

PHOENIX
TECHNOLOGY SERVICES



EQT Production - Marcellus

Doddridge County, WV Grid

Doddridge County 514663

Well #514663

Main Wellbore

Design: As Drilled Surveys

Standard Survey Report

07 October, 2014



10/23/2015

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Doddridge County 514663
Company:	EQT Production - Marcellus	TVD Reference:	KB @ 1224.0usft
Project:	Doddridge County, WV Grid	MD Reference:	KB @ 1224.0usft
Site:	Doddridge County 514663	North Reference:	Grid
Well:	Well #514663	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 514663		
Site Position:		Northing:	277,743.50 usft
From:	Map	Easting:	1,642,266.10 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	39.26
		Longitude:	-80.76
		Grid Convergence:	-0.81 °

Well	Well #514663		
Well Position	+N/-S	0.0 usft	Northing: 277,743.50 usft
	+E/-W	0.0 usft	Easting: 1,642,266.10 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	39° 15' 20.391 N
		Longitude:	80° 45' 47.975 W
		Ground Level:	1,208.0 usft

Wellbore	Main Wellbore		
-----------------	---------------	--	--

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010_14	9/15/2014	-8.49	66.76	52,244

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	152.48

Survey Program		Date			
From (')	To (usft)	10/7/2014	Survey (Wellbore)	Tool Name	Description
0.00	5395.0	514663	Gyrodata (Main Wellbore)	GYD_DP_MS	Gyrodata gyro-compassing and drop
0.00	14885.0	514663	PHX MWD (Main Wellbore)	MWD+IGRF	MWD+IGRF v3:standard declination

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	-1,224.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.24	139.96	100.0	-1,124.0	-0.2	0.1	0.2	0.24	0.24	0.00
200.0	0.25	155.32	200.0	-1,024.0	-0.5	0.4	0.6	0.07	0.01	15.36
300.0	0.18	159.72	300.0	-924.0	-0.9	0.5	1.0	0.07	-0.07	4.40
400.0	0.10	121.62	400.0	-824.0	-1.1	0.6	1.2	0.12	-0.08	-38.10
500.0	0.14	157.41	500.0	-724.0	-1.2	0.8	1.4	0.08	0.04	35.79
600.0	0.15	167.10	600.0	-624.0	-1.5	0.8	1.7	0.03	0.01	9.69
700.0	0.10	138.20	700.0	-524.0	-1.6	0.9	1.9	0.08	-0.05	-28.90

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Doddridge County 514663
Company:	EQT Production - Marcellus	TVD Reference:	KB @ 1224.0usft
Project:	Doddridge County, WV Grid	MD Reference:	KB @ 1224.0usft
Site:	Doddridge County 514663	North Reference:	Grid
Well:	Well #514663	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)	Buidl Rate (°/100usft)	Turn Rate (°/100usft)
800.0	0.15	143.76	800.0	-424.0	-1.8	1.1	2.1	0.05	0.05	5.56
900.0	0.23	226.01	900.0	-324.0	-2.1	1.0	2.3	0.26	0.08	82.25
1,000.0	0.25	242.30	1,000.0	-224.0	-2.3	0.7	2.3	0.07	0.02	16.29
