

17-06502

PHOENIX
TECHNOLOGY SERVICES



EQT Production - Marcellus

Doddridge County, WV Grid

Doddridge County 513154

Well #513154

Main Wellbore

Design: 513154 AS Drilled Surveys

Standard Survey Report

11 May, 2015



10/30/2015

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Doddridge County 513154
Company:	EQT Production - Marcellus	TVD Reference:	KB@23 @ 1275.0usft
Project:	Doddridge County, WV Grid	MD Reference:	KB@23 @ 1275.0usft
Site:	Doddridge County 513154	North Reference:	Grid
Well:	Well #513154	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	513154 AS Drilled Surveys		

Project	Doddridge County, WV Grid		
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	Doddridge County 513154				
Site Position:		Northing:	260,322.60 usft	Latitude:	39.21
From:	Map	Easting:	1,642,311.70 usft	Longitude:	-80.76
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.81 °

Well	Well #513154					
Well Position	+N/-S	0.0 usft	Northing:	260,322.60 usft	Latitude:	39° 12' 28.222 N
	+E/-W	0.0 usft	Easting:	1,642,311.70 usft	Longitude:	80° 45' 44.284 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	1,252.0 usft

Wellbore	Main Wellbore				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	4/20/2015	-7.78	66.68	52,236

Design	513154 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	293.68	

Survey Program	Date 5/11/2015				
From (°)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	5,262.0	513154 Gyrodata Gyro (Main Wellbore)	GYD_DP_MS	Gyrodata gyro-compassing and drop	
0.00	13,310.0	513154 PHX MWD (Main Wellbore)	PHX+MWD+HDGM	PHX+OWSG MWD + HDGM	

Measure d	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	-1,275.0	0.0	0.0	0.0	0.00	0.00	0.00
23.0	0.00	0.00	23.0	-1,252.0	0.0	0.0	0.0	0.00	0.00	0.00
123.0	0.51	282.49	123.0	-1,152.0	0.1	-0.4	0.4	0.51	0.51	0.00
223.0	0.40	304.11	223.0	-1,052.0	0.4	-1.2	1.2	0.20	-0.11	21.62
323.0	0.34	292.64	323.0	-952.0	0.7	-1.7	1.9	0.10	-0.06	-11.47
423.0	0.17	301.03	423.0	-852.0	0.9	-2.1	2.3	0.17	-0.17	8.39
523.0	0.23	293.93	523.0	-752.0	1.0	-2.4	2.6	0.06	0.06	-7.10

West Virginia Department of Environmental Protection
SEP 16 2015



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Doddridge County 513154
Company:	EQT Production - Marcellus	TVD Reference:	KB@23 @ 1275.0usft
Project:	Doddridge County WV Grid	MD Reference:	KB@23 @ 1275.0usft
Site:	Doddridge County 513154	North Reference:	Grid
Well:	Well #513154	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	513154 AS Drilled Surveys		

