

17-06463

EQT Production - Marcellus

Doddridge County, WV Grid

Doddridge County 513149

Well #513149

API: 47-170476463

Main Wellbore

Design: AS Drilled Surveys

Standard Survey Report

01 February, 2015

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Environmental Protection

10/16/2015

Phoenix Technologies

Survey Report

17-06463

Database: EDM 5000.1 Single User Db	Local Co-ordinate Reference: Site Doddridge County 513149	
Company: EQT Production - Marcellus	TVD Reference: KB @ 991.0usft	
Project: Doddridge County, WV Grid	MD Reference: KB @ 991.0usft	
Site: Doddridge County 513149	North Reference: Grid	
Well: Well #513149	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 513149			
Site Position:	Northing: 270,560.90 usft	Latitude: 39.24	
From: Map	Easting: 1,641,274.50 usft	Longitude: -80.77	
Position Uncertainty: 0.0 usft	Slot Radius: 13-3/16 "	Grid Convergence: -0.81 °	

Well Well #513149			
Well Position +N/-S	0.0 usft	Northing: 270,560.90 usft	Latitude: 39° 14' 9.266 N
+E/-W	0.0 usft	Easting: 1,641,274.50 usft	Longitude: 80° 45' 59.293 W
Position Uncertainty	0.0 usft	Wellhead Elevation: usft	Ground Level: 968.0 usft

Wellbore Main Wellbore					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010_14	1/19/2015	-8.50	66.71	52,194

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 (°)	
	6,436.0	0.0	0.0	132.43	

Survey Program Date 2/1/2015					
From ()	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	5,180.0	513149 Gyrodata Gyro (Main Wellbore)	GYD_DP_MS	Gyrodata gyro-compassing and drop	
0.00	7,074.0	513149 PHX MWD (Air Curve) (Main Wellb)	MWD+IGRF	MWD+IGRF v3:standard declination	
0.00	11,463.0	513149 PHX MWD Curve and Lateral (Ma	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	-991.0	0.0	0.0	0.0	0.00	0.00	0.00
110.0	0.12	44.45	110.0	-881.0	0.1	0.1	0.0	0.11	0.07	0.00
210.0	0.06	27.11	210.0	-781.0	0.2	0.2	0.0	0.07	-0.06	30.34
310.0	0.07	57.53	310.0	-681.0	0.3	0.3	0.0	0.04	0.01	30.42
410.0	0.08	36.26	410.0	-581.0	0.4	0.3	0.0	0.03	0.01	-21.27
510.0	0.15	321.49	510.0	-481.0	0.5	0.3	-0.1	0.15	0.07	-74.77
610.0	0.31	322.96	610.0	-381.0	0.8	0.1	-0.5	0.16	0.16	1.47