1,100.0	0.16	219.78	1,100.0	-124.0	-2.5	0.4	2.4	0.12	-0.09	-22.52
1,200.0	0.14	213.78	1,200.0	-24.0	-2.7	0.2	2.5	0.03	-0.02	-6.00
1,300.0	0.08	232.58	1,300.0	76.0	-2.9	0.1	2.6	0.07	-0.06	18.80
1,400.0	0.25	85.57	1,400.0	176.0	-2.9	0.2	2.7	0.32	0.17	-147.01
1,500.0	0.36	99.88	1,500.0	276.0	-2.9	0.8	3.0	0.13	0.11	14.31
1,600.0	0.49	114.26	1,600.0	376.0	-3.2	1.5	3.5	0.17	0.13	14.38
1,700.0	0.56	125.44	1,700.0	476.0	-3.6	2.3	4.3	0.12	0.07	11.18
1,800.0	0.57	138.12	1,800.0	576.0	-4.3	3.0	5.2	0.13	0.01	12.68
1,900.0	0.58	138.88	1,900.0	676.0	-5.0	3.7	6.1	0.01	0.01	0.76
2,000.0	0.49	147.88	2,000.0	776.0	-5.8	4.2	7.1	0.12	-0.09	9.00
2,100.0	0.49	155.22	2,100.0	876.0	-6.5	4.6	7.9	0.06	0.00	7.34
2,200.0	0.44	166.12	2,200.0	976.0	-7.3	4.9	8.7	0.10	-0.05	10.90
2,300.0	0.40	164.02	2,300.0	1,076.0	-8.0	5.1	9.4	0.04	-0.04	-2.10
2,400.0	0.47	166.41	2,400.0	1,176.0	-8.7	5.3	10.2	0.07	0.07	2.39
2,500.0	0.41	173.18	2,500.0	1,276.0	-9.5	5.4	10.9	0.08	-0.06	6.77
2,600.0	0.32	171.62	2,600.0	1,376.0	-10.1	5.5	11.5	0.09	-0.09	-1.56
2,700.0	0.41	183.22	2,700.0	1,476.0	-10.7	5.5	12.1	0.12	0.09	11.60
2,800.0	0.43	163.01	2,799.9	1,575.9	-11.5	5.6	12.8	0.15	0.02	-20.21
2,900.0	0.39	191.28	2,899.9	1,675.9	-12.1	5.7	13.4	0.20	-0.04	28.27
3,000.0	0.41	172.77	2,999.9	1,775.9	-12.8	5.6	14.0	0.13	0.02	-18.51
3,100.0	0.45	178.42	3,099.9	1,875.9	-13.6	5.7	14.7	0.06	0.04	5.65
3,200.0	0.37	173.12	3,199.9	1,975.9	-14.3	5.7	15.3	0.09	-0.08	-5.30
3,300.0	0.41	173.84	3,299.9	2,075.9	-15.0	5.8	16.0	0.04	0.04	0.72
3,400.0	0.44	177.03	3,399.9	2,175.9	-15.7	5.9	16.6	0.04	0.03	3.19
3,500.0	0.40	176.59	3,499.9	2,275.9	-16.4	5.9	17.3	0.04	-0.04	-0.44
3,600.0	0.41	171.53	3,599.9	2,375.9	-17.1	6.0	18.0	0.04	0.01	-5.06
3,700.0	0.41	162.27	3,699.9	2,475.9	-17.8	6.1	18.7	0.07	0.00	-9.26
3,800.0	0.45	158.88	3,799.9	2,575.9	-18.5	6.4	19.4	0.05	0.04	-3.39
3,900.0	0.50	167.04	3,899.9	2,675.9	-19.3	6.6	20.2	0.08	0.05	8.16
4,000.0	0.47	198.19	3,999.9	2,775.9	-20.2	6.6	20.9	0.26	-0.05	3.16
4,100.0	0.58	220.79	4,099.9	2,875.9	-20.9	6.1	21.4	0.23	0.11	22.60
4,200.0	0.75	228.36	4,199.9	2,975.9	-21.7	5.3	21.7	0.17	0.17	7.57
4,300.0	0.88	246.37	4,299.9	3,075.9	-22.5	4.1	21.9	0.29	0.13	18.61
4,400.0	0.94	262.24	4,399.9	3,175.9	-22.9	2.6	21.5	0.26	0.09	15.87
4,500.0	1.02	267.99	4,499.9	3,275.9	-23.1	0.9	20.9	0.13	0.08	5.75
4,600.0	1.12	275.74	4,599.9	3,375.9	-23.0	-0.9	19.9	0.18	0.10	7.75
4,700.0	1.17	281.73	4,699.8	3,475.8	-22.7	-2.9	18.8	0.13	0.05	5.99
4,800.0	1.19	285.15	4,799.8	3,575.8	-22.2	-4.9	17.4	0.07	0.02	3.42
4,900.0	1.23	293.12	4,899.8	3,675.8	-21.5	-6.9	15.9	0.17	0.04	7.97

