

Well Operator's Report of Well Work



Where energy meets innovation.

Well Number: 513139

API: 47 - 017 - 06328

Submission: Initial Amended

Notes:

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WV Department of
Environmental Protection

06/12/2015



Where energy meets innovation.

EQT Production - Marcellus

Doddridge County, WV Grid

Doddridge County 513139

Well #513139

Main Wellbore

Design: As Drilled Surveys

Standard Survey Report

27 August, 2014



Where energy meets innovation.

WV Department of
Environmental Protection 06/12/2015

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Doddridge County 513139
Company:	EQT Production - Marcellus	TVD Reference:	KB @ 1218.0usft
Project:	Doddridge County, WV Grid	MD Reference:	KB @ 1218.0usft
Site:	Doddridge County 513139	North Reference:	Grid
Well:	Well #513139	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	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 513139				
Site Position:		Northing:	267,935.80 usft	Latitude:	39.23
From:	Map	Easting:	1,635,240.40 usft	Longitude:	-80.79
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.82 °

Well	Well #513139					
Well Position	+N/-S	0.0 usft	Northing:	267,935.80 usft	Latitude:	39° 13' 42.473 N
	+E/-W	0.0 usft	Easting:	1,635,240.40 usft	Longitude:	80° 47' 15.496 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	1,202.0 usft

Wellbore	Main Wellbore				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010_14	8/12/2013	-8.42	66.84	52,366

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	152.84	

Survey Program	Date	8/27/2014			
From (')	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	5,188.0	513139 Gyrodata Gyros (Main Wellbore)	GYD_DP_MS	Gyrodata gyro-compassing and drop	
0.00	12,794.0	513139 PHX MWD (Main Wellbore)	MWD+IGRF	MWD+IGRF v3:standard declination	

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	-1,218.0	0.0	0.0	0.0	0.00	0.00	0.00	
100.0	0.21	24.39	100.0	-1,118.0	0.2	0.1	-0.1	0.21	0.21	0.00	
200.0	0.13	21.13	200.0	-1,018.0	0.4	0.2	-0.3	0.08	0.08	-3.26	
300.0	0.12	31.70	300.0	-918.0	0.6	0.3	-0.4	0.03	0.03		
400.0	0.17	47.13	400.0	-818.0	0.8	0.5	-0.5	0.06	0.05	15.43	
500.0	0.25	62.84	500.0	-718.0	1.0	0.8	-0.6	0.08	0.08	15.71	
600.0	0.25	86.66	600.0	-618.0	1.1	1.2	-0.5	0.10	0.00	23.82	
700.0	0.41	119.27	700.0	-518.0	1.0	1.7	-0.1	0.24	0.16	32.61	