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Project:	Doddridge County, WV Grid	MD Reference:	KB @ 991.0usft
Site:	Doddridge County 513149	North Reference:	Grd
Well:	Well #513149	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)	
710.0	0.21	313.52	710.0	-281.0	1.2	-0.2	-1.0	0.11	-0.10	-9.44	
810.0	0.26	290.93	810.0	-181.0	1.4	-0.6	-1.4	0.10	0.05	-22.59	
910.0	0.33	293.94	910.0	-81.0	1.6	-1.1	-1.9	0.07	0.07	3.01	
1,010.0	0.72	286.10	1,010.0	19.0	1.9	-1.9	-2.7	0.40	0.39	-7.84	
1,110.0	0.85	292.72	1,110.0	119.0	2.3	-3.2	-4.0	0.16	0.13	6.62	
1,210.0	0.85	290.61	1,210.0	219.0	2.9	-4.6	-5.3	0.03	0.00	-2.11	
1,310.0	0.78	300.31	1,310.0	319.0	3.5	-5.9	-6.7	0.15	-0.07	9.70	
1,410.0	0.83	310.78	1,410.0	419.0	4.3	-7.0	-8.1	0.16	0.05	10.47	
1,510.0	0.72	313.15	1,509.9	518.9	5.2	-8.0	-9.4	0.11	-0.11	2.37	
1,610.0	0.62	323.33	1,609.9	618.9	6.1	-8.8	-10.6	0.16	-0.10	10.18	
1,710.0	0.56	327.54	1,709.9	718.9	6.9	-9.4	-11.6	0.07	-0.06	4.21	
1,810.0	0.41	349.87	1,809.9	818.9	7.7	-9.7	-12.4	0.24	-0.15	22.33	
1,910.0	0.35	2.37	1,909.9	918.9	8.4	-9.8	-12.8	0.10	-0.06	12.50	
2,010.0	0.29	352.47	2,009.9	1,018.9	8.9	-9.8	-13.2	0.08	-0.06	-9.90	
2,110.0	0.24	30.53	2,109.9	1,118.9	9.3	-9.7	-13.5	0.18	-0.05	38.06	
2,210.0	0.27	36.63	2,209.9	1,218.9	9.7	-9.5	-13.5	0.04	0.03	6.10	
2,310.0	0.19	22.20	2,309.9	1,318.9	10.1	-9.3	-13.6	0.10	-0.08	-14.43	
2,410.0	0.14	58.75	2,409.9	1,418.9	10.3	-9.1	-13.6	0.11	-0.05	36.55	
2,510.0	0.17	63.71	2,509.9	1,518.9	10.4	-8.8	-13.5	0.03	0.03	4.96	
2,610.0	0.14	77.94	2,609.9	1,618.9	10.5	-8.6	-13.4	0.05	-0.03	14.23	