Received
Office of Oil & Gas
JUL 15 2015

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Doddridge County 514663
Company:	EQT Production - Marcellus	TVD Reference:	KB @ 1224.0usft
Project:	Doddridge County, WV Grid	MD Reference:	KB @ 1224.0usft
Site:	Doddridge County 514663	North Reference:	Grid
Well:	Well #514663	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)
5,000.0	1.24	298.89	4,999.8	3,775.8	-20.6	-8.8	14.2	0.12	0.01	5.77
5,100.0	1.31	300.30	5,099.7	3,875.7	-19.5	-10.8	12.3	0.08	0.07	1.41
5,200.0	1.59	304.66	5,199.7	3,975.7	-18.1	-12.9	10.1	0.30	0.28	4.36
5,254.0	1.72	305.83	5,253.7	4,029.7	-17.2	-14.2	8.7	0.27	0.24	4.02
5,364.0	1.80	297.60	5,363.6	4,139.6	-15.4	-17.0	5.8	0.27	0.07	-8.39
Gyro Tie In=5395' MD										
5,395.0	1.10	312.10	5,394.6	4,170.6	-15.0	-17.7	5.1	2.53	-2.26	46.77
5,427.0	3.30	287.00	5,426.6	4,202.6	-14.5	-18.8	4.2	7.35	6.88	-78.44
5,458.0	8.30	254.10	5,457.4	4,233.4	-14.8	-21.8	3.1	18.74	16.13	-106.13
5,490.0	12.80	247.50	5,488.9	4,264.9	-16.8	-27.3	2.3	14.54	14.06	-20.63
5,522.0	12.20	257.00	5,520.1	4,296.1	-19.0	-33.9	1.2	6.69	-1.88	29.69
5,553.0	10.20	276.80	5,550.6	4,326.6	-19.4	-39.8	-1.2	13.89	-6.45	63.87
5,585.0	9.40	294.40	5,582.1	4,358.1	-18.0	-45.0	-4.9	9.65	-2.50	55.00
5,616.0	11.00	313.60	5,612.6	4,388.6	-14.9	-49.4	-9.7	12.05	5.16	61.94
5,648.0	9.80	317.90	5,644.1	4,420.1	-10.7	-53.5	-15.2	4.46	-3.75	13.44
5,679.0	10.70	326.60	5,674.6	4,450.6	-6.4	-56.8	-20.6	5.77	2.90	28.06
5,711.0	13.10	339.80	5,705.9	4,481.9	-0.5	-59.7	-27.1	11.29	7.50	41.25
5,742.0	16.90	348.80	5,735.9	4,511.9	7.2	-61.8	-35.0	14.34	12.26	29.03
5,774.0	20.80	355.00	5,766.1	4,542.1	17.5	-63.2	-44.7	13.69	12.19	19.38
5,806.0	24.90	359.60	5,795.6	4,571.6	29.9	-63.7	-55.9	13.97	12.81	14.38
5,837.0	28.60	1.70	5,823.3	4,599.3	43.8	-63.6	-68.2	12.32	11.94	6.77
5,868.0	32.70	4.80	5,850.0	4,626.0	59.6	-62.6	-81.8	14.17	13.23	10.00
5,900.0	36.80	6.10	5,876.2	4,652.2	77.7	-60.9	-97.1	13.02	12.81	4.06
5,931.0	40.90	9.90	5,900.4	4,676.4	97.0	-58.2	-112.9	15.29	13.23	12.26
5,963.0	41.40	16.20	5,924.5	4,700.5	117.5	-53.4	-128.8	13.05	1.56	19.69
5,995.0	39.70	20.70	5,948.8	4,724.8	137.2	-46.8	-143.3	10.57	-5.31	14.06
6,026.0	36.00	24.70	5,973.3	4,749.3	154.7	-39.5	-155.5	14.32	-11.94	12.90
6,057.0	32.00	27.80	5,999.0	4,775.0	170.3	-31.9	-165.7	14.06	-12.90	10.00
6,089.0	28.50	31.30	6,026.6	4,802.6	184.3	-24.0	-174.5	12.24	-10.94	10.94
6,121.0	25.30	36.30	6,055.2	4,831.2	196.3	-15.9	-181.5	12.24	-10.00	15.63
6,152.0	23.60	33.50	6,083.4	4,859.4	206.9	-8.6	-187.4	6.64	-5.48	-9.03
6,183.0	21.80	38.60	6,112.0	4,888.0	216.5	-1.6	-192.8	8.60	-5.81	16.45
6,215.0	21.50	46.50	6,141.7	4,917.7	225.2	6.4	-196.8	9.15	-0.94	24.69
6,246.0	21.20	54.20	6,170.6	4,946.6	232.4	15.0	-199.2	9.09	-0.97	24.84
6,278.0	20.80	60.50	6,200.5	4,976.5	238.6	24.7	-200.2	7.16	-1.25	19.69
6,309.0	20.80	64.30	6,229.5	5,005.5	243.7	34.4	-200.2	4.35	0.00	12.26
6,341.0	23.20	74.30	6,259.2	5,035.2	247.9	45.6	-198.7	13.88	7.50	31.75
6,372.0	25.90	81.80	6,287.4	5,063.4	250.5	58.2	-195.2	13.29	4.38	24.19
6,404.0	27.30	90.20	6,316.0	5,092.0	251.5	72.5	-189.5	12.53	4.38	19.65
6,436.0	27.90	97.30	6,344.3	5,120.3	250.5	87.2	-181.8	11.88	4.52	22.19
6,467.0	29.30	103.40	6,371.6	5,147.6	247.8	101.8	-172.7	10.44	4.52	20.41
6,499.0	30.90	111.40	6,399.3	5,175.3	243.0	117.1	-161.4	13.49	5.00	25.00
6,531.0	32.70	116.20	6,426.5	5,202.5	236.2	132.5	-148.2	9.70	5.63	15.00