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Site:	Doddridge County 513139	North Reference:	Grid
Well:	Well #513139	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	0.42	132.10	800.0	-418.0	0.6	2.3	0.5	0.09	0.01	12.83	
900.0	0.52	121.58	900.0	-318.0	0.1	2.9	1.3	0.13	0.10	-10.52	
1,000.0	0.55	127.03	1,000.0	-218.0	-0.5	3.7	2.1	0.06	0.03	5.45	
1,100.0	0.50	126.62	1,100.0	-118.0	-1.0	4.4	2.9	0.05	-0.05	-0.41	
1,200.0	0.55	131.47	1,200.0	-18.0	-1.6	5.2	3.8	0.07	0.05	4.85	
1,300.0	0.58	127.22	1,300.0	82.0	-2.2	5.9	4.7	0.05	0.03	-4.25	
1,400.0	0.62	114.59	1,400.0	182.0	-2.7	6.8	5.5	0.14	0.04	-12.63	
1,500.0	0.65	110.21	1,500.0	282.0	-3.2	7.8	6.4	0.06	0.03	-4.38	
1,600.0	0.38	129.89	1,600.0	382.0	-3.6	8.6	7.1	0.32	-0.27	19.68	
1,700.0	0.32	144.31	1,700.0	482.0	-4.0	9.0	7.7	0.11	-0.06	14.42	
1,800.0	0.44	144.76	1,800.0	582.0	-4.5	9.4	8.3	0.12	0.12	0.45	
1,900.0	0.39	156.90	1,899.9	681.9	-5.2	9.8	9.1	0.10	-0.05	12.14	
2,000.0	0.39	154.43	1,999.9	781.9	-5.8	10.1	9.7	0.02	0.00	-2.47	
2,100.0	0.38	155.34	2,099.9	881.9	-6.4	10.3	10.4	0.01	-0.01	0.91	
2,200.0	0.34	184.26	2,199.9	981.9	-7.0	10.5	11.0	0.18	-0.04	28.92	
2,300.0	0.40	191.86	2,299.9	1,081.9	-7.6	10.4	11.5	0.08	0.06	7.60	
2,400.0	0.44	197.55	2,399.9	1,181.9	-8.3	10.2	12.1	0.06	0.04	5.69	
2,500.0	0.52	203.19	2,499.9	1,281.9	-9.1	9.9	12.6	0.09	0.08	5.64	
2,600.0	0.70	205.23	2,599.9	1,381.9	-10.1	9.4	13.3	0.18	0.18	2.04	
2,700.0	0.83	202.60	2,699.9	1,481.9	-11.3	8.9	14.1	0.13	0.13	-2.63	
2,800.0	0.97	204.96	2,799.9	1,581.9	-12.8	8.3	15.1	0.14	0.14	2.36	
2,900.0	0.99	203.27	2,899.9	1,681.9	-14.3	7.6	16.2	0.04	0.02	-1.69	
3,000.0	1.06	201.16	2,999.9	1,781.9	-16.0	6.9	17.4	0.08	0.07	-2.11	
3,100.0	1.01	202.02	3,099.9	1,881.9	-17.7	6.2	18.6	0.05	-0.05	0.86	
3,200.0	1.13	201.66	3,199.8	1,981.8	-19.4	5.5	19.8	0.12	0.12	-0.36	
3,300.0	1.11	196.93	3,299.8	2,081.8	-21.2	4.9	21.1	0.09	-0.02	-4.73	
3,400.0	1.17	198.02	3,399.8	2,181.8	-23.1	4.3	22.5	0.06	0.06	1.09	
3,500.0	1.01	197.00	3,499.8	2,281.8	-24.9	3.7	23.9	0.16	-0.16	-1.02	
3,600.0	0.94	199.29	3,599.8	2,381.8	-26.6	3.2	25.1	0.08	-0.07	2.29	
3,700.0	0.91	205.56	3,699.8	2,481.8	-28.0	2.6	26.1	0.11	-0.03	6.27	
3,800.0	0.81	221.70	3,799.7	2,581.7	-29.3	1.8	26.9	0.26	-0.10	16.14	
3,900.0	0.84	239.56	3,899.7	2,681.7	-30.2	0.7	27.2	0.26	0.03	17.86	
4,000.0	0.83	256.38	3,999.7	2,781.7	-30.7	-0.7	27.0	0.24	-0.01	16.82	
4,100.0	1.14	273.32	4,099.7	2,881.7	-30.8	-2.4	26.4	0.42	0.31	16.94	
4,200.0	1.56	280.76	4,199.7	2,981.7	-30.5	-4.7	25.0	0.45	0.42	7.44	
4,300.0	1.76	286.68	4,299.6	3,081.6	-29.8	-7.5	23.1	0.26	0.20	5.92	
4,400.0	2.17	293.06	4,399.6	3,181.6	-28.7	-10.7	20.6	0.46	0.41	6.38	
4,500.0	3.73	299.12	4,499.4	3,281.4	-26.3	-15.3	16.4	1.59	1.56	6.06	
4,600.0	7.34	306.30	4,599.0	3,381.0	-21.0	-23.3	8.0	3.67	3.61	7.18	
4,700.0	9.76	308.37	4,697.8	3,479.8	-11.9	-35.1	-5.4	2.44	2.42	2.07	
4,800.0	10.59	309.90	4,796.3	3,578.3	-0.8	-48.8	-21.6	0.87	0.83	1.53	
4,900.0	12.87	310.34	4,894.2	3,676.2	12.3	-64.3	-40.3	2.28	2.28	0.44	