2,710.0	0.20	128.88	2,709.9	1,718.9	10.4	-8.3	-13.2	0.16	0.06	50.94	
2,810.0	0.24	123.18	2,809.9	1,818.9	10.2	-8.0	-12.8	0.05	0.04	-5.70	
2,910.0	0.30	146.05	2,909.9	1,918.9	9.8	-7.7	-12.3	0.12	0.06	22.87	
3,010.0	0.30	169.21	3,009.9	2,018.9	9.4	-7.5	-11.9	0.12	0.00	23.16	
3,110.0	0.39	173.41	3,109.9	2,118.9	8.8	-7.4	-11.4	0.09	0.09	4.20	
3,210.0	0.35	166.55	3,209.9	2,218.9	8.1	-7.3	-10.9	0.06	-0.04	-6.86	
3,310.0	0.41	166.90	3,309.9	2,318.9	7.5	-7.2	-10.3	0.06	0.06	0.35	
3,410.0	0.43	171.96	3,409.9	2,418.9	6.8	-7.0	-9.8	0.04	0.02	5.06	
3,510.0	0.34	180.84	3,509.9	2,518.9	6.1	-7.0	-9.3	0.11	-0.09	8.88	
3,610.0	0.39	220.67	3,609.9	2,618.9	5.6	-7.2	-9.1	0.25	0.05	39.83	
3,710.0	0.50	235.05	3,709.9	2,718.9	5.0	-7.8	-9.2	0.16	0.11	14.38	
3,810.0	0.61	263.98	3,809.9	2,818.9	4.7	-8.7	-9.6	0.30	0.11	28.93	
3,910.0	0.90	285.27	3,909.9	2,918.9	4.9	-10.0	-10.7	0.40	0.29	21.29	
4,010.0	1.09	283.20	4,009.9	3,018.9	5.3	-11.6	-12.2	0.19	0.19	-2.07	
4,110.0	1.35	289.72	4,109.8	3,118.8	5.9	-13.7	-14.1	0.29	0.26	6.52	
4,210.0	1.61	292.07	4,209.8	3,218.8	6.9	-16.1	-16.5	0.27	0.26	2.35	
4,310.0	1.83	293.71	4,309.8	3,318.8	8.0	-18.9	-19.3	0.23	0.22	1.64	
4,410.0	2.01	297.79	4,409.7	3,418.7	9.5	-21.9	-22.5	0.23	0.19	4.98	
4,510.0	2.12	301.79	4,509.6	3,518.6	11.3	-25.0	-26.1	0.18	0.11	4.00	
4,610.0	2.43	308.44	4,609.6	3,618.6	13.6	-28.2	-30.0	0.41	0.31	6.65	
4,710.0	2.78	312.15	4,709.5	3,718.5	16.5	-31.7	-34.5	0.39	0.35	3.71	
4,810.0	2.99	314.06	4,809.3	3,818.3	20.0	-35.4	-39.6	0.23	0.21	1.91	
4,910.0	3.57	316.00	4,909.2	3,918.2	24.0	-39.4	-45.3	0.59	0.58	1.94	