Received
Office of Oil & Gas
JUL 15 2015

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Doddridge County 514663
Company:	EQT Production - Marcellus	TVD Reference:	KB @ 1224.0usft
Project:	Doddridge County, WV Grid	MD Reference:	KB @ 1224.0usft
Site:	Doddridge County 514663	North Reference:	Grid
Well:	Well #514663	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)	
6,562.0	34.90	123.20	6,452.2	5,228.2	227.6	147.5	-133.7	14.42	7.10	22.58	
6,593.0	35.40	126.90	6,477.6	5,253.6	217.4	162.1	-117.9	7.06	1.61	11.94	
6,625.0	39.00	128.40	6,503.1	5,279.1	205.5	177.4	-100.3	11.60	11.25	4.69	
6,656.0	43.30	128.70	6,526.4	5,302.4	192.8	193.3	-81.7	13.89	13.87	0.97	
6,688.0	46.90	131.50	6,549.0	5,325.0	178.2	210.6	-60.7	12.84	11.25	8.75	
6,719.0	49.60	134.40	6,569.6	5,345.6	162.5	227.5	-38.9	11.16	8.71	9.35	
6,751.0	54.30	136.90	6,589.3	5,365.3	144.4	245.1	-14.8	15.92	14.69	7.81	
6,783.0	54.00	137.80	6,608.1	5,384.1	125.4	262.7	-10.2	2.46	-0.94	2.81	
6,814.0	57.80	139.30	6,625.5	5,401.5	106.1	279.7	35.1	12.90	12.26	4.84	
6,846.0	60.10	139.10	6,642.0	5,418.0	85.4	297.6	61.8	7.21	7.19	-0.63	
6,877.0	62.40	139.30	6,656.9	5,432.9	64.8	315.4	88.3	7.44	7.42	0.65	
6,909.0	66.20	140.60	6,670.8	5,446.8	42.7	333.9	116.4	12.43	11.88	4.06	
6,941.0	69.90	142.90	6,682.7	5,458.7	19.4	352.3	145.6	13.35	11.56	7.19	
6,972.0	74.40	144.70	6,692.2	5,468.2	-4.4	369.7	174.7	15.53	14.52	5.81	
7,003.0	77.80	146.70	6,699.7	5,475.7	-29.3	386.6	204.6	12.63	10.97	6.45	
7,035.0	81.80	148.00	6,705.3	5,481.3	-55.8	403.6	236.0	13.12	12.50	4.06	
7,066.0	82.90	150.20	6,709.5	5,485.5	-82.1	419.4	266.6	7.88	3.55	7.10	
7,098.0	84.40	152.00	6,713.0	5,489.0	-110.0	434.8	298.4	7.30	4.69	5.63	
7,130.0	86.20	154.70	6,715.6	5,491.6	-138.5	449.1	330.3	10.12	5.63	8.44	
7,160.0	90.20	155.80	6,717.5	5,493.5	-192.9	474.2	390.2	6.91	6.67	1.83	
7,254.0	90.60	155.60	6,717.1	5,493.1	-251.2	500.5	454.1	0.70	0.63	-0.31	
7,317.0	89.70	155.70	6,716.9	5,492.9	-308.6	526.5	517.0	1.44	-1.43	0.16	
7,380.0	89.50	155.50	6,717.3	5,493.3	-366.0	552.5	579.9	0.45	-0.32	-0.32	
7,443.0	89.80	155.60	6,717.7	5,493.7	-423.4	578.6	642.8	0.50	0.48	0.16	
7,507.0	90.40	156.40	6,717.6	5,493.6	-481.8	604.6	706.7	1.56	0.94	1.25	
7,570.0	91.20	157.30	6,716.7	5,492.7	-539.8	629.4	769.5	1.91	1.27	1.43	
7,633.0	90.40	156.10	6,715.8	5,491.8	-597.6	654.3	832.3	2.29	-1.27	-1.90	
7,696.0	90.70	155.50	6,715.2	5,491.2	-655.1	680.1	895.2	1.06	0.48	-0.95	
7,759.0	90.90	155.80	6,714.4	5,490.4	-712.5	706.1	958.1	0.57	0.32	0.48	
7,823.0	90.50	154.90	6,713.6	5,489.6	-770.6	732.8	1,022.0	1.54	-0.63	-1.41	
7,886.0	90.50	155.20	6,713.0	5,489.0	-827.7	759.4	1,084.9	0.48	0.00	0.48	
7,949.0	91.00	156.20	6,712.2	5,488.2	-885.2	785.3	1,147.8	1.77	0.79	1.59	
8,012.0	90.10	155.50	6,711.6	5,487.6	-942.6	811.1	1,210.7	1.81	-1.43	-1.11	
8,075.0	90.50	156.10	6,711.3	5,487.3	-1,000.1	836.9	1,273.6	1.14	0.63	0.95	
8,138.0	90.60	155.00	6,710.7	5,486.7	-1,057.4	863.0	1,336.5	1.75	0.16	-1.75	
8,201.0	89.50	152.90	6,710.6	5,486.6	-1,114.0	890.6	1,399.5	3.76	-1.75	-3.33	
8,264.0	89.70	151.80	6,711.1	5,487.1	-1,169.8	919.9	1,462.5	1.77	0.32	-1.75	
8,327.0	89.90	151.80	6,711.3	5,487.3	-1,225.4	949.6	1,525.5	0.32	0.32	-1.75	
8,390.0	90.60	153.50	6,711.0	5,487.0	-1,281.3	978.6	1,588.5	2.92	1.17	-2.70	
8,453.0	91.60	155.20	6,709.8	5,485.8	-1,338.1	1,005.8	1,651.4	3.13	1.59	-2.70	
8,516.0	90.60	153.60	6,708.6	5,484.6	-1,394.9	1,033.1	1,714.4	2.99	-1.59	-2.54	
8,579.0	90.40	154.20	6,708.0	5,484.0	-1,451.5	1,060.8	1,777.4	1.00	-0.32	0.95	
8,642.0	90.50	154.00	6,707.5	5,483.5	-1,508.1	1,088.3	1,840.3	0.35	0.16	-0.32	

