



Where energy meets innovation.

# **EQT PRODUCTION**

**Doddridge County, WV**

**WEU2**

**Well #515876- Marcellus**

**Main Wellbore**

API#: 47-017-06762

**Design: 515876 As Drilled Surveys**

## **Standard Survey Report**

11 April, 2016



**PRODIRECTIONAL**

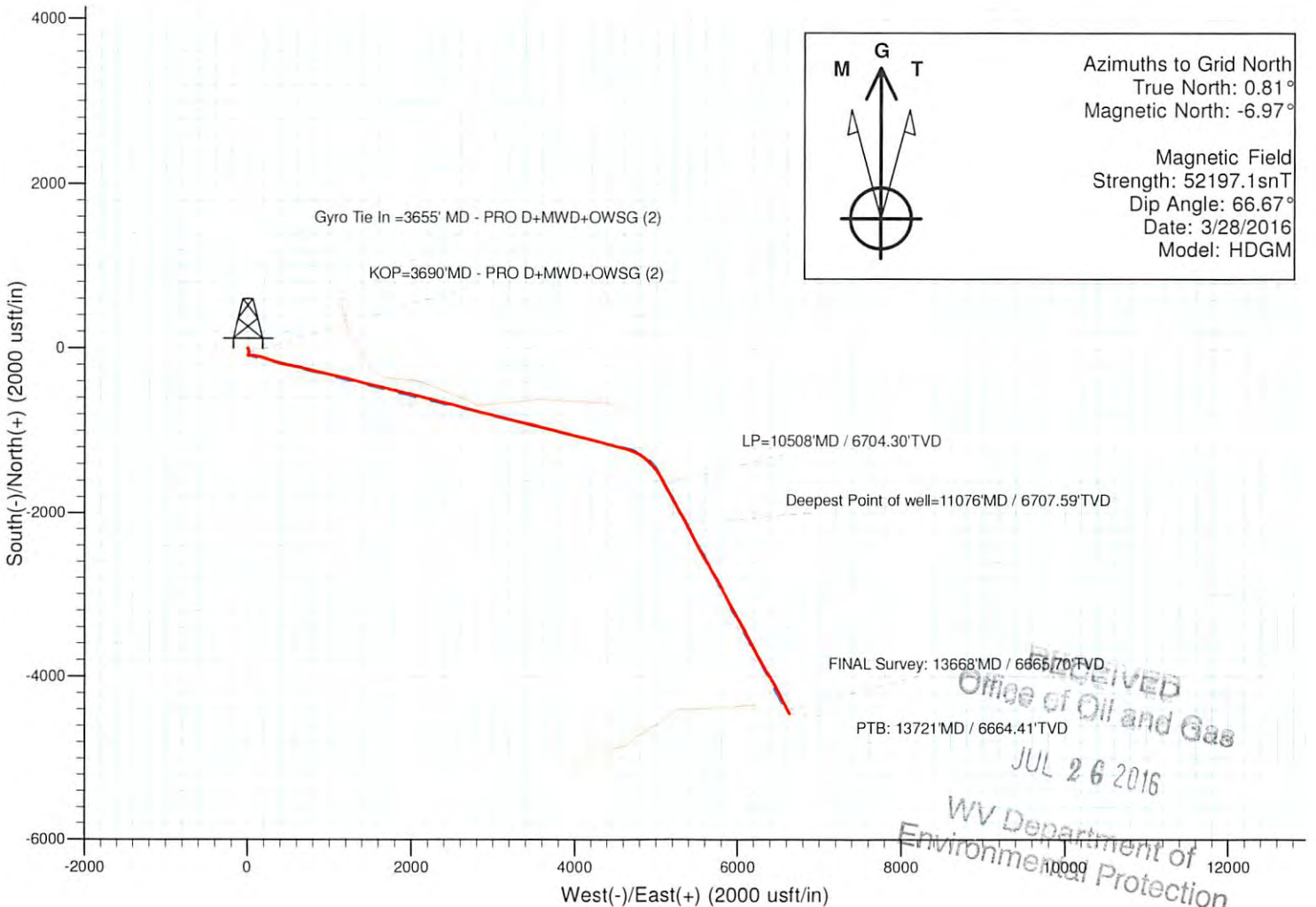
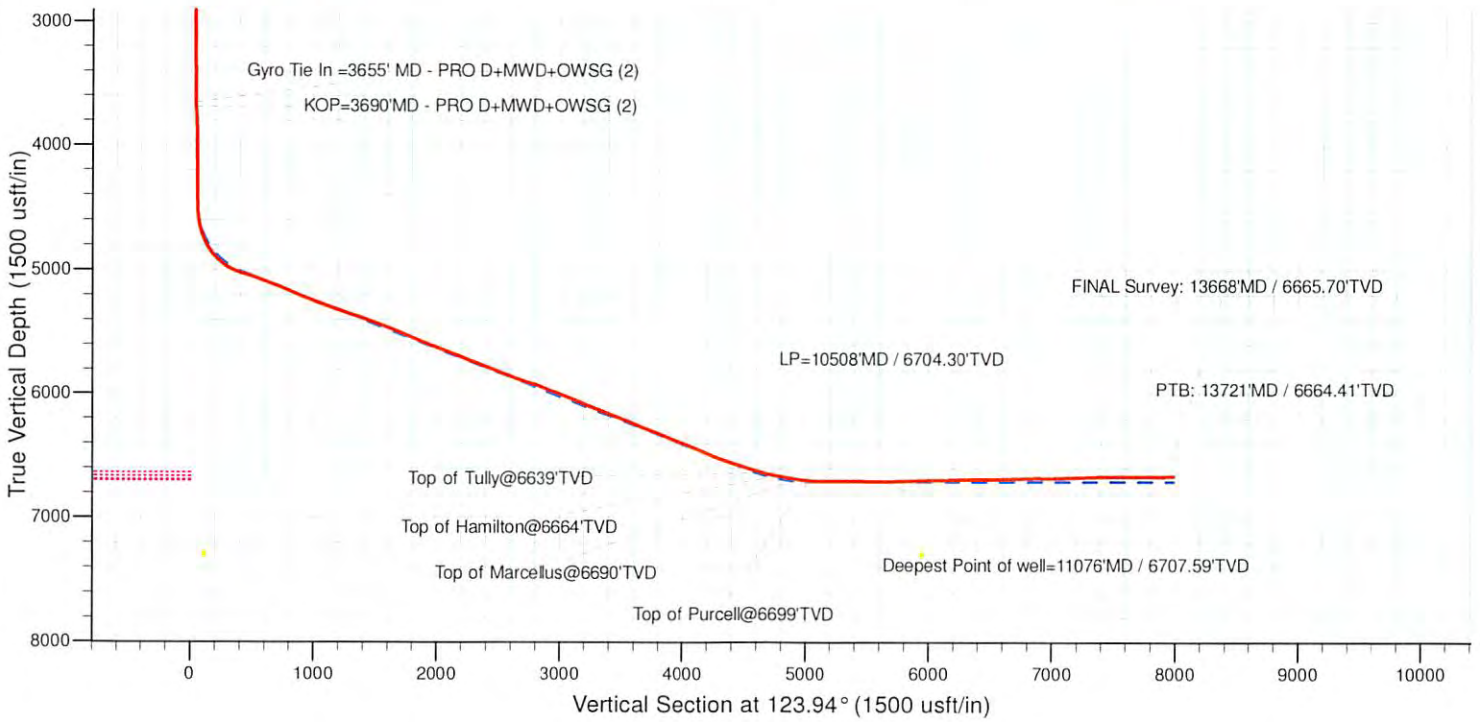
WV Department of  
Environmental Protection