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Project:	Doddridge County, WV Grid	MD Reference:	KB @ 991.0usft
Site:	Doddridge County 513149	North Reference:	Grid
Well:	Well #513149	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)
5,010.0	3.69	313.98	5,009.0	4,018.0	28.5	-43.9	-51.6	0.18	0.12	-2.02
5,110.0	3.43	324.72	5,108.8	4,117.8	33.2	-47.9	-57.7	0.71	-0.26	10.74
Gyro Tie In=5170' MD										
5,180.0	3.66	332.80	5,178.6	4,187.6	36.9	-50.1	-61.9	0.78	0.33	11.54
5,216.0	3.70	336.00	5,214.6	4,223.6	38.9	-51.1	-64.0	0.58	0.11	8.89
5,259.0	7.11	337.94	5,257.4	4,266.4	42.7	-52.7	-67.7	7.94	7.93	4.51
5,302.0	11.71	340.80	5,299.8	4,308.8	49.3	-55.1	-73.9	10.75	10.70	6.65
5,342.0	15.38	345.52	5,338.7	4,347.7	58.2	-57.8	-82.0	9.57	9.18	11.80
5,385.0	18.69	352.72	5,379.8	4,388.8	70.6	-60.1	-92.0	9.11	7.70	16.74
5,428.0	22.32	357.52	5,420.1	4,429.1	85.6	-61.3	-103.0	9.30	8.44	11.16
5,471.0	24.39	3.73	5,459.5	4,468.5	102.6	-61.1	-114.3	7.47	4.81	14.44
5,514.0	24.88	14.53	5,498.6	4,507.6	120.2	-58.3	-124.1	10.52	1.14	25.12
5,557.0	26.12	23.83	5,537.5	4,546.5	137.7	-52.2	-131.4	9.74	2.88	21.63
5,600.0	28.28	31.23	5,575.7	4,584.7	155.0	-43.0	-136.4	9.32	5.02	17.21
5,642.0	30.49	37.62	5,612.3	4,621.3	172.0	-31.4	-139.2	9.13	5.26	15.21
5,685.0	31.90	44.01	5,649.1	4,658.1	188.8	-16.8	-139.8	8.36	3.28	14.86
5,728.0	33.58	50.31	5,685.3	4,694.3	204.6	0.2	-137.9	8.83	3.91	14.65
5,771.0	36.41	55.12	5,720.5	4,729.5	219.5	19.9	-133.4	9.19	6.58	11.19
5,814.0	40.30	56.70	5,754.2	4,763.2	234.4	42.0	-127.2	9.33	9.05	3.67
5,857.0	44.10	57.80	5,786.1	4,795.1	250.0	66.2	-119.8	9.00	8.84	2.56
5,900.0	47.11	58.42	5,816.2	4,825.2	266.3	92.3	-111.5	7.08	7.00	1.44
5,943.0	51.22	59.21	5,844.3	4,853.3	283.1	120.2	-102.3	9.66	9.56	1.84
5,986.0	54.09	61.02	5,870.4	4,879.4	300.1	149.8	-91.9	7.47	6.67	4.21
6,029.0	57.80	63.71	5,894.4	4,903.4	316.6	181.4	-79.8	10.06	8.63	6.26
6,072.0	60.72	64.90	5,916.4	4,925.4	332.6	214.7	-66.0	7.20	6.79	2.77
6,114.0	64.52	65.82	5,935.7	4,944.7	348.2	248.6	-51.4	9.25	9.05	2.19
6,157.0	68.71	65.82	5,952.8	4,961.8	364.3	284.6	-35.8	9.74	9.74	0.00
6,200.0	71.10	66.93	5,967.6	4,976.6	380.5	321.6	-19.4	6.06	5.56	2.58
6,243.0	71.50	65.91	5,981.4	4,990.4	396.8	358.9	-2.8	2.43	0.93	-2.37
6,286.0	71.98	65.03	5,994.8	5,003.8	413.8	396.0	13.2	2.24	1.12	-2.05
6,329.0	72.21	63.93	6,008.0	5,017.0	431.4	433.0	28.5	2.49	0.53	-2.56
6,372.0	70.70	64.11	6,021.7	5,030.7	449.3	469.6	-43.5	3.53	-3.51	0.42
6,415.0	68.10	63.84	6,036.8	5,045.8	466.9	505.8	58.3	6.08	-6.05	-0.63
6,457.0	67.21	64.02	6,052.8	5,061.8	484.0	540.7	72.5	2.16	-2.12	0.43
6,500.0	65.89	62.83	6,069.9	5,078.9	501.6	575.9	86.7	3.98	-3.07	-2.77
6,543.0	64.38	65.43	6,088.0	5,097.0	518.7	611.0	101.1	6.51	-3.51	6.05
6,586.0	63.28	65.74	6,107.0	5,116.0	534.6	646.2	116.3	2.64	-2.56	0.72
6,629.0	66.11	66.93	6,125.4	5,134.4	550.2	681.8	132.0	7.04	6.58	2.77
6,672.0	69.20	67.01	6,141.7	5,150.7	565.8	718.4	148.5	7.19	7.19	0.19
6,715.0	70.22	66.53	6,156.6	5,165.6	581.7	755.4	165.2	2.59	2.37	1.12
6,758.0	69.20	67.50	6,171.5	5,180.5	597.4	792.6	181.9	3.18	-2.37	2.26
6,801.0	68.71	71.64	6,187.0	5,196.0	611.4	830.2	200.2	9.66	-1.14	0.63