Received
Office of Oil & Gas
JUL 15 2015

17-06385

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Doddridge County 514663
Company:	EQT Production - Marcellus	TVD Reference:	KB @ 1224.0usft
Project:	Doddridge County, WV Grid	MD Reference:	KB @ 1224.0usft
Site:	Doddridge County 514663	North Reference:	Grid
Well:	Well #514663	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)
8,705.0	90.60	154.80	6,706.9	5,482.9	-1,565.0	1,115.5	1,903.3	1.28	0.16	1.27
8,767.0	90.30	155.60	6,706.4	5,482.4	-1,621.2	1,141.5	1,965.2	1.38	-0.48	1.29
8,831.0	90.60	155.40	6,705.9	5,481.9	-1,679.5	1,168.0	2,029.1	0.56	0.47	-0.31
8,894.0	90.50	156.00	6,705.3	5,481.3	-1,736.9	1,194.0	2,092.0	0.97	-0.16	0.95
8,957.0	90.60	155.10	6,704.7	5,480.7	-1,794.2	1,220.0	2,154.9	1.44	0.16	-1.43
9,020.0	90.50	154.10	6,704.1	5,480.1	-1,851.1	1,247.1	2,217.9	1.60	-0.16	-1.59
9,083.0	90.70	152.30	6,703.5	5,479.5	-1,907.4	1,275.5	2,280.9	2.87	0.32	-2.86
9,146.0	90.60	150.00	6,702.7	5,478.7	-1,962.5	1,305.9	2,343.9	3.65	-0.16	-3.65
9,209.0	90.80	150.20	6,702.0	5,478.0	-2,017.2	1,337.3	2,406.8	0.45	0.32	0.32
9,272.0	90.60	150.50	6,701.2	5,477.2	-2,071.9	1,368.4	2,469.8	0.57	-0.32	0.48
9,335.0	89.90	146.60	6,700.9	5,476.9	-2,125.6	1,401.3	2,532.6	6.29	-1.11	-6.19
9,398.0	89.90	146.90	6,701.0	5,477.0	-2,178.3	1,435.8	2,595.3	0.48	0.00	0.48
9,461.0	88.80	148.60	6,701.8	5,477.8	-2,231.6	1,469.5	2,658.1	3.21	-1.75	2.70
9,524.0	89.60	150.60	6,702.6	5,478.6	-2,285.9	1,501.3	2,721.0	3.42	1.27	3.17
9,588.0	90.90	156.90	6,702.4	5,478.4	-2,343.3	1,529.6	2,784.9	10.05	2.03	9.84
9,650.0	91.40	157.10	6,701.1	5,477.1	-2,400.4	1,553.8	2,846.7	0.87	0.81	0.32
9,713.0	91.10	156.00	6,699.7	5,475.7	-2,458.1	1,578.9	2,909.5	1.81	-0.48	-1.75
9,777.0	91.80	155.70	6,698.1	5,474.1	-2,516.5	1,605.1	2,973.4	1.19	1.09	-0.47
9,840.0	91.50	157.20	6,696.3	5,472.3	-2,574.2	1,630.2	3,036.2	2.43	-0.48	2.38
9,903.0	90.20	156.20	6,695.4	5,471.4	-2,632.1	1,655.2	3,099.0	2.60	-2.06	-1.59
9,966.0	89.50	153.40	6,695.5	5,471.5	-2,689.1	1,682.0	3,162.0	4.58	-1.11	-4.44
10,029.0	89.20	152.50	6,696.3	5,472.3	-2,745.2	1,710.6	3,225.0	1.51	-0.48	-1.43
10,092.0	88.50	152.40	6,697.5	5,473.5	-2,801.0	1,739.8	3,288.0	1.12	-1.11	-0.16
10,155.0	88.80	153.90	6,699.0	5,475.0	-2,857.2	1,768.2	3,350.9	2.43	0.48	2.38
10,218.0	89.00	156.40	6,700.2	5,476.2	-2,914.4	1,794.7	3,413.9	3.98	0.32	3.97
10,282.0	88.90	155.40	6,701.4	5,477.4	-2,972.8	1,820.8	3,477.7	1.57	-0.16	-1.56
10,345.0	89.00	154.90	6,702.5	5,478.5	-3,030.0	1,847.3	3,540.7	0.81	0.16	-0.79
10,408.0	88.90	156.70	6,703.7	5,479.7	-3,087.4	1,873.1	3,603.5	2.86	-0.16	2.86
10,471.0	88.90	157.80	6,704.9	5,480.9	-3,145.5	1,897.4	3,666.3	1.75	0.00	1.75
10,535.0	89.40	156.40	6,705.9	5,481.9	-3,204.4	1,922.3	3,730.1	2.32	0.78	-2.19
10,598.0	89.50	156.30	6,706.5	5,482.5	-3,262.1	1,947.6	3,792.9	0.22	0.16	-0.16
10,661.0	89.50	155.30	6,707.0	5,483.0	-3,319.6	1,973.4	3,855.8	1.59	0.00	-1.59
10,724.0	89.70	156.10	6,707.4	5,483.4	-3,377.0	1,999.4	3,918.7	1.31	0.32	1.27
10,788.0	89.80	156.40	6,707.7	5,483.7	-3,435.6	2,025.1	3,982.6	0.49	0.16	0.47
10,851.0	90.00	156.20	6,707.8	5,483.8	-3,493.3	2,050.5	4,045.5	0.45	0.32	0.47
10,914.0	89.80	154.70	6,707.9	5,483.9	-3,550.6	2,076.6	4,108.4	2.40	-0.32	-2.38
10,977.0	90.00	154.70	6,708.1	5,484.1	-3,607.5	2,103.6	4,171.3	0.32	0.00	0.00
11,040.0	90.60	155.40	6,707.7	5,483.7	-3,664.7	2,130.1	4,234.3	1.46	0.95	1.46
11,103.0	90.50	155.10	6,707.1	5,483.1	-3,721.9	2,156.5	4,297.2	0.50	-0.16	-0.48
11,167.0	90.90	154.10	6,706.3	5,482.3	-3,779.7	2,184.0	4,361.1	1.68	0.63	-1.56
11,230.0	90.90	154.30	6,705.3	5,481.3	-3,836.4	2,211.4	4,424.1	0.32	0.00	0.32
11,293.0	89.90	156.10	6,704.9	5,480.9	-3,893.6	2,237.8	4,487.0	3.27	-1.59	2.86