RECEIVED  
Office of Oil and Gas

JUL 26 2016



Project: Doddridge County, WV  
 Site: WEU2  
 Well: Well #515876- Marcellus  
 Wellbore: Main Wellbore  
 Design: 515876 As Drilled Surveys  
 Elevation: KB@23 @ 1179.00usft



RECEIVED  
 Office of Oil and Gas  
 JUL 26 2016  
 WV Department of  
 Environmental Protection



## Professional Directional Survey Report



<b>Company:</b> EQT PRODUCTION	<b>Local Co-ordinate Reference:</b> Well Well #515876- Marcellus
<b>Project:</b> Doddridge County, WV	<b>TVD Reference:</b> KB@23 @ 1179.00usft
<b>Site:</b> WEU2	<b>MD Reference:</b> KB@23 @ 1179.00usft
<b>Well:</b> Well #515876- Marcellus	<b>North Reference:</b> Grid
<b>Wellbore:</b> Main Wellbore	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> 515876 As Drilled Surveys	<b>Database:</b> Well_Planner1

<b>Project</b> Doddridge County, WV
<b>Map System:</b> US State Plane 1927 (Exact solution) <b>System Datum:</b> Mean Sea Level
<b>Geo Datum:</b> NAD 1927 (NADCON CONUS)
<b>Map Zone:</b> West Virginia North 4701

