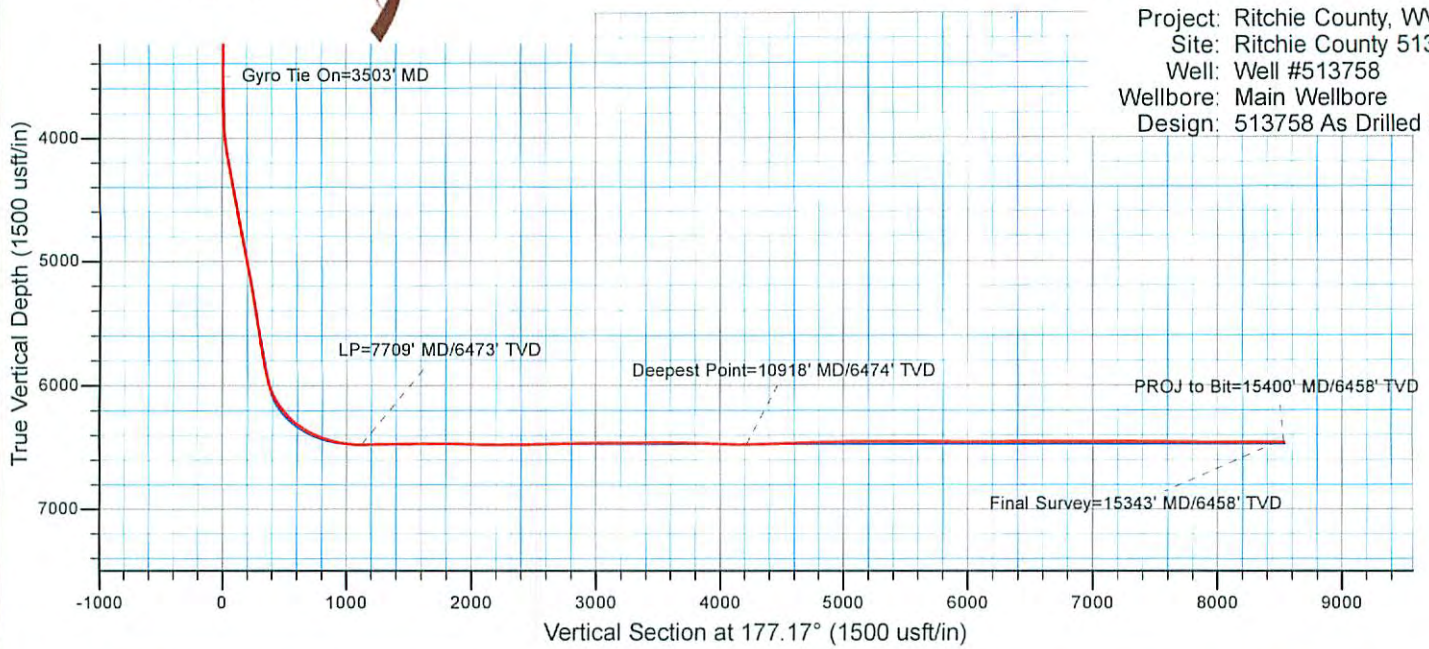
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# EQT Production - Geneseo Shale

Project: Ritchie County, WV  
 Site: Ritchie County 513758  
 Well: Well #513758  
 Wellbore: Main Wellbore  
 Design: 513758 As Drilled Surveys



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