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Survey											
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5,000.0	13.18	313.46	4,991.6	3,773.6	27.4	-81.1	-61.4	0.77	0.31	3.12	
5,100.0	16.99	316.98	5,088.1	3,870.1	45.9	-99.3	-86.2	3.92	3.81	3.52	
Gyro Tie In=5188' MD											
5,188.0	17.80	319.77	5,172.1	3,954.1	65.6	-116.8	-111.7	1.32	0.92	3.17	
5,320.0	17.80	320.80	5,297.8	4,079.8	96.6	-142.6	-151.1	0.24	0.00	0.78	
5,352.0	18.70	325.70	5,328.2	4,110.2	104.7	-148.6	-160.9	5.56	2.81	15.31	
5,384.0	19.60	333.10	5,358.4	4,140.4	113.7	-153.9	-171.4	8.08	2.81	23.13	
5,416.0	20.60	340.00	5,388.5	4,170.5	123.8	-158.2	-182.4	8.04	3.13	21.56	
5,447.0	21.50	347.50	5,417.4	4,199.4	134.4	-161.3	-193.3	9.16	2.90	24.19	
5,479.0	22.60	352.20	5,447.1	4,229.1	146.3	-163.4	-204.7	6.50	3.44	14.69	
5,510.0	24.60	355.00	5,475.5	4,257.5	158.6	-164.8	-216.3	7.39	6.45	9.03	
5,542.0	27.00	356.00	5,504.3	4,286.3	172.5	-165.9	-229.2	7.62	7.50	3.13	
5,573.0	29.10	357.50	5,531.7	4,313.7	187.0	-166.7	-242.5	7.15	6.77	4.84	
5,605.0	31.80	358.70	5,559.2	4,341.2	203.2	-167.2	-257.2	8.65	8.44	3.75	
5,636.0	31.40	1.90	5,585.6	4,367.6	219.5	-167.2	-271.6	5.56	-1.29	10.32	
5,668.0	28.30	6.20	5,613.4	4,395.4	235.3	-166.1	-285.2	11.77	-9.69	13.44	
5,700.0	24.80	11.60	5,642.0	4,424.0	249.5	-163.9	-296.8	13.28	-10.94	16.88	
5,731.0	22.80	14.70	5,670.4	4,452.4	261.6	-161.1	-306.3	7.61	-6.45	10.00	
5,763.0	21.70	15.10	5,700.0	4,482.0	273.4	-158.0	-315.3	3.47	-3.44	1.25	
5,794.0	20.40	17.00	5,728.9	4,510.9	284.1	-154.9	-323.4	4.74	-4.19	6.13	
5,826.0	19.10	21.20	5,759.1	4,541.1	294.3	-151.4	-330.9	6.01	-4.06	13.13	
5,857.0	17.70	27.90	5,788.5	4,570.5	303.2	-147.3	-337.0	8.17	-4.52	21.61	
5,889.0	16.70	35.60	5,819.0	4,601.0	311.2	-142.4	-341.9	7.76	-3.13	24.06	
5,920.0	16.30	42.50	5,848.8	4,630.8	318.0	-136.8	-345.4	6.45	-1.29	22.26	
5,952.0	16.20	48.70	5,879.5	4,661.5	324.3	-130.4	-348.1	5.43	-0.31	19.38	
5,983.0	16.40	54.40	5,909.2	4,691.2	329.7	-123.6	-349.8	5.20	0.65	18.39	
6,015.0	15.90	60.10	5,940.0	4,722.0	334.5	-116.2	-350.6	5.19	-1.56	17.81	
6,046.0	16.00	68.80	5,969.8	4,751.8	338.2	-108.5	-350.4	7.71	0.32	28.06	
6,078.0	16.70	78.30	6,000.5	4,782.5	340.7	-99.9	-348.7	8.63	2.19	29.69	
6,109.0	17.50	86.40	6,030.1	4,812.1	341.9	-90.9	-345.7	8.10	2.58	26.13	
6,140.0	18.40	93.40	6,059.6	4,841.6	341.9	-81.3	-341.3	7.53	2.90	22.58	
6,172.0	19.20	100.00	6,089.9	4,871.9	340.7	-71.1	-335.6	7.10	2.50	20.63	
6,203.0	19.80	108.90	6,119.2	4,901.2	338.1	-61.1	-328.7	9.77	1.94	28.71	
6,235.0	20.90	117.40	6,149.2	4,931.2	333.7	-50.9	-320.2	9.85	3.44	26.56	
6,266.0	22.40	125.10	6,178.0	4,960.0	327.8	-41.2	-310.4	10.35	4.84	24.84	
6,298.0	24.50	130.40	6,207.3	4,989.3	320.0	-31.1	-298.9	9.30	6.56	16.56	
6,330.0	26.90	133.20	6,236.2	5,018.2	310.7	-20.8	-285.9	8.40	7.50	8.75	
6,361.0	29.30	133.70	6,263.5	5,045.5	300.7	-10.2	-272.2	7.78	7.74	1.61	
6,393.0	31.80	132.80	6,291.1	5,073.1	289.5	1.6	-256.8	7.08	7.81	2.81	
6,424.0	34.40	133.40	6,317.0	5,099.0	278.0	14.0	-240.9	8.45	8.29	1.04	
6,456.0	37.70	133.60	6,342.9	5,124.9	265.0	27.7	-223.1	10.32	10.31	0.63	
6,488.0	40.80	134.10	6,367.7	5,149.7	251.0	42.3	-204.0	9.68	9.68	0.56	
6,519.0	44.10	134.80	6,390.6	5,172.6	236.3	57.2	-184.1	10.75	10.65	2.26	