Survey										
Measure d Depth	Inclination n	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)
623.0	0.24	288.60	623.0	-652.0	1.2	-2.8	3.1	0.02	0.01	-5.33
723.0	0.25	272.87	723.0	-552.0	1.3	-3.2	3.5	0.07	0.01	-15.73
823.0	0.36	293.41	823.0	-452.0	1.4	-3.7	4.0	0.15	0.11	20.54
923.0	0.50	290.42	923.0	-352.0	1.7	-4.4	4.7	0.14	0.14	-2.99
1,023.0	0.79	272.50	1,023.0	-252.0	1.9	-5.5	5.8	0.35	0.29	-17.92
1,123.0	0.74	276.07	1,123.0	-152.0	2.0	-6.9	7.1	0.07	-0.05	3.57
1,223.0	0.91	282.23	1,223.0	-52.0	2.2	-8.3	8.5	0.19	0.17	6.16
1,323.0	1.41	282.83	1,322.9	47.9	2.6	-10.3	10.5	0.50	0.50	0.60
1,423.0	1.58	285.66	1,422.9	147.9	3.3	-12.8	13.0	0.19	0.17	2.83
1,523.0	1.57	283.08	1,522.9	247.9	4.0	-15.4	15.7	0.07	-0.01	-2.58
1,623.0	1.52	280.26	1,622.8	347.8	4.5	-18.1	18.4	0.09	-0.05	-2.82
1,723.0	1.43	272.63	1,722.8	447.8	4.8	-20.6	20.8	0.22	-0.09	-7.63
1,823.0	1.58	275.72	1,822.8	547.8	5.0	-23.3	23.3	0.17	0.15	3.09
1,923.0	1.47	273.70	1,922.7	647.7	5.2	-25.9	25.8	0.12	-0.11	-2.02
2,023.0	1.49	276.86	2,022.7	747.7	5.5	-28.5	28.3	0.08	0.02	3.16
2,123.0	1.64	279.70	2,122.7	847.7	5.9	-31.2	30.9	0.17	0.15	2.84
2,223.0	1.72	282.05	2,222.6	947.6	6.4	-34.1	33.8	0.11	0.08	2.35
2,323.0	1.80	283.75	2,322.6	1,047.6	7.1	-37.1	36.8	0.10	0.08	1.70
2,423.0	1.80	286.34	2,422.5	1,147.5	7.9	-40.1	39.9	0.08	0.00	2.59
2,523.0	2.02	285.52	2,522.5	1,247.5	8.8	-43.3	43.2	0.22	0.22	-0.82
2,623.0	2.10	284.24	2,622.4	1,347.4	9.8	-46.8	46.7	0.09	0.08	-1.28
2,723.0	2.33	283.30	2,722.3	1,447.3	10.7	-50.5	50.5	0.23	0.23	-0.94
2,823.0	2.31	286.09	2,822.2	1,547.2	11.7	-54.4	54.5	0.11	-0.02	2.79
2,923.0	2.39	288.16	2,922.2	1,647.2	12.9	-58.3	58.6	0.12	0.08	2.07
3,023.0	2.50	288.08	3,022.1	1,747.1	14.2	-62.4	62.9	0.11	0.11	-0.08
3,123.0	2.65	285.08	3,122.0	1,847.0	15.5	-66.7	67.3	0.20	0.15	-3.00
3,223.0	2.67	283.98	3,221.9	1,946.9	16.7	-71.2	71.9	0.05	0.02	-1.10
3,323.0	2.84	285.47	3,321.7	2,046.7	17.9	-75.8	76.7	0.18	0.17	1.49
3,423.0	2.86	285.80	3,421.6	2,146.6	19.2	-80.6	81.6	0.03	0.02	0.33
3,523.0	2.97	284.36	3,521.5	2,246.5	20.6	-85.5	86.6	0.13	0.11	-1.44
3,623.0	3.06	287.22	3,621.4	2,346.4	22.0	-90.6	91.8	0.18	0.09	2.86
3,723.0	3.16	288.55	3,721.2	2,446.2	23.7	-95.8	97.2	0.12	0.10	1.33
3,823.0	3.57	289.60	3,821.0	2,546.0	25.6	-101.3	103.1	0.41	0.41	1.05
3,923.0	5.20	293.51	3,920.7	2,645.7	28.4	-108.4	110.7	1.66	1.63	3.91
4,023.0	6.13	297.59	4,020.2	2,745.2	32.7	-117.3	120.6	1.01	0.93	4.08
4,123.0	6.62	298.47	4,119.6	2,844.6	37.9	-127.1	131.6	0.50	0.49	0.88
4,223.0	6.80	300.54	4,218.9	2,943.9	43.7	-137.3	143.2	0.30	0.18	2.07
4,323.0	7.06	303.58	4,318.2	3,043.2	50.1	-147.5	155.2	0.45	0.26	3.04
4,423.0	7.14	304.51	4,417.4	3,142.4	57.0	-157.7	167.3	0.14	0.08	0.93
4,523.0	7.21	309.08	4,516.7	3,241.7	64.5	-167.7	179.5	0.57	0.07	4.57

RECEIVED
Office of Oil and Gas
SEP 3 2015
WV Department of
Environmental Protection

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Doddridge County 513154
Company:	EQT Production - Marcellus	TVD Reference:	KB@23 @ 1275.0usft
Project:	Doddridge County, WV Gnd	MD Reference:	KB@23 @ 1275.0usft
Site:	Doddridge County 513154	North Reference:	Grid
Well:	Well #513154	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	513154 AS Drilled Surveys		