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6,844.0	68.49	76.31	6,202.7	5,211.7	622.5	868.6	221.2	10.12	-0.51	10.86	
6,886.0	69.60	80.01	6,217.7	5,226.7	630.5	907.0	244.1	8.64	2.64	8.81	
6,929.0	71.01	84.51	6,232.2	5,241.2	636.0	947.1	270.0	10.38	3.28	10.47	
6,972.0	70.88	88.43	6,246.2	5,255.2	638.5	987.7	298.2	8.62	-0.30	9.12	
7,057.0	70.70	92.71	6,274.2	5,283.2	637.7	1,067.9	358.0	4.76	-0.21	5.04	
Final Survey=7064' MD/ 6270' TVD - Plan Tie In=7074' MD											
7,074.0	71.54	93.63	6,279.7	5,288.7	636.8	1,084.0	370.5	7.12	4.94	5.41	
7,105.0	72.80	92.80	6,289.2	5,298.2	635.1	1,113.4	393.3	4.80	4.06	-2.68	
7,138.0	74.50	93.70	6,298.5	5,307.5	633.3	1,145.0	417.9	5.78	5.15	2.73	
7,170.0	75.60	95.80	6,306.7	5,315.7	630.8	1,175.9	442.3	7.21	3.44	6.56	
7,201.0	76.60	98.70	6,314.2	5,323.2	627.0	1,205.7	466.9	9.64	3.23	9.35	
7,232.0	77.80	101.80	6,321.1	5,330.1	621.6	1,235.4	492.5	10.49	3.87	10.00	
7,264.0	78.60	105.50	6,327.6	5,336.6	614.2	1,265.9	520.0	11.59	2.50	11.56	
7,295.0	79.80	108.20	6,333.4	5,342.4	605.4	1,295.0	547.4	9.39	3.87	8.71	
7,327.0	80.60	111.10	6,338.9	5,347.9	594.8	1,324.7	576.5	9.27	2.50	9.06	
7,358.0	81.40	113.60	6,343.7	5,352.7	583.1	1,353.0	605.3	8.37	2.58	8.06	
7,389.0	81.60	115.90	6,348.3	5,357.3	570.3	1,380.9	634.5	7.37	0.65	7.42	
7,421.0	80.80	118.30	6,353.2	5,362.2	555.9	1,409.0	665.0	7.82	-2.50	7.50	
7,452.0	79.20	120.20	6,358.6	5,367.6	541.0	1,435.6	694.7	7.94	-5.16	6.13	
7,484.0	77.70	122.40	6,365.0	5,374.0	524.7	1,462.4	725.4	8.21	-4.69	6.88	
7,515.0	77.30	125.10	6,371.7	5,380.7	507.9	1,487.6	755.4	8.60	-1.29	8.71	
7,547.0	77.20	127.30	6,378.8	5,387.8	489.4	1,512.8	786.4	6.71	-0.31	6.88	
7,578.0	77.10	130.70	6,385.7	5,394.7	470.4	1,536.3	816.5	10.70	-0.32	10.97	
7,609.0	77.10	134.00	6,392.6	5,401.6	450.1	1,558.6	846.8	10.38	0.00	10.65	
7,641.0	77.20	136.70	6,399.7	5,408.7	427.9	1,580.5	877.9	8.23	0.31	8.44	
7,672.0	77.20	140.40	6,406.6	5,415.6	405.2	1,600.5	908.0	11.64	0.00	11.94	
7,703.0	78.20	143.00	6,413.2	5,422.2	381.5	1,619.3	937.9	8.81	3.23	8.39	
7,735.0	79.70	145.40	6,419.3	5,428.3	356.0	1,637.7	968.6	8.73	4.69	7.50	
7,766.0	80.80	148.90	6,424.6	5,433.6	330.3	1,654.2	998.1	11.68	3.55	11.29	
7,797.0	82.10	151.50	6,429.2	5,438.2	303.7	1,669.5	1,027.3	9.29	4.19	8.39	
7,829.0	83.80	152.90	6,433.1	5,442.1	275.6	1,684.3	1,057.2	6.86	5.31	4.38	
LP= 7860' MD/6436' TVD											
7,860.0	85.70	155.00	6,435.9	5,444.9	247.9	1,697.8	1,085.9	9.11	6.13	6.77	
7,892.0	86.40	155.40	6,438.1	5,447.1	218.9	1,711.2	1,115.4	2.52	2.19	1.25	
7,924.0	86.90	155.60	6,440.0	5,449.0	189.8	1,724.5	1,144.8	1.68	1.56	0.63	
8,017.0	87.10	155.10	6,444.9	5,453.9	105.4	1,763.2	1,230.3	0.58	0.22	-0.54	
8,112.0	87.40	154.60	6,449.4	5,458.4	19.5	1,803.5	1,318.0	0.61	0.32	-0.53	
8,206.0	87.80	154.60	6,453.4	5,462.4	-65.3	1,843.8	1,405.0	0.45	0.43	0.00	
8,301.0	87.40	153.80	6,457.4	5,466.4	-150.8	1,885.1	1,493.1	0.94	-0.42	-0.84	
8,395.0	89.60	153.90	6,459.8	5,468.8	-235.1	1,926.5	1,580.6	2.34	2.34	0.11	
8,489.0	89.30	151.30	6,460.7	5,469.7	-318.5	1,969.8	1,668.8	2.78	-0.32	2.77	
8,584.0	90.10	148.70	6,461.2	5,470.2	-400.8	2,017.3	1,759.4	2.86	0.84	-2.74	
8,678.0	91.10	152.40	6,460.2	5,469.2	-482.6	2,063.5	1,848.7	4.08	1.06	3.94	