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6,551.0	47.70	135.00	6,412.8	5,194.8	220.1	73.5	-162.3	11.26	11.25	0.63
6,583.0	51.10	135.70	6,433.7	5,215.7	202.8	90.5	-139.1	10.75	10.63	2.19
6,614.0	53.40	137.50	6,452.6	5,234.6	185.0	107.4	-115.6	8.72	7.42	5.81
6,646.0	55.40	138.90	6,471.3	5,253.3	165.6	124.7	-90.4	7.19	6.25	4.38
6,677.0	57.80	139.90	6,488.3	5,270.3	146.0	141.5	-65.2	8.20	7.74	3.23
6,709.0	59.90	142.70	6,504.9	5,286.9	124.6	158.7	-38.4	9.96	6.56	8.75
6,740.0	61.60	145.40	6,520.0	5,302.0	102.7	174.5	-11.7	9.37	5.48	8.71
6,771.0	63.00	147.00	6,534.4	5,316.4	79.9	189.8	15.6	6.42	4.52	5.16
6,803.0	65.10	148.20	6,548.4	5,330.4	55.6	205.2	44.2	7.38	6.56	3.75
6,834.0	66.60	149.10	6,561.1	5,343.1	31.4	219.9	72.4	5.52	4.84	2.90
6,866.0	68.20	148.80	6,573.4	5,355.4	6.1	235.2	101.9	5.07	5.00	-0.94
6,897.0	70.30	149.50	6,584.4	5,366.4	-18.8	250.0	130.8	7.10	6.77	2.26
6,929.0	73.00	150.50	6,594.5	5,376.5	-45.1	265.2	161.2	8.94	8.44	3.13
6,960.0	74.50	152.30	6,603.2	5,385.2	-71.2	279.5	190.9	7.38	4.84	5.81
6,991.0	76.20	152.70	6,611.0	5,393.0	-97.8	293.3	220.9	5.62	5.48	1.29
7,023.0	78.10	153.90	6,618.1	5,400.1	-125.7	307.3	252.1	6.97	5.94	3.75
7,054.0	80.70	154.60	6,623.8	5,405.8	-153.1	320.6	282.6	8.68	8.39	2.26
7,085.0	83.30	155.20	6,628.1	5,410.1	-180.9	333.6	313.2	8.60	8.39	1.94
7,117.0	85.70	156.10	6,631.2	5,413.2	-209.9	346.7	345.1	8.01	7.50	2.81
LP=7148' MD/ 6633' TVD										
7,148.0	88.80	156.50	6,632.7	5,414.7	-238.3	359.2	376.0	10.08	10.00	1.29
7,179.0	91.50	156.00	6,632.6	5,414.6	-266.7	371.6	406.9	8.86	8.71	-1.61
7,211.0	93.50	155.70	6,631.2	5,413.2	-295.8	384.7	438.8	6.32	6.25	-0.94
7,273.0	91.60	153.90	6,628.4	5,410.4	-351.9	411.1	500.7	4.22	-3.06	-2.90
7,336.0	91.80	153.90	6,626.6	5,408.6	-408.4	438.8	563.7	0.32	0.32	0.00
7,399.0	90.60	153.20	6,625.3	5,407.3	-464.8	466.8	626.7	2.21	-1.90	-1.11
7,461.0	90.10	151.90	6,624.9	5,406.9	-519.8	495.4	688.7	2.25	-0.81	-2.10
7,524.0	89.80	149.90	6,624.9	5,406.9	-574.9	526.1	751.6	3.21	-0.48	-3.17
7,587.0	89.40	149.50	6,625.4	5,407.4	-629.3	557.8	814.5	0.90	-0.63	-0.63
7,650.0	89.10	151.50	6,626.2	5,408.2	-684.1	588.9	877.5	3.21	-0.48	3.17
7,713.0	90.60	152.50	6,626.4	5,408.4	-739.7	618.4	940.5	2.86	2.38	1.59
7,776.0	91.90	156.00	6,625.0	5,407.0	-796.4	645.8	1,003.4	5.93	2.06	5.56
7,839.0	91.60	156.30	6,623.1	5,405.1	-854.0	671.3	1,066.3	0.67	-0.48	0.48
7,902.0	90.80	156.40	6,621.7	5,403.7	-911.7	696.5	1,129.1	1.28	-1.27	0.16
7,965.0	89.70	157.20	6,621.5	5,403.5	-969.6	721.3	1,192.0	2.16	-1.75	1.27
8,028.0	89.00	157.60	6,622.2	5,404.2	-1,027.8	745.6	1,254.8	1.28	-1.11	0.63
8,091.0	89.50	158.50	6,623.0	5,405.0	-1,086.2	769.1	1,317.5	1.63	0.79	1.43
8,155.0	89.80	157.60	6,623.4	5,405.4	-1,145.6	793.0	1,381.2	1.48	0.47	0.63
8,218.0	89.20	157.20	6,623.9	5,405.9	-1,203.7	817.2	1,444.0	1.14	-0.95	0.63
8,280.0	88.30	156.20	6,625.3	5,407.3	-1,260.7	841.7	1,505.9	2.17	-1.45	-1.61
8,344.0	89.10	156.50	6,626.8	5,408.8	-1,319.3	867.4	1,569.8	1.33	1.25	0.47
8,407.0	88.90	156.00	6,627.9	5,409.9	-1,376.9	892.8	1,632.6	0.85	-0.32	0.47
8,470.0	88.10	153.70	6,629.5	5,411.5	-1,433.9	919.5	1,695.6	3.86	-1.27	-3.65