Survey										
Measure d	Inclination	Azimuth	Vertical Depth	Subsea Depth	+N/-S	+E/-W	Vertical Section	Dogleg Rate	Build Rate	Turn Rate
Depth	n	(°)	(usft)	(usft)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)
4,623.0	7.36	315.06	4,615.9	3,340.9	73.0	-177.1	191.5	0.77	0.15	5.98
4,723.0	7.33	318.51	4,715.0	3,440.0	82.3	-185.9	203.3	0.44	-0.03	3.45
4,823.0	7.15	322.34	4,814.2	3,539.2	92.0	-193.9	214.5	0.52	-0.18	3.83
4,923.0	7.20	323.76	4,913.5	3,638.5	102.0	-201.4	225.4	0.18	0.05	1.42
5,023.0	7.03	327.79	5,012.7	3,737.7	112.2	-208.4	235.9	0.53	-0.17	4.03
5,123.0	6.92	331.70	5,111.9	3,836.9	122.7	-214.5	245.7	0.49	-0.11	3.91
5,223.0	6.73	335.69	5,211.2	3,936.2	133.3	-219.7	254.8	0.51	-0.19	3.99
Gyro Tie In=5262' MD										
5,262.0	6.97	336.32	5,250.0	3,975.0	137.6	-221.6	258.2	0.64	0.62	1.62
5,319.0	6.00	323.80	5,306.6	4,031.6	143.2	-224.8	263.4	3.00	-1.70	-21.96
5,350.0	6.60	290.30	5,337.4	4,062.4	145.1	-227.4	266.5	11.84	1.94	-108.06
5,382.0	8.30	266.60	5,369.2	4,094.2	145.6	-231.4	270.4	10.86	5.31	-74.06
5,413.0	10.90	251.30	5,399.7	4,124.7	144.5	-236.5	274.6	11.68	8.39	-49.35
5,445.0	13.70	241.90	5,431.0	4,156.0	141.8	-242.7	279.2	10.73	8.75	-29.38
5,477.0	16.00	234.90	5,461.9	4,186.9	137.4	-249.6	283.8	9.10	7.19	-21.88
5,508.0	17.60	228.40	5,491.6	4,216.6	131.9	-256.6	288.0	7.95	5.16	-20.97
5,540.0	19.30	222.30	5,522.0	4,247.0	124.7	-263.8	291.7	8.03	5.31	-19.06
5,571.0	21.50	219.10	5,551.0	4,276.0	116.5	-270.8	294.8	7.95	7.10	-10.32
5,602.0	24.70	216.50	5,579.5	4,304.5	106.9	-278.3	297.8	10.83	10.32	-8.39
5,634.0	28.00	214.40	5,608.2	4,333.2	95.4	-286.5	300.7	10.71	10.31	-6.56
5,666.0	30.80	213.30	5,636.1	4,361.1	82.3	-295.2	303.4	8.91	8.75	-3.44
5,697.0	34.10	213.70	5,662.2	4,387.2	68.4	-304.4	306.3	10.67	10.65	1.29
5,728.0	37.40	214.20	5,687.4	4,412.4	53.4	-314.5	309.5	10.69	10.65	1.61
5,760.0	40.70	214.80	5,712.2	4,437.2	36.8	-326.0	313.3	10.38	10.31	1.88
5,791.0	44.10	215.10	5,735.1	4,460.1	19.7	-337.9	317.4	10.99	10.97	0.97
5,823.0	47.70	215.30	5,757.4	4,482.4	0.9	-351.2	322.0	11.26	11.25	0.63
5,854.0	51.10	214.50	5,777.6	4,502.6	-18.4	-364.6	326.5	11.14	10.97	-2.58
5,886.0	54.50	213.10	5,796.9	4,521.9	-39.6	-378.8	331.0	11.18	10.63	-4.38
5,917.0	57.60	212.10	5,814.2	4,539.2	-61.2	-392.7	335.0	10.35	10.00	-3.23
5,949.0	60.60	211.40	5,830.6	4,555.6	-84.6	-407.1	338.9	9.56	9.38	-2.19
5,980.0	64.00	210.70	5,845.1	4,570.1	-108.1	-421.2	342.4	11.15	10.97	-2.26
6,012.0	67.40	210.30	5,858.2	4,583.2	-133.2	-436.0	345.8	10.69	10.63	-1.25
6,043.0	70.00	209.90	5,869.5	4,594.5	-158.2	-450.5	349.1	8.47	8.39	-1.29
6,075.0	73.30	210.40	5,879.6	4,604.6	-184.5	-465.8	352.5	10.42	10.31	1.56
6,138.0	74.40	210.50	5,897.1	4,622.1	-236.6	-496.5	359.6	1.75	1.75	0.16
6,232.0	75.00	209.90	5,921.9	4,646.9	-315.0	-542.1	369.9	0.89	0.64	-0.64
6,326.0	75.70	209.50	5,945.7	4,670.7	-394.0	-587.1	379.5	0.85	0.74	-0.43
6,420.0	74.30	209.40	5,970.0	4,695.0	-473.1	-631.8	388.6	1.49	-1.49	-0.11
6,514.0	74.90	208.70	5,994.9	4,719.9	-552.3	-675.8	397.1	0.96	0.64	-0.74
6,609.0	75.90	208.10	6,018.9	4,743.9	-633.2	-719.5	404.7	1.22	1.05	-0.63

RECEIVED
Office of Oil and Gas
SEP 16 2015
WV Department of
Environmental Protection