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Survey Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Doddridge County 513149
Company:	EQT Production - Marcellus	TVD Reference:	KB @ 991.0usft
Project:	Doddridge County, WV Grid	MD Reference:	KB @ 991.0usft
Site:	Doddridge County 513149	North Reference:	Grid
Well:	Well #513149	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)
8,773.0	90.50	154.00	6,458.9	5,467.9	-567.4	2,106.3	1,937.5	1.80	-0.63	1.68
8,868.0	89.90	155.00	6,458.6	5,467.6	-653.2	2,147.2	2,025.6	1.23	-0.63	1.05
8,962.0	87.70	154.20	6,460.5	5,469.5	-738.1	2,187.5	2,112.6	2.49	-2.34	-0.85
9,056.0	87.30	153.60	6,464.6	5,473.6	-822.4	2,228.8	2,200.0	0.77	-0.43	-0.64
9,150.0	87.80	154.40	6,468.7	5,477.7	-906.8	2,270.0	2,287.3	1.00	0.53	0.85
9,245.0	87.90	154.20	6,472.2	5,481.2	-992.3	2,311.2	2,375.4	0.24	0.11	-0.21
9,339.0	88.00	153.60	6,475.6	5,484.6	-1,076.7	2,352.5	2,462.8	0.65	0.11	-0.64
9,434.0	87.60	152.80	6,479.2	5,488.2	-1,161.4	2,395.3	2,551.6	0.94	-0.42	-0.84
9,529.0	88.10	153.60	6,482.8	5,491.8	-1,246.2	2,438.1	2,640.4	0.99	0.53	0.84
9,624.0	87.70	151.80	6,486.3	5,495.3	-1,330.5	2,481.6	2,729.4	1.94	-0.42	-1.89
9,718.0	88.80	154.20	6,489.1	5,498.1	-1,414.2	2,524.3	2,817.4	2.81	1.17	2.55
9,813.0	89.30	154.70	6,490.7	5,499.7	-1,499.9	2,565.3	2,905.4	0.74	0.53	0.53
9,907.0	89.50	154.20	6,491.7	5,500.7	-1,584.7	2,605.8	2,992.6	0.57	0.21	-0.53
10,002.0	88.50	151.60	6,493.4	5,502.4	-1,669.3	2,649.1	3,081.5	2.93	-1.05	-2.74
10,096.0	88.90	153.50	6,495.5	5,504.5	-1,752.7	2,692.4	3,169.8	2.07	0.43	2.02
10,191.0	89.40	154.70	6,496.9	5,505.9	-1,838.1	2,733.9	3,258.0	1.37	0.53	1.26
10,285.0	89.60	154.00	6,497.7	5,506.7	-1,922.9	2,774.6	3,345.2	0.77	0.21	-0.74
10,379.0	89.40	155.20	6,498.5	5,507.5	-2,007.8	2,814.9	3,432.3	1.29	-0.21	1.28
10,474.0	89.10	154.20	6,499.8	5,508.8	-2,093.6	2,855.5	3,520.2	1.10	-0.32	-1.05
10,568.0	88.70	154.00	6,501.6	5,510.6	-2,178.2	2,896.5	3,607.5	0.48	-0.43	-0.21
10,662.0	89.00	156.10	6,503.5	5,512.5	-2,263.4	2,936.2	3,694.3	2.26	0.32	2.23
10,756.0	88.80	155.10	6,505.3	5,514.3	-2,349.0	2,975.0	3,780.7	1.08	-0.21	-1.06
10,851.0	89.40	155.40	6,506.8	5,515.8	-2,435.2	3,014.8	3,868.2	0.71	0.63	0.32
10,945.0	89.90	155.50	6,507.4	5,516.4	-2,520.7	3,053.8	3,954.7	0.54	0.53	0.11
11,040.0	90.60	155.90	6,506.9	5,515.9	-2,607.3	3,092.9	4,042.0	0.85	0.74	0.42
11,134.0	89.30	156.20	6,507.0	5,516.0	-2,693.2	3,131.1	4,128.1	1.42	-1.38	0.32
11,228.0	89.20	154.80	6,508.2	5,517.2	-2,778.8	3,170.0	4,214.6	1.49	-0.11	-1.49
11,323.0	89.90	154.10	6,509.0	5,518.0	-2,864.5	3,211.0	4,302.7	1.04	0.74	-0.74
Final Survey= 11409' MD/6510' TVD										
11,409.0	89.10	149.70	6,509.7	5,518.7	-2,940.3	3,251.5	4,383.7	5.20	-0.93	-5.12
Projection to TD/Deepest Point of Well= 11463' MD/6511' TVD										
11,463.0	89.10	149.70	6,510.6	5,519.6	-2,986.9	3,278.8	4,435.3	0.00	0.00	0.00