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Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Doddridge County 513139
Company:	EQT Production - Marcellus	TVD Reference:	KB @ 1218.0usft
Project:	Doddridge County, WV Grid	MD Reference:	KB @ 1218.0usft
Site:	Doddridge County 513139	North Reference:	Grid
Well:	Well #513139	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)	
8,533.0	88.00	153.20	6,631.6	5,413.6	-1,490.2	947.7	1,758.5	0.81	-0.16	-0.79	
8,595.0	88.50	153.00	6,633.5	5,415.5	-1,545.5	975.7	1,820.5	0.87	0.81	-0.32	
8,658.0	89.10	152.60	6,634.9	5,416.9	-1,601.5	1,004.5	1,883.5	1.14	0.95	-0.63	
8,720.0	89.80	154.20	6,635.5	5,417.5	-1,657.0	1,032.3	1,945.5	2.82	1.13	2.58	
8,783.0	90.20	154.90	6,635.5	5,417.5	-1,713.8	1,059.3	2,008.4	1.28	0.63	1.11	
8,846.0	89.30	153.90	6,635.7	5,417.7	-1,770.7	1,086.6	2,071.4	2.14	-1.43	-1.59	
8,910.0	88.90	156.70	6,636.7	5,418.7	-1,828.8	1,113.3	2,135.3	4.42	-0.63	4.38	
8,973.0	89.30	153.90	6,637.7	5,419.7	-1,886.0	1,139.6	2,198.3	4.49	0.63	-4.44	
9,035.0	89.80	154.30	6,638.2	5,420.2	-1,941.8	1,166.7	2,260.3	1.03	0.81	0.65	
9,098.0	90.10	155.40	6,638.3	5,420.3	-1,998.8	1,193.5	2,323.2	1.81	0.48	1.75	
9,161.0	90.70	155.50	6,637.8	5,419.8	-2,056.1	1,219.7	2,386.1	0.97	0.95	0.16	
9,224.0	91.50	155.10	6,636.6	5,418.6	-2,113.3	1,246.0	2,449.1	1.42	1.27	-0.63	
9,288.0	91.10	156.30	6,635.2	5,417.2	-2,171.7	1,272.3	2,513.0	1.98	-0.63	1.88	
9,350.0	91.30	155.30	6,633.9	5,415.9	-2,228.2	1,297.7	2,574.9	1.64	0.32	-1.61	
9,414.0	92.00	155.20	6,632.0	5,414.0	-2,286.3	1,324.5	2,638.8	1.10	1.09	-0.16	
9,477.0	91.00	155.70	6,630.4	5,412.4	-2,343.6	1,350.7	2,701.7	1.77	-1.59	0.79	
9,540.0	90.80	155.70	6,629.4	5,411.4	-2,401.0	1,376.6	2,764.6	0.32	-0.32	0.00	
9,603.0	91.30	157.20	6,628.2	5,410.2	-2,458.7	1,401.8	2,827.5	2.51	0.79	2.38	
9,666.0	92.20	157.40	6,626.3	5,408.3	-2,516.8	1,426.1	2,890.3	1.46	1.43	0.32	
9,730.0	91.20	156.40	6,624.4	5,406.4	-2,575.7	1,451.2	2,954.1	2.21	-1.56	-1.56	
9,793.0	90.90	155.40	6,623.3	5,405.3	-2,633.2	1,476.9	3,017.0	1.66	-0.48	-1.59	
9,856.0	89.50	153.90	6,623.0	5,405.0	-2,690.1	1,503.8	3,079.9	3.26	-2.22	-2.38	
9,919.0	89.70	154.30	6,623.5	5,405.5	-2,746.8	1,531.4	3,142.9	0.71	0.32	0.63	
9,982.0	90.30	154.40	6,623.5	5,405.5	-2,803.6	1,558.6	3,205.9	0.97	0.95	0.16	
10,045.0	90.90	155.10	6,622.8	5,404.8	-2,860.5	1,585.5	3,268.9	1.46	0.95	1.11	
10,108.0	91.60	155.30	6,621.4	5,403.4	-2,917.7	1,611.9	3,331.8	1.16	1.11	0.32	
10,171.0	90.70	155.50	6,620.2	5,402.2	-2,975.0	1,638.1	3,394.7	1.46	-1.43	0.32	
10,234.0	90.90	155.20	6,619.3	5,401.3	-3,032.2	1,664.4	3,457.7	0.57	0.32	-0.48	
10,297.0	91.40	155.30	6,618.0	5,400.0	-3,089.4	1,690.8	3,520.6	0.81	0.79	0.16	
10,361.0	92.30	155.00	6,616.0	5,398.0	-3,147.5	1,717.7	3,584.5	1.48	1.41	-0.47	
10,424.0	91.00	155.60	6,614.1	5,396.1	-3,204.7	1,744.0	3,647.4	2.27	-2.06	0.95	
10,487.0	90.80	155.10	6,613.2	5,395.2	-3,261.9	1,770.3	3,710.3	0.85	-0.32	-0.79	
10,550.0	91.40	155.20	6,611.9	5,393.9	-3,319.1	1,796.7	3,773.3	0.97	0.95	0.16	
10,613.0	89.80	155.30	6,611.3	5,393.3	-3,376.3	1,823.1	3,836.2	2.54	-2.54	0.16	
10,677.0	90.10	155.30	6,611.3	5,393.3	-3,434.4	1,849.8	3,900.2	0.47	0.47	0.00	
10,740.0	90.80	156.70	6,610.9	5,392.9	-3,492.0	1,875.5	3,963.1	2.48	1.11	2.22	
10,803.0	91.60	156.20	6,609.5	5,391.5	-3,549.7	1,900.6	4,025.9	1.50	1.27	-0.79	
10,866.0	91.40	155.90	6,607.9	5,389.9	-3,607.3	1,926.2	4,088.8	0.57	-0.32	-0.48	
10,929.0	90.90	155.60	6,606.6	5,388.6	-3,664.7	1,952.1	4,151.7	0.93	-0.79	-0.48	
10,992.0	91.30	155.30	6,605.4	5,387.4	-3,722.0	1,978.2	4,214.6	0.79	0.63	-0.48	
11,055.0	91.40	155.10	6,603.9	5,385.9	-3,779.2	2,004.7	4,277.6	0.35	0.16	-0.32	
11,118.0	91.80	154.10	6,602.2	5,384.2	-3,836.1	2,031.7	4,340.5	1.71	0.63	-1.59	