Database:	EDM 5000 1- Single User Db	Local Co-ordinate Reference:	Site Doddridge County 513154
Company:	EQT Production - Marcellus	TVD Reference:	KB@23 @ 1275.0usft
Project:	Doddridge County, WV Grd	MD Reference:	KB@23 @ 1275.0usft
Site:	Doddridge County 513154	North Reference:	Grid
Well:	Well #513154	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	513154 AS Drilled Surveys		

Survey										
Measure d Depth	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)
6,703.0	75.20	211.80	6,042.4	4,767.4	-712.0	-764.9	414.6	3.88	-0.74	3.94
6,798.0	76.10	211.50	6,065.9	4,790.9	-790.4	-813.2	427.4	1.00	0.95	-0.32
6,892.0	74.20	211.40	6,090.0	4,815.0	-867.9	-860.6	439.7	2.02	-2.02	-0.11
6,987.0	75.10	211.20	6,115.1	4,840.1	-946.1	-908.2	451.8	0.97	0.95	-0.21
7,081.0	75.60	210.80	6,138.9	4,863.9	-1,024.1	-955.0	463.4	0.67	0.53	-0.43
7,176.0	74.20	210.70	6,163.7	4,888.7	-1,102.9	-1,001.9	474.7	1.48	-1.47	-0.11
7,270.0	74.60	210.30	6,188.9	4,913.9	-1,180.9	-1,047.9	485.4	0.59	0.43	-0.43
7,364.0	74.80	210.50	6,213.7	4,938.7	-1,259.1	-1,093.8	496.1	0.30	0.21	0.21
7,458.0	75.20	210.90	6,238.1	4,963.1	-1,337.2	-1,140.1	507.2	0.59	0.43	0.43
7,553.0	74.80	208.60	6,262.7	4,987.7	-1,416.9	-1,185.7	516.9	2.38	-0.42	-2.42
7,647.0	75.50	208.60	6,286.8	5,011.8	-1,496.6	-1,229.2	524.7	0.74	0.74	0.00
7,741.0	76.50	208.30	6,309.5	5,034.5	-1,576.8	-1,272.6	532.3	1.11	1.06	-0.32
7,836.0	76.00	210.60	6,332.1	5,057.1	-1,657.2	-1,318.0	541.5	2.41	-0.53	2.42
7,930.0	76.40	210.00	6,354.5	5,079.5	-1,736.0	-1,364.0	552.1	0.75	0.43	-0.64
8,025.0	74.60	210.30	6,378.3	5,103.3	-1,815.5	-1,410.2	562.4	1.92	-1.89	0.32
8,057.0	74.90	210.30	6,386.7	5,111.7	-1,842.2	-1,425.8	566.0	0.94	0.94	0.00
8,088.0	75.30	210.30	6,394.7	5,119.7	-1,868.0	-1,440.9	569.4	1.29	1.29	0.00
8,119.0	75.70	212.10	6,402.4	5,127.4	-1,893.7	-1,456.5	573.4	5.77	1.29	5.81
8,151.0	75.40	215.20	6,410.4	5,135.4	-1,919.5	-1,473.6	578.7	9.43	-0.94	9.69
8,182.0	75.10	218.70	6,418.3	5,143.3	-1,943.5	-1,491.6	585.6	10.96	-0.97	11.29
8,214.0	74.40	221.60	6,426.7	5,151.7	-1,967.1	-1,511.5	594.4	9.01	-2.19	9.06
8,246.0	73.70	224.70	6,435.5	5,160.5	-1,989.5	-1,532.6	604.6	9.57	-2.19	9.69
8,277.0	73.30	228.30	6,444.3	5,169.3	-2,010.0	-1,554.1	616.2	11.21	-1.29	11.61
8,309.0	73.50	231.70	6,453.5	5,178.5	-2,029.7	-1,577.6	629.8	10.20	0.63	10.63
8,341.0	73.80	234.50	6,462.5	5,187.5	-2,048.1	-1,602.2	644.8	8.45	0.94	8.75
8,372.0	73.50	237.50	6,471.2	5,196.2	-2,064.7	-1,626.8	660.7	9.34	-0.97	9.68
8,403.0	73.50	240.10	6,480.0	5,205.0	-2,080.1	-1,652.3	677.8	8.04	0.00	8.39
8,435.0	73.50	243.10	6,489.1	5,214.1	-2,094.7	-1,679.2	696.7	8.99	0.00	9.38
8,466.0	72.70	246.00	6,498.1	5,223.1	-2,107.5	-1,706.0	716.1	9.32	-2.58	9.35
8,498.0	71.20	248.50	6,508.0	5,233.0	-2,119.2	-1,734.1	737.1	8.78	-4.69	7.81
8,529.0	70.30	252.10	6,518.3	5,243.3	-2,129.1	-1,761.6	758.3	11.34	-2.90	11.61
8,560.0	70.40	255.80	6,528.7	5,253.7	-2,137.2	-1,789.7	780.8	11.24	0.32	11.94
8,592.0	71.30	258.30	6,539.2	5,264.2	-2,143.9	-1,819.1	805.0	7.90	2.81	7.81
8,623.0	72.90	260.70	6,548.7	5,273.7	-2,149.3	-1,848.1	829.4	8.99	5.16	7.74
8,654.0	75.00	263.20	6,557.3	5,282.3	-2,153.5	-1,877.6	854.8	10.29	6.77	8.06
8,686.0	75.90	265.90	6,565.3	5,290.3	-2,156.4	-1,908.5	881.8	8.64	2.81	8.44
8,717.0	75.70	269.50	6,572.9	5,297.9	-2,157.6	-1,938.5	908.8	11.28	-0.65	11.61
8,748.0	74.60	272.90	6,580.9	5,305.9	-2,157.0	-1,968.4	936.5	11.18	-3.55	10.97
8,780.0	74.10	276.00	6,589.5	5,314.5	-2,154.6	-1,999.1	965.6	9.46	-1.56	9.69
8,811.0	74.20	280.60	6,598.0	5,323.0	-2,150.3	-2,028.6	994.4	14.28	0.32	14.84