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Company:	EQT Production - Marcellus	TVD Reference:	KB @ 991.0usft
Project:	Doddridge County, WV Grid	MD Reference:	KB @ 991.0usft
Site:	Doddridge County 513149	North Reference:	Grid
Well:	Well #513149	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	AS Drilled Surveys		

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
5,180.0	5,178.6	36.9	-50.1	Gyro Tie In=5170' MD
7,074.0	6,279.7	636.8	1,084.0	Final Survey=7064' MD/ 6270' TVD
7,074.0	6,279.7	636.8	1,084.0	Plan Tie In=7074' MD
7,860.0	6,435.9	247.9	1,697.8	LP= 7860' MD/6436' TVD
11,409.0	6,509.7	-2,940.3	3,251.5	Final Survey= 11409' MD/6510' TVD
11,463.0	6,510.6	-2,986.9	3,278.8	Projection to TD/Deepest Point of Well= 11463' MD/6511' TVD

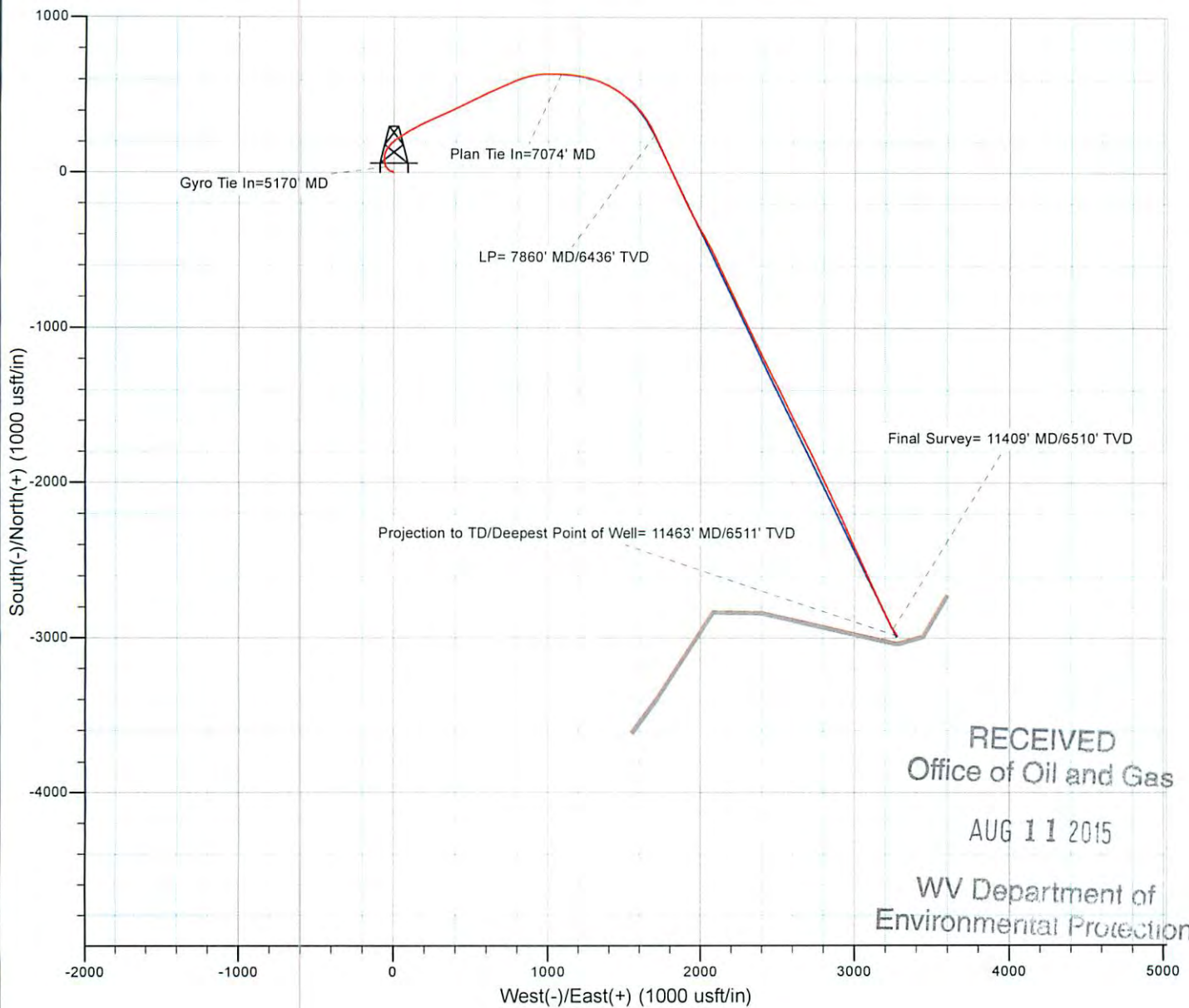
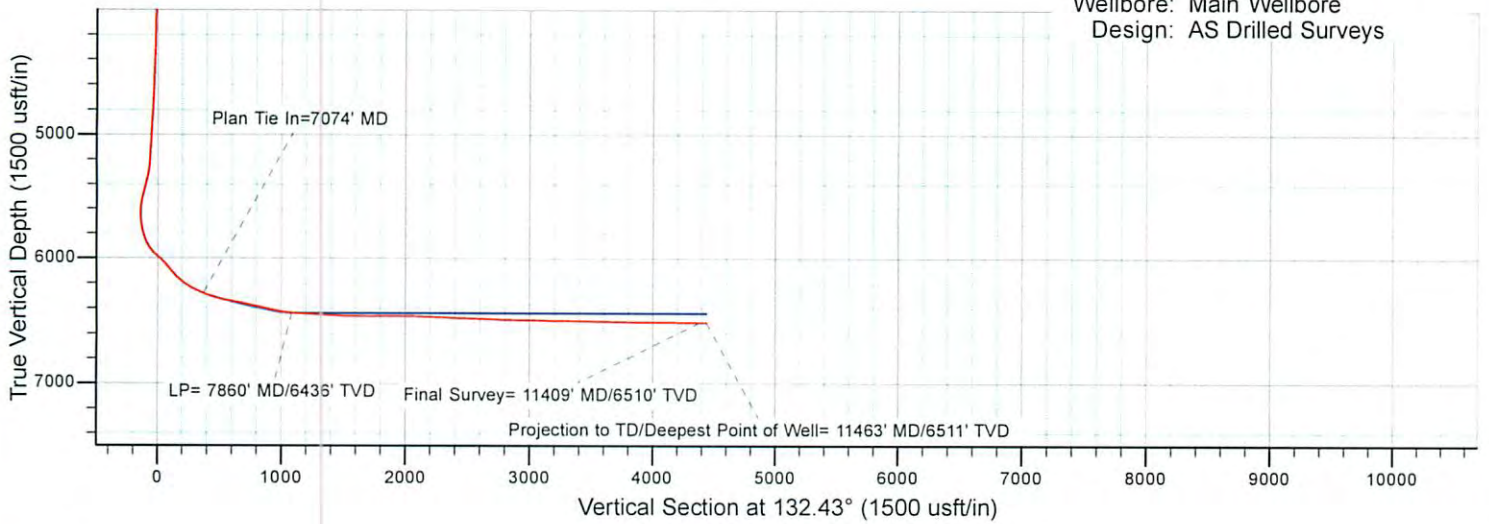
Checked By: _____ Approved By: _____ Date: _____

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EQT Production - Marcellus

Project: Doddridge County, WV Grid
Site: Doddridge County 513149
Well: Well #513149
Wellbore: Main Wellbore
Design: AS Drilled Surveys



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