<b>Site</b> WEU2	
<b>Site Position:</b>	<b>Northing:</b> 283,820.10 usft <b>Latitude:</b> 39° 16' 20.14 N
<b>From:</b> Map	<b>Easting:</b> 1,640,046.30 usft <b>Longitude:</b> 80° 46' 17.29 W
<b>Position Uncertainty:</b> 0.00 usft	<b>Slot Radius:</b> 13-3/16 " <b>Grid Convergence:</b> -0.81 °

<b>Well</b> Well #515876- Marcellus	
<b>Well Position</b> +N/-S 0.00 usft	<b>Northing:</b> 283,842.92 usft <b>Latitude:</b> 39° 16' 20.37 N
+E/-W 0.00 usft	<b>Easting:</b> 1,640,085.06 usft <b>Longitude:</b> 80° 46' 16.80 W
<b>Position Uncertainty</b> 0.00 usft	<b>Wellhead Elevation:</b> 0.00 usft <b>Ground Level:</b> 1,156.00 usft

<b>Wellbore</b> Main Wellbore	
<b>Magnetics</b>	<b>Model Name</b> HDGM <b>Sample Date</b> 3/28/2016 <b>Declination (°)</b> -7.78 <b>Dip Angle (°)</b> 66.67 <b>Field Strength (nT)</b> 52,197

<b>Design</b> 515876 As Drilled Surveys	
<b>Audit Notes:</b>	
<b>Version:</b> 1.0	<b>Phase:</b> ACTUAL <b>Tie On Depth:</b> 0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b> 0.00 <b>+N/-S (usft)</b> 0.00 <b>+E/-W (usft)</b> 0.00 <b>Direction (°)</b> 123.94

<b>Survey Program</b> <b>Date</b> 4/11/2016				
<b>From (usft)</b> 100.00	<b>To (usft)</b> 3,655.00	<b>Survey (Wellbore)</b> 515876 Gyrodata Gyro (Main Wellbore)	<b>Tool Name</b> Gyrodata_DP_MS	<b>Description</b> Gyrodata gyro-compassing and drop
3,690.00	13,721.00	515876 PRO D MWD (Main Wellbore)	MWD - OWSG	MWD - OWSG

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.45	154.40	100.00	-0.35	0.17	0.34	0.45	0.45	0.00
200.00	0.52	175.17	200.00	-1.16	0.38	0.96	0.19	-0.07	20.77
300.00	0.12	162.49	299.99	-1.71	0.45	1.33	0.40	-0.40	-12.68
400.00	0.12	149.81	399.99	-1.90	0.53	1.50	0.03	0.00	12.68
500.00	0.15	135.27	499.99	-2.09	0.68	1.73	0.05	0.05	-14.54
600.00	0.29	144.86	599.99	-2.39	0.91	2.09	0.14	0.14	9.59
700.00	0.44	162.63	699.99	-2.96	1.17	2.63	0.19	0.15	17.77
800.00	0.41	162.04	799.99	-3.67	1.40	3.21	0.03	0.03	-0.59
900.00	0.43	142.87	899.99	-4.31	1.74	3.84	0.14	0.02	-19.17

RECEIVED  
 Office of Oil and Gas  
 JUL 26 2016  
 WV Department of  
 Environmental Protection

**Company:** EQT PRODUCTION  
**Project:** Doddridge County, WV  
**Site:** WEU2  
**Well:** Well #515876- Marcellus  
**Wellbore:** Main Wellbore  
**Design:** 515876 As Drilled Surveys

**Local Co-ordinate Reference:** Well Well #515876- Marcellus  
**TVD Reference:** KB@23 @ 1179.00usft  
**MD Reference:** KB@23 @ 1179.00usft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Database:** Well\_Planner1