RECEIVED
Office of Oil and Gas
SEP 18 2015
Department of
Environmental Protection

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Doddridge County 513154
Company:	EQT Production - Marcellus	TVD Reference:	KB@23 @ 1275.0usft
Project:	Doddridge County, WV Grid	MD Reference:	KB@23 @ 1275.0usft
Site:	Doddridge County 513154	North Reference:	Grid
Well:	Well #513154	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	513154 AS Drilled Surveys		

Survey										
Measure d Depth	Inclina n	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)
8,842.0	75.50	284.40	6,606.1	5,331.1	-2,143.8	-2,057.9	1,023.7	12.55	4.19	12.26
8,874.0	75.30	287.90	6,614.2	5,339.2	-2,135.2	-2,087.6	1,054.4	10.60	-0.63	10.94
8,905.0	76.00	291.70	6,621.9	5,346.9	-2,125.0	-2,115.8	1,084.4	12.09	2.26	12.26
8,936.0	76.80	295.10	6,629.1	5,354.1	-2,113.1	-2,143.5	1,114.5	10.97	2.58	10.97
8,968.0	77.80	297.80	6,636.2	5,361.2	-2,099.2	-2,171.4	1,145.7	8.80	3.13	8.44
9,000.0	78.30	301.00	6,642.8	5,367.8	-2,083.8	-2,198.7	1,176.8	9.91	1.56	10.00
9,031.0	78.90	304.80	6,648.9	5,373.9	-2,067.3	-2,224.2	1,206.8	12.17	1.94	12.26
9,063.0	79.70	308.60	6,654.9	5,379.9	-2,048.5	-2,249.4	1,237.4	11.93	2.50	11.88
9,094.0	80.00	312.10	6,660.3	5,385.3	-2,028.8	-2,272.7	1,266.7	11.16	0.97	11.29
9,125.0	81.40	314.90	6,665.4	5,390.4	-2,007.7	-2,294.9	1,295.4	9.99	4.52	9.03
9,157.0	82.60	317.70	6,669.8	5,394.8	-1,984.8	-2,316.8	1,324.7	9.44	3.75	8.75
9,188.0	83.40	319.80	6,673.6	5,398.6	-1,961.7	-2,337.0	1,352.5	7.20	2.58	6.77
9,220.0	85.20	322.40	6,676.8	5,401.8	-1,936.9	-2,357.0	1,380.8	9.85	5.63	8.13
9,252.0	86.70	325.10	6,679.0	5,404.0	-1,911.1	-2,375.9	1,408.4	9.63	4.69	8.44
9,283.0	88.60	328.80	6,680.3	5,405.3	-1,885.2	-2,392.8	1,434.3	13.41	6.13	11.94
9,315.0	89.80	330.70	6,680.7	5,405.7	-1,857.6	-2,408.9	1,460.2	7.02	3.75	5.94
LP=8145 MD/6681 TVD										
9,346.0	90.60	333.90	6,680.6	5,405.6	-1,830.1	-2,423.3	1,484.4	10.64	2.58	10.32
9,441.0	91.70	334.70	6,678.7	5,403.7	-1,744.5	-2,464.5	1,556.5	1.43	1.16	0.84
9,535.0	92.00	333.60	6,675.7	5,400.7	-1,660.0	-2,505.5	1,628.0	1.21	0.32	-1.17
9,630.0	89.90	334.70	6,674.1	5,399.1	-1,574.5	-2,546.9	1,700.2	2.50	-2.21	1.16
9,724.0	90.90	333.60	6,673.5	5,398.5	-1,489.9	-2,587.9	1,771.7	1.58	1.06	-1.17
9,818.0	88.30	335.50	6,674.1	5,399.1	-1,405.0	-2,628.3	1,842.8	3.43	-2.77	2.02
9,912.0	89.10	335.20	6,676.3	5,401.3	-1,319.6	-2,667.4	1,913.0	0.91	0.85	-0.32
10,006.0	89.80	334.00	6,677.2	5,402.2	-1,234.7	-2,707.8	1,984.0	1.48	0.74	-1.28
10,101.0	90.80	333.20	6,676.7	5,401.7	-1,149.6	-2,750.0	2,056.8	1.35	1.05	-0.84
10,196.0	90.40	336.40	6,675.7	5,400.7	-1,063.7	-2,790.4	2,128.4	3.39	-0.42	3.37
10,290.0	91.10	334.80	6,674.4	5,399.4	-978.1	-2,829.3	2,198.3	1.86	0.74	-1.70
10,384.0	91.80	333.60	6,672.1	5,397.1	-893.5	-2,870.2	2,269.8	1.48	0.74	-1.28
10,479.0	91.50	333.90	6,669.3	5,394.3	-808.3	-2,912.2	2,342.4	0.45	-0.32	0.32
10,574.0	89.80	336.70	6,668.2	5,393.2	-722.0	-2,951.9	2,413.4	3.45	-1.79	2.95
10,669.0	89.40	334.80	6,668.9	5,393.9	-635.4	-2,990.9	2,483.9	2.04	-0.42	-2.00
10,764.0	90.40	333.60	6,669.1	5,394.1	-549.9	-3,032.2	2,556.1	1.64	1.05	-1.26
10,858.0	90.30	333.20	6,668.5	5,393.5	-465.9	-3,074.3	2,628.4	0.44	-0.11	-0.43
10,952.0	91.30	332.40	6,667.2	5,392.2	-382.3	-3,117.3	2,701.4	1.36	1.06	-0.85
11,046.0	90.80	334.80	6,665.5	5,390.5	-298.1	-3,159.1	2,773.4	2.61	-0.53	2.55
11,141.0	91.10	333.30	6,663.9	5,388.9	-212.7	-3,200.6	2,845.8	1.61	0.32	-1.58
11,235.0	91.20	334.90	6,662.0	5,387.0	-128.1	-3,241.7	2,917.3	1.71	0.11	1.70
11,330.0	91.00	338.30	6,660.2	5,385.2	-41.0	-3,279.4	2,986.9	3.58	-0.21	3.58
11,424.0	91.50	337.50	6,658.1	5,383.1	46.1	-3,314.7	3,054.2	1.00	0.53	-0.85