Received
Office of Oil & Gas
JUL 15 2015

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Doddridge County 514663
Company:	EQT Production - Marcellus	TVD Reference:	KB @ 1224.0usft
Project:	Doddridge County, WV Grid	MD Reference:	KB @ 1224.0usft
Site:	Doddridge County 514663	North Reference:	Grid
Well:	Well #514663	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)	
11,356.0	88.80	157.90	6,705.6	5,481.6	-3,951.6	2,262.4	4,549.8	3.35	-1.75	2.86	
11,419.0	89.00	158.40	6,706.8	5,482.8	-4,010.0	2,285.9	4,612.5	0.85	0.32	0.79	
11,482.0	89.40	159.10	6,707.7	5,483.7	-4,068.7	2,308.7	4,675.1	1.28	0.63	1.11	
11,545.0	88.90	158.50	6,708.6	5,484.6	-4,127.5	2,331.5	4,737.7	1.24	-0.79	-0.95	
11,608.0	88.70	158.60	6,710.0	5,486.0	-4,186.1	2,354.5	4,800.4	0.35	-0.32	0.16	
11,671.0	89.30	159.60	6,711.1	5,487.1	-4,244.9	2,377.0	4,862.9	1.85	0.95	1.59	
11,734.0	88.80	159.20	6,712.1	5,488.1	-4,303.9	2,399.1	4,925.5	1.02	-0.79	-0.63	
11,797.0	88.70	159.10	6,713.5	5,489.5	-4,362.8	2,421.6	4,988.0	0.22	-0.16	-0.16	
11,860.0	88.10	159.40	6,715.2	5,491.2	-4,421.7	2,443.9	5,050.5	1.06	-0.95	0.48	
11,923.0	86.30	159.00	6,718.3	5,494.3	-4,480.5	2,466.2	5,113.0	2.93	-2.86	-0.63	
11,986.0	85.90	158.30	6,722.6	5,498.6	-4,539.0	2,489.1	5,175.5	1.28	-0.63	-1.11	
12,048.0	86.20	156.30	6,726.9	5,502.9	-4,596.1	2,513.0	5,237.2	3.25	0.48	-3.23	
12,111.0	86.80	155.00	6,730.7	5,506.7	-4,653.4	2,538.9	5,299.9	2.27	0.95	-2.06	
12,174.0	87.60	154.30	6,733.8	5,509.8	-4,710.2	2,565.8	5,362.8	1.69	1.27	-1.11	
12,237.0	88.60	153.50	6,735.9	5,511.9	-4,766.8	2,593.5	5,425.8	2.03	1.59	-1.27	
12,301.0	89.70	152.40	6,736.8	5,512.8	-4,823.8	2,622.6	5,489.8	2.43	1.72	-1.72	
12,364.0	88.50	149.60	6,737.8	5,513.8	-4,878.8	2,653.2	5,552.7	4.83	-1.90	-4.44	
12,427.0	89.50	148.90	6,738.9	5,514.9	-4,933.0	2,685.4	5,615.6	1.94	1.59	-1.11	
12,490.0	89.50	147.40	6,739.5	5,515.5	-4,986.5	2,718.6	5,678.4	2.38	0.00	-2.38	
12,553.0	90.20	148.40	6,739.6	5,515.6	-5,039.9	2,752.1	5,741.2	1.94	1.11	1.59	
12,616.0	90.80	149.20	6,739.1	5,515.1	-5,093.7	2,784.7	5,804.1	1.59	0.95	1.27	
12,679.0	91.30	149.40	6,737.9	5,513.9	-5,147.9	2,816.9	5,867.0	0.85	0.79	0.32	
12,742.0	91.40	148.90	6,736.5	5,512.5	-5,202.0	2,849.2	5,929.9	0.81	0.16	-0.79	
12,805.0	90.70	150.70	6,735.3	5,511.3	-5,256.4	2,880.9	5,992.8	3.07	-1.11	2.86	
12,869.0	89.50	147.10	6,735.2	5,511.2	-5,311.2	2,913.9	6,056.6	5.93	-1.88	-5.63	
12,931.0	90.10	149.30	6,735.4	5,511.4	-5,363.9	2,946.6	6,118.5	3.68	0.97	3.55	
12,995.0	89.70	148.90	6,735.5	5,511.5	-5,418.8	2,979.4	6,182.3	0.88	-0.63	-0.63	
13,058.0	88.30	151.30	6,736.6	5,512.6	-5,473.4	3,010.8	6,245.3	4.41	-2.22	3.81	
13,121.0	89.20	152.20	6,738.0	5,514.0	-5,528.9	3,040.7	6,308.3	2.02	1.43	1.43	
13,184.0	89.80	153.70	6,738.5	5,514.5	-5,585.0	3,069.3	6,371.2	2.56	0.95	2.38	
13,247.0	90.00	154.10	6,738.7	5,514.7	-5,641.6	3,097.0	6,434.2	0.71	0.32	0.63	
13,310.0	89.30	153.20	6,739.0	5,515.0	-5,698.0	3,125.0	6,497.2	1.81	-1.11	-1.43	
13,373.0	89.50	154.60	6,739.7	5,515.7	-5,754.6	3,152.7	6,560.2	2.24	0.32	2.22	
13,436.0	89.40	154.40	6,740.3	5,516.3	-5,811.5	3,179.8	6,623.1	0.35	-0.16	-0.32	
13,499.0	89.60	158.00	6,740.9	5,516.9	-5,869.1	3,205.2	6,686.0	5.72	0.32	5.71	
13,562.0	88.90	160.40	6,741.7	5,517.7	-5,928.0	3,227.6	6,748.6	3.97	-1.11	3.81	
13,626.0	89.80	161.40	6,742.4	5,518.4	-5,988.4	3,248.5	6,811.9	2.10	1.41	1.41	
13,689.0	90.20	161.20	6,742.4	5,518.4	-6,048.1	3,268.7	6,874.1	0.71	0.63	0.63	
13,752.0	89.10	159.60	6,742.8	5,518.8	-6,107.5	3,289.9	6,936.5	3.08	-0.63	-2.54	
13,815.0	88.70	158.70	6,744.0	5,520.0	-6,166.3	3,312.3	6,999.1	1.56	-0.63	1.56	
13,878.0	89.20	160.10	6,745.1	5,521.1	-6,225.3	3,334.5	7,061.6	2.36	0.79	2.22	
13,942.0	88.80	159.80	6,746.3	5,522.3	-6,285.4	3,356.4	7,125.1	0.78	-0.63	-0.47	
14,005.0	88.40	159.00	6,747.8	5,523.8	-6,344.4	3,378.6	7,187.6	1.42	-0.63	-1.27	