**Survey**

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,000.00	0.73	130.20	999.98	-5.02	2.45	4.83	0.32	0.30	-12.67
1,100.00	0.83	143.45	1,099.97	-6.01	3.37	6.15	0.21	0.10	13.25
1,200.00	1.11	156.47	1,199.96	-7.48	4.19	7.65	0.35	0.28	13.02
1,300.00	1.24	158.21	1,299.94	-9.37	4.97	9.36	0.13	0.13	1.74
1,400.00	1.16	155.67	1,399.91	-11.30	5.79	11.11	0.10	-0.08	-2.54
1,500.00	1.06	154.84	1,499.89	-13.06	6.60	12.77	0.10	-0.10	-0.83
1,600.00	1.14	158.41	1,599.88	-14.82	7.36	14.38	0.11	0.08	3.57
1,700.00	1.34	167.86	1,699.85	-16.89	7.97	16.05	0.29	0.20	9.45
1,800.00	1.46	166.57	1,799.82	-19.27	8.52	17.82	0.12	0.12	-1.29
1,900.00	1.52	164.13	1,899.79	-21.79	9.17	19.78	0.09	0.06	-2.44
2,000.00	1.54	161.24	1,999.75	-24.33	9.97	21.86	0.08	0.02	-2.89
2,100.00	1.58	160.29	2,099.72	-26.90	10.87	24.04	0.05	0.04	-0.95
2,200.00	1.45	161.27	2,199.68	-29.40	11.74	26.15	0.13	-0.13	0.98
2,300.00	1.44	164.52	2,299.65	-31.81	12.48	28.11	0.08	-0.01	3.25
2,400.00	1.31	162.49	2,399.62	-34.11	13.16	29.96	0.14	-0.13	-2.03
2,500.00	1.27	164.73	2,499.60	-36.27	13.79	31.70	0.06	-0.04	2.24
2,600.00	1.13	166.36	2,599.57	-38.30	14.32	33.26	0.14	-0.14	1.63
2,700.00	0.94	178.22	2,699.56	-40.08	14.58	34.47	0.29	-0.19	11.86
2,800.00	0.88	187.51	2,799.54	-41.66	14.50	35.29	0.16	-0.06	9.29
2,900.00	0.93	195.93	2,899.53	-43.20	14.18	35.88	0.14	0.05	8.42
3,000.00	1.00	203.88	2,999.52	-44.78	13.60	36.29	0.15	0.07	7.95
3,100.00	1.06	210.31	3,099.50	-46.37	12.78	36.50	0.13	0.06	6.43
3,200.00	1.05	189.71	3,199.49	-48.07	12.16	36.93	0.38	-0.01	-20.60
3,300.00	0.87	179.02	3,299.47	-49.74	12.02	37.74	0.25	-0.18	-10.69
3,400.00	0.90	182.14	3,399.46	-51.28	12.00	38.59	0.06	0.03	3.12
3,500.00	0.85	178.19	3,499.45	-52.81	12.00	39.44	0.08	-0.05	-3.95
3,600.00	0.81	173.62	3,599.44	-54.25	12.10	40.33	0.08	-0.04	-4.57
3,655.00	0.75	174.43	3,654.43	-55.00	12.18	40.81	0.11	-0.11	1.47
<b>Gyro Tie In =3655' MD - PRO D+MWD+OWSG (2)</b>									
3,690.00	2.90	181.70	3,689.41	-56.11	12.17	41.43	6.17	6.14	20.77
<b>KOP=3690'MD - PRO D+MWD+OWSG (2)</b>									
3,721.00	5.50	182.30	3,720.33	-58.38	12.09	42.63	8.39	8.39	1.94
3,753.00	7.50	183.70	3,752.12	-61.99	11.89	44.48	6.27	6.25	4.38
3,848.00	2.40	168.80	3,846.74	-70.14	11.88	49.02	5.49	-5.37	-15.68
3,942.00	0.70	255.80	3,940.71	-72.21	11.71	50.03	2.62	-1.81	92.55
4,037.00	1.40	209.40	4,035.69	-73.36	10.57	49.74	1.10	0.74	-48.84
4,131.00	2.50	183.40	4,129.64	-76.41	9.89	50.87	1.47	1.17	-27.66
4,226.00	2.80	190.20	4,224.54	-80.76	9.35	52.86	0.46	0.32	7.16
4,320.00	1.00	235.80	4,318.48	-83.48	8.27	53.47	2.36	-1.91	48.51
4,415.00	0.50	182.30	4,413.48	-84.36	7.57	53.38	0.85	-0.53	-56.32
4,447.00	0.70	197.90	4,445.48	-84.69	7.50	53.51	0.80	0.63	48.75
4,478.00	1.00	151.50	4,476.47	-85.11	7.57	53.80	2.34	0.97	-149.68
4,510.00	3.40	111.70	4,508.45	-85.70	8.59	54.98	8.46	7.50	-124.38

<b>Company:</b>	EQT PRODUCTION	<b>Local Co-ordinate Reference:</b>	Well Well #515876- Marcellus
<b>Project:</b>	Doddridge County, WV	<b>TVD Reference:</b>	KB@23 @ 1179.00usft
<b>Site:</b>	WEU2	<b>MD Reference:</b>	KB@23 @ 1179.00usft
<b>Well:</b>	Well #515876- Marcellus	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Main Wellbore	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	515876 As Drilled Surveys	<b>Database:</b>	