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Doddridge County 513154
Company:	EQT Production - Marcellus	TVD Reference:	KB@23 @ 1275.0usft
Project:	Doddridge County, WV Grd	MD Reference:	KB@23 @ 1275.0usft
Site:	Doddridge County 513154	North Reference:	Grid
Well:	Well #513154	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	513154 AS Drilled Surveys		

Measure d Denth	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)
11,519.0	92.70	336.00	6,654.6	5,379.6	133.3	-3,352.2	3,123.6	2.02	1.26	-1.58
11,613.0	89.80	338.20	6,652.6	5,377.6	219.9	-3,388.8	3,191.8	3.87	-3.09	2.34
11,708.0	90.40	337.40	6,652.4	5,377.4	307.8	-3,424.7	3,260.0	1.05	0.63	-0.84
11,802.0	89.60	337.80	6,652.4	5,377.4	394.7	-3,460.5	3,327.7	0.95	-0.85	0.43
11,897.0	90.10	337.20	6,652.7	5,377.7	482.5	-3,496.8	3,396.3	0.82	0.53	-0.63
11,991.0	90.40	334.70	6,652.3	5,377.3	568.3	-3,535.1	3,465.8	2.68	0.32	-2.66
12,086.0	91.00	332.20	6,651.1	5,376.1	653.3	-3,577.6	3,538.8	2.71	0.63	-2.63
12,180.0	90.60	336.10	6,649.8	5,374.8	737.9	-3,618.6	3,610.3	4.17	-0.43	4.15
12,275.0	91.80	335.30	6,647.8	5,372.8	824.4	-3,657.7	3,680.8	1.52	1.26	-0.84
12,369.0	90.00	337.90	6,646.3	5,371.3	910.7	-3,695.0	3,749.7	3.36	-1.91	2.77
12,464.0	89.10	339.10	6,647.1	5,372.1	999.1	-3,729.8	3,817.0	1.58	-0.95	1.26
12,558.0	90.40	339.10	6,647.5	5,372.5	1,086.9	-3,763.3	3,883.0	1.38	1.38	0.00
12,653.0	91.10	338.60	6,646.2	5,371.2	1,175.5	-3,797.6	3,950.0	0.91	0.74	-0.53
12,747.0	88.00	338.60	6,647.0	5,372.0	1,263.0	-3,831.9	4,016.5	3.30	-3.30	0.00
12,841.0	89.00	338.90	6,649.4	5,374.4	1,350.6	-3,866.0	4,082.9	1.11	1.06	0.32
12,936.0	88.80	333.60	6,651.3	5,376.3	1,437.5	-3,904.2	4,152.8	5.58	-0.21	-5.58
13,030.0	89.10	333.30	6,653.0	5,378.0	1,521.5	-3,946.2	4,225.0	0.45	0.32	-0.32
13,125.0	89.10	332.60	6,654.5	5,379.5	1,606.1	-3,989.4	4,298.6	0.74	0.00	-0.74
13,178.0	89.10	332.20	6,655.3	5,380.3	1,653.1	-4,014.0	4,339.9	0.75	0.00	-0.75
13,219.0	88.90	332.30	6,656.0	5,381.0	1,689.4	-4,033.0	4,372.0	0.55	-0.49	0.24
Final Survey=13257' MD/ 6657' TVD										
13,257.0	88.80	332.20	6,656.8	5,381.8	1,723.0	-4,050.7	4,401.7	0.37	-0.26	-0.26
Projection to TD=13310' MD/ 6658' TVD										
13,310.0	88.80	332.20	6,657.9	5,382.9	1,769.9	-4,075.4	4,443.1	0.00	0.00	0.00