Received
Office of Oil & Gas
JUL 15 2015

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Doddridge County 514663
Company:	EQT Production - Marcellus	TVD Reference:	KB @ 1224.0usft
Project:	Doddridge County, WV Grid	MD Reference:	KB @ 1224.0usft
Site:	Doddridge County 514663	North Reference:	Grid
Well:	Well #514663	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)
14,068.0	88.40	159.00	6,749.6	5,525.6	-6,403.1	3,401.1	7,250.1	0.00	0.00	0.00
14,131.0	88.40	159.30	6,751.3	5,527.3	-6,462.0	3,423.5	7,312.7	0.48	0.00	0.48
14,194.0	88.20	157.50	6,753.2	5,529.2	-6,520.5	3,446.7	7,375.3	2.87	-0.32	-2.86
14,257.0	90.30	156.90	6,754.0	5,530.0	-6,578.6	3,471.1	7,438.1	3.47	3.33	-0.95
14,318.0	91.40	155.90	6,753.1	5,529.1	-6,634.5	3,495.5	7,499.0	2.44	1.80	-1.64
14,381.0	89.80	153.20	6,752.5	5,528.5	-6,691.4	3,522.6	7,561.9	4.98	-2.54	-4.29
14,444.0	88.40	151.10	6,753.4	5,529.4	-6,747.1	3,552.0	7,624.9	4.01	-2.22	-3.33
14,507.0	89.40	151.00	6,754.7	5,530.7	-6,802.2	3,582.5	7,687.9	1.60	1.59	-0.16
14,570.0	89.60	150.60	6,755.2	5,531.2	-6,857.2	3,613.3	7,750.8	0.71	0.32	-0.63
14,631.0	91.10	147.40	6,754.8	5,530.8	-6,909.5	3,644.7	7,811.7	5.79	2.46	-5.25
14,695.0	91.90	147.50	6,753.2	5,529.2	-6,963.4	3,679.1	7,875.4	1.26	1.25	0.16
14,758.0	90.50	143.90	6,751.8	5,527.8	-7,015.4	3,714.6	7,938.0	6.13	-2.22	-5.71
Final Survey=14821' MD/ 6752' TVD										
14,821.0	89.70	142.90	6,751.7	5,527.7	-7,066.0	3,752.1	8,000.2	2.03	-1.27	-1.59
Projection to TD=14885' MD/ 6752' TVD										
14,885.0	89.70	142.90	6,752.1	5,528.1	-7,117.0	3,790.7	8,063.3	0.00	0.00	0.00

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
5,395.0	5,394.6	-15.0	-17.7	Gyro Tie In=5395' MD
14,821.0	6,751.7	-7,066.0	3,752.1	Final Survey=14821' MD/ 6752' TVD
14,885.0	6,752.1	-7,117.0	3,790.7	Projection to TD=14885' MD/ 6752' TVD