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Doddridge County 513139
Company:	EQT Production - Marcellus	TVD Reference:	KB @ 1218.0usft
Project:	Doddridge County, WV Grid	MD Reference:	KB @ 1218.0usft
Site:	Doddridge County 513139	North Reference:	Grid
Well:	Well #513139	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)
11,181.0	91.30	154.80	6,600.5	5,382.5	-3,892.9	2,058.8	4,403.5	1.37	-0.79	1.11
11,244.0	91.80	156.40	6,598.8	5,380.8	-3,950.2	2,084.8	4,466.4	2.66	0.79	2.54
11,307.0	91.00	155.50	6,597.2	5,379.2	-4,007.8	2,110.5	4,529.2	1.91	-1.27	-1.43
11,371.0	90.80	155.60	6,596.2	5,378.2	-4,066.0	2,137.0	4,593.2	0.35	-0.31	0.16
11,433.0	89.10	155.50	6,596.3	5,378.3	-4,122.4	2,162.7	4,655.1	2.75	-2.74	-0.16
11,497.0	89.00	155.30	6,597.3	5,379.3	-4,180.6	2,189.3	4,719.0	0.35	-0.16	-0.31
11,560.0	89.50	155.30	6,598.2	5,380.2	-4,237.9	2,215.6	4,782.0	0.79	0.79	0.00
11,623.0	89.80	155.30	6,598.5	5,380.5	-4,295.1	2,241.9	4,844.9	0.48	0.48	0.00
11,686.0	90.20	155.20	6,598.5	5,380.5	-4,352.3	2,268.3	4,907.8	0.65	0.63	-0.16
11,749.0	90.80	155.30	6,598.0	5,380.0	-4,409.5	2,294.7	4,970.8	0.97	0.95	0.16
11,812.0	91.40	155.30	6,596.8	5,378.8	-4,466.7	2,321.0	5,033.7	0.95	0.95	0.00
11,876.0	92.00	155.00	6,594.9	5,376.9	-4,524.8	2,347.9	5,097.6	1.05	0.94	-0.47
11,939.0	90.90	154.70	6,593.3	5,375.3	-4,581.8	2,374.7	5,160.6	1.81	-1.75	-0.48
12,002.0	90.90	155.80	6,592.3	5,374.3	-4,639.0	2,401.0	5,223.5	1.75	0.00	1.75
12,065.0	91.80	155.90	6,590.8	5,372.8	-4,696.5	2,426.8	5,286.4	1.44	1.43	0.16
12,129.0	92.40	156.10	6,588.5	5,370.5	-4,754.9	2,452.8	5,350.3	0.99	0.94	0.31
12,192.0	90.90	155.30	6,586.7	5,368.7	-4,812.3	2,478.7	5,413.2	2.70	-2.38	-1.27
12,255.0	90.00	153.90	6,586.2	5,368.2	-4,869.2	2,505.8	5,476.1	2.64	-1.43	-2.22
12,318.0	90.20	153.40	6,586.0	5,368.0	-4,925.7	2,533.7	5,539.1	0.85	0.32	-0.79
12,381.0	90.80	153.90	6,585.5	5,367.5	-4,982.1	2,561.7	5,602.1	1.24	0.95	0.79
12,444.0	91.20	154.40	6,584.4	5,366.4	-5,038.8	2,589.1	5,665.1	1.02	0.63	0.79
12,508.0	89.90	153.50	6,583.8	5,365.8	-5,096.3	2,617.2	5,729.1	2.47	-2.03	-1.41
12,571.0	89.40	154.10	6,584.2	5,366.2	-5,152.8	2,645.1	5,792.0	1.24	-0.79	0.95
12,634.0	89.80	154.30	6,584.6	5,366.6	-5,209.5	2,672.5	5,855.0	0.71	0.63	0.32
12,697.0	90.20	154.50	6,584.6	5,366.6	-5,266.3	2,699.7	5,918.0	0.71	0.63	0.32
Last Survey=12742' MD/ 6584' TVD										
12,742.0	90.80	154.50	6,584.2	5,366.2	-5,307.0	2,719.1	5,963.0	1.33	1.33	0.00
Projection to TD=12794' MD/ 6584' TVD										
12,794.0	90.80	154.50	6,583.5	5,365.5	-5,353.9	2,741.5	6,015.0	0.00	0.00	0.00

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
5,188.0	5,172.1	65.6	-116.8	Gyro Tie In=5188' MD	
7,148.0	6,632.7	-238.3	359.2	LP=7148' MD/ 6633' TVD	
12,742.0	6,584.2	-5,307.0	2,719.1	Last Survey=12742' MD/ 6584' TVD	
12,794.0	6,583.5	-5,353.9	2,741.5	Projection to TD=12794' MD/ 6584' TVD	

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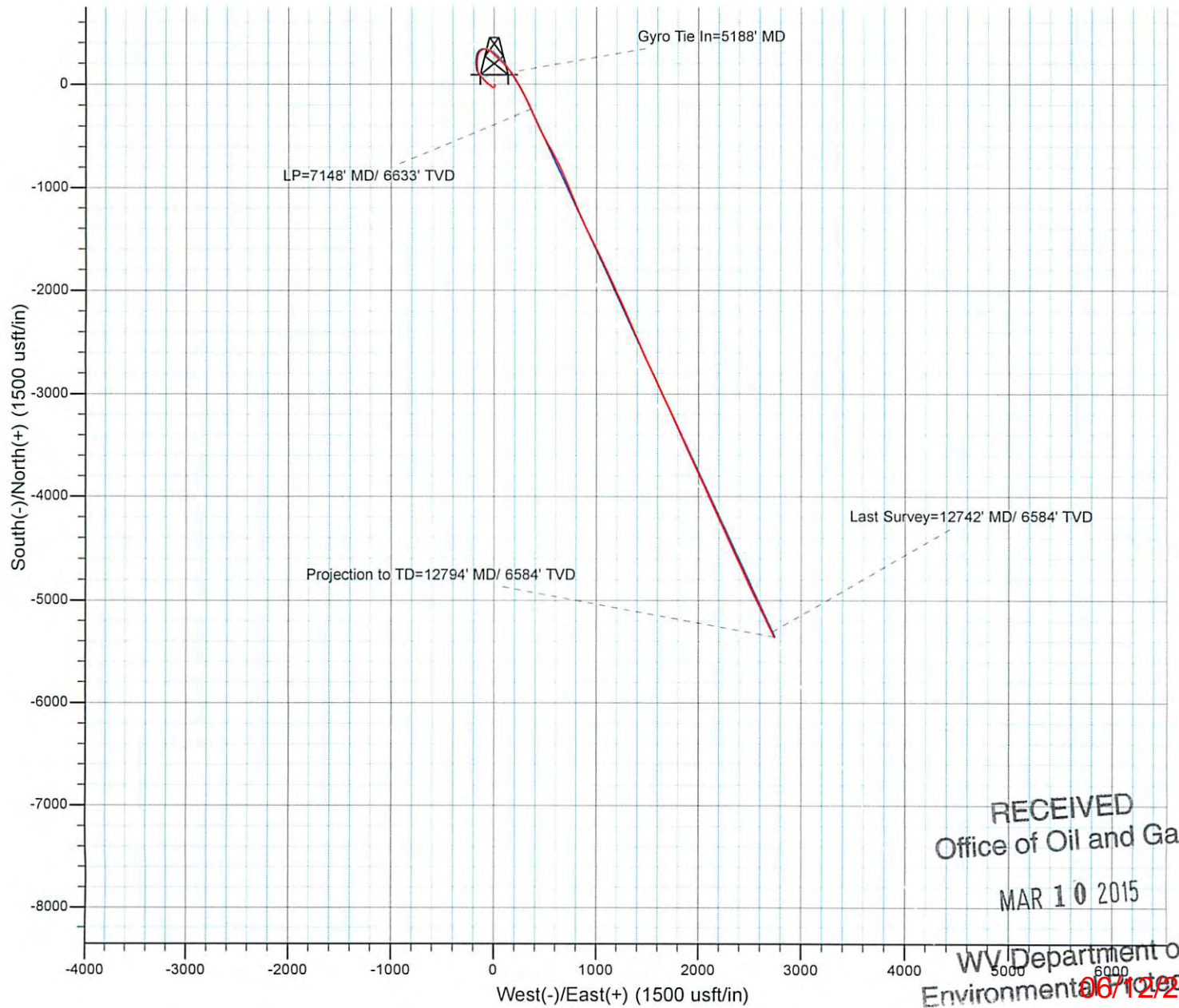
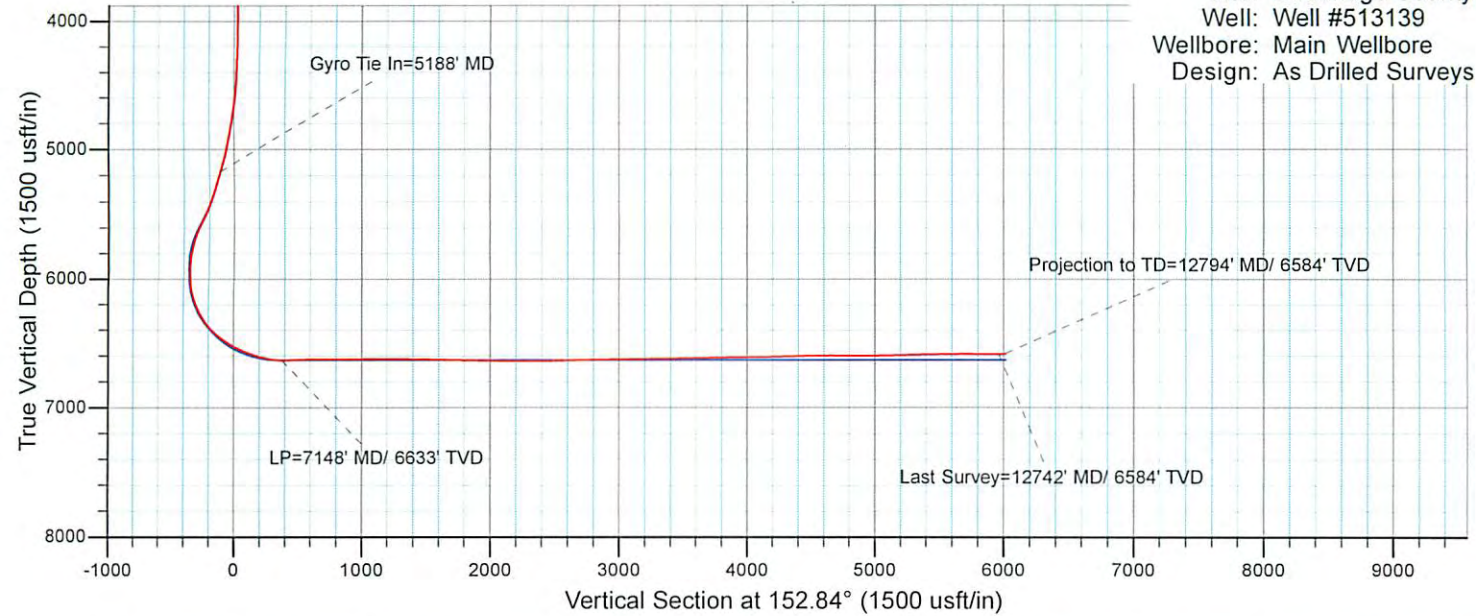
Checked By: _____ Approved By: _____ Date: MAR 10 2015

WV Department of
Environmental Protection



EQT Production - Marcellus

Project: Doddridge County, WV Grid
Site: Doddridge County 513139
Well: Well #513139
Wellbore: Main Wellbore
Design: As Drilled Surveys



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