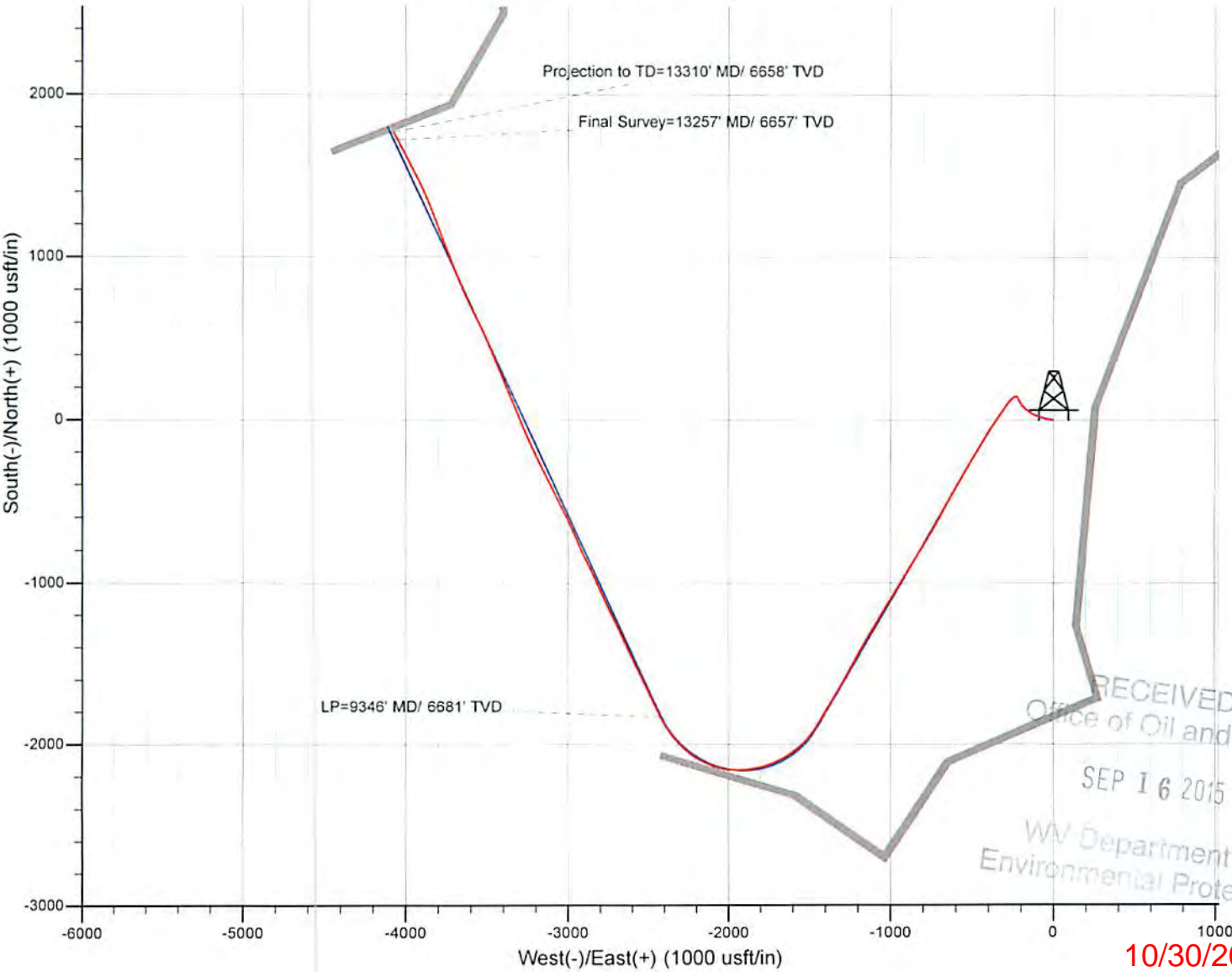
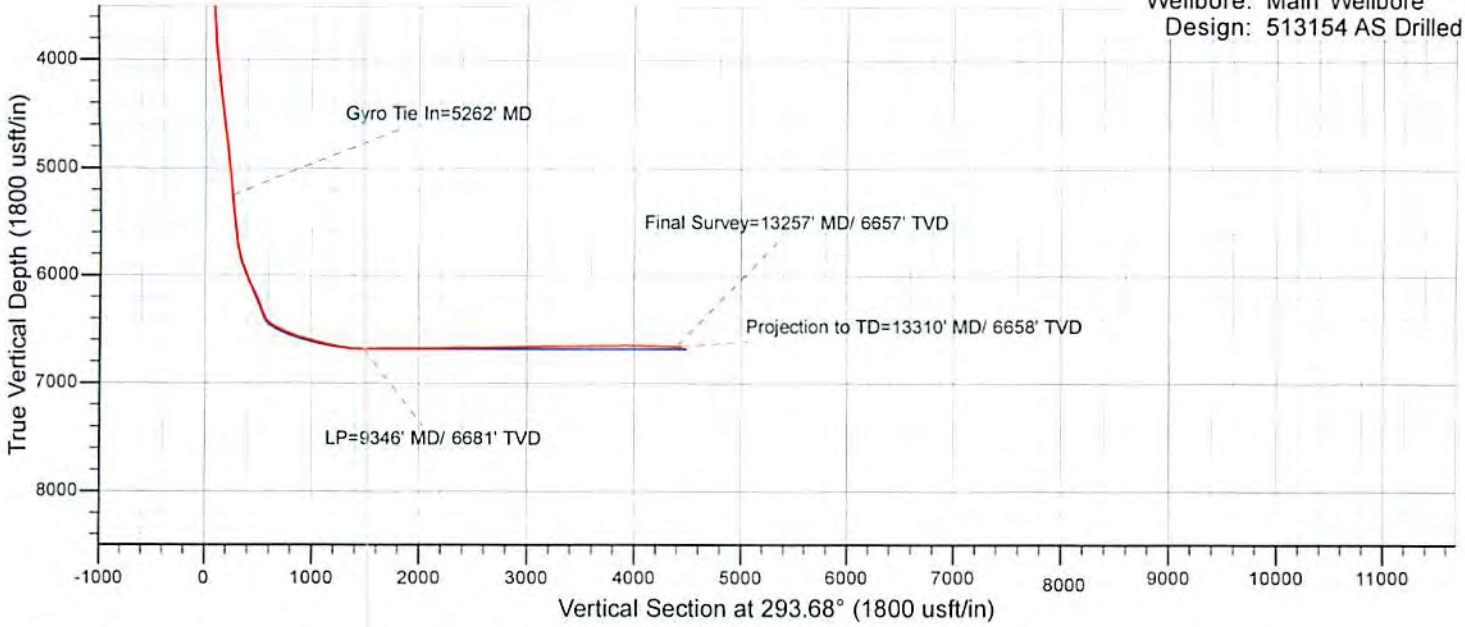
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
5,262.0	5,250.0	137.6	-221.6	Gyro Tie In=5262' MD
9,346.0	6,680.6	-1,830.1	-2,423.3	LP=9346' MD/ 6681' TVD
13,257.0	6,656.8	1,723.0	-4,050.7	Final Survey=13257' MD/ 6657' TVD
13,310.0	6,657.9	1,769.9	-4,075.4	Projection to TD=13310' MD/ 6658' TVD

Checked By: _____ Approved By: _____ Date: _____

RECEIVED
Office of Oil and Gas
SEP 16 2015
WV Department of
Environmental Protection
COMPASS 3.00/2014
10/30/2015



Project: Doddridge County, WV Grid
Site: Doddridge County 513154
Well: Well #513154
Wellbore: Main Wellbore
Design: 513154 AS Drilled Surveys



RECEIVED
Office of Oil and Gas
SEP 16 2015
WV Department of
Environmental Protection

10/30/2015