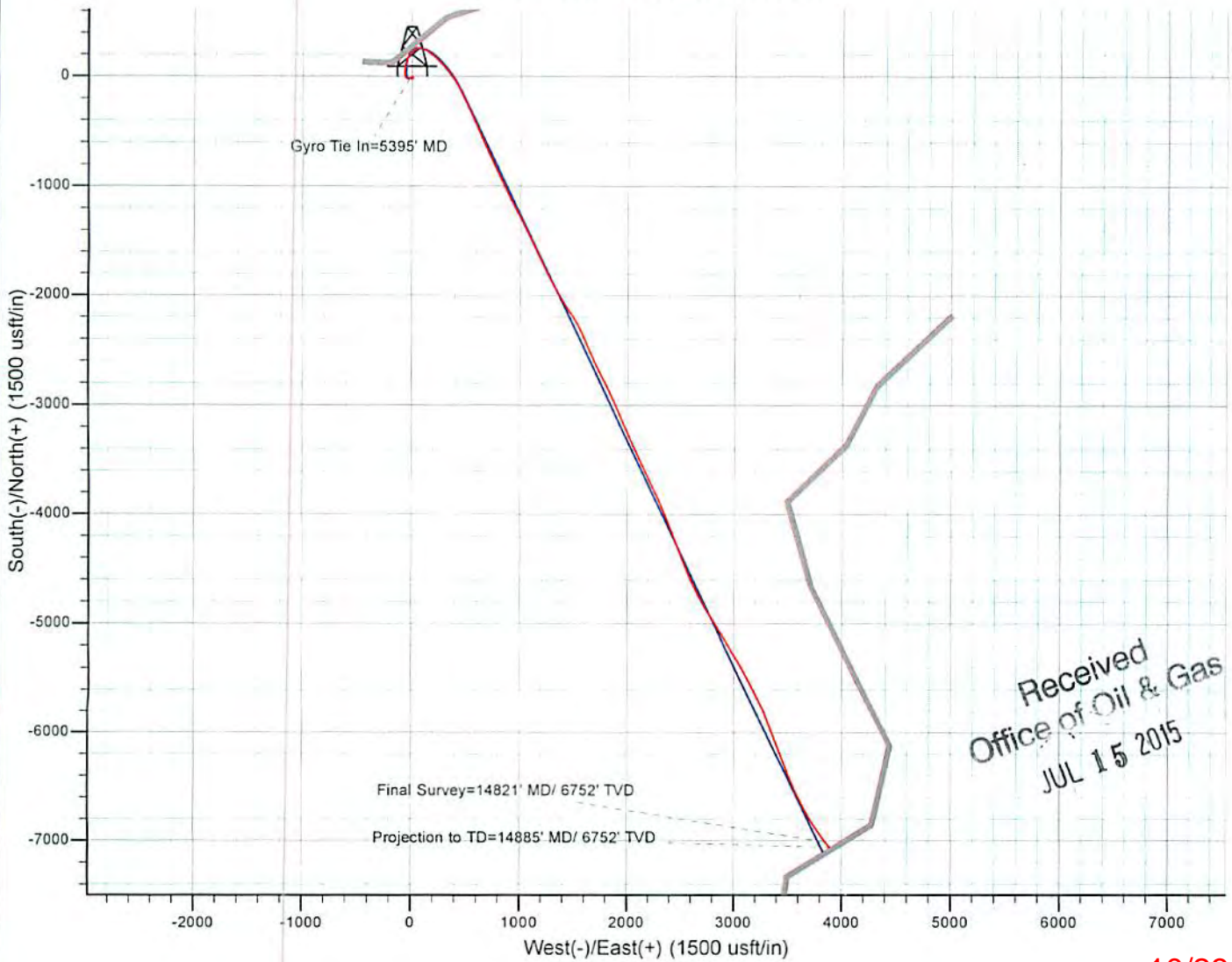
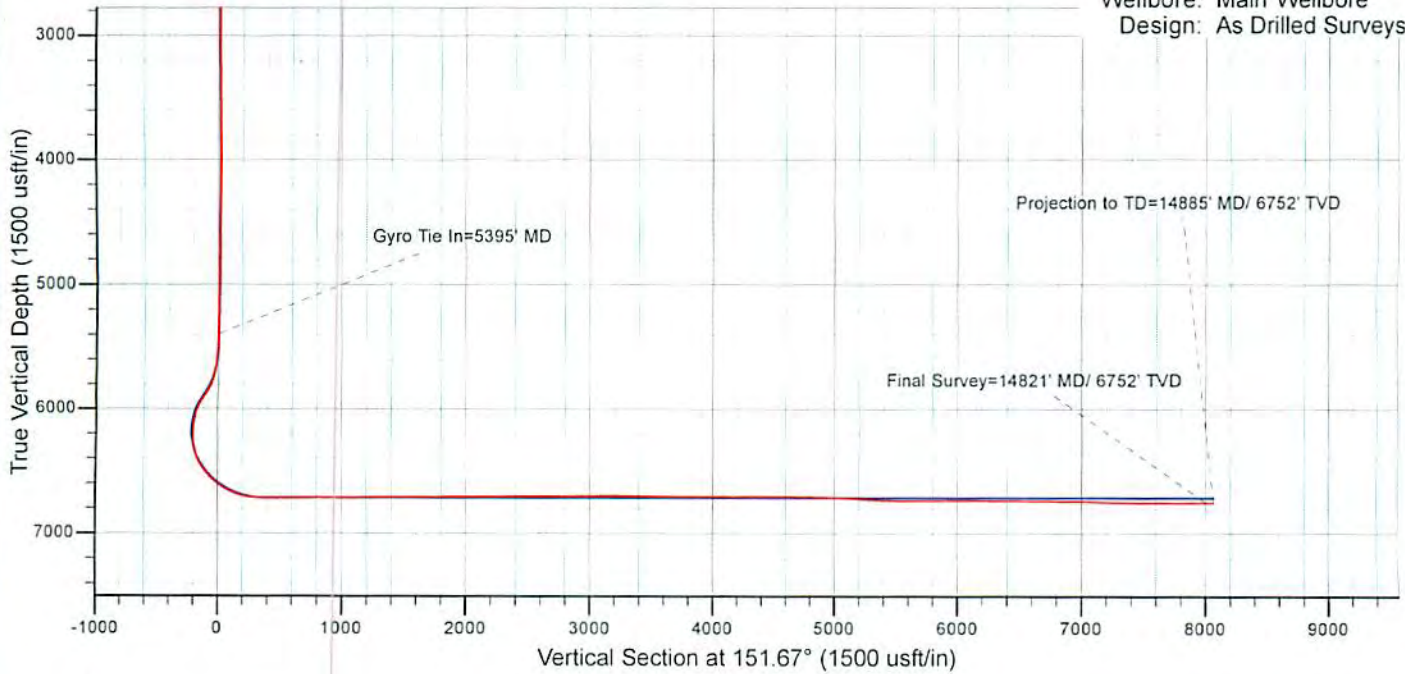
Checked By: _____ Approved By: _____ Date: _____

Received
Office of Oil & Gas
JUL 15 2015



EQT Production - Marcellus

Project: Doddridge County, WV Grid
Site: Doddridge County 514663
Well: Well #514663
Wellbore: Main Wellbore
Design: As Drilled Surveys



Received
Office of Oil & Gas
JUL 15 2015

10/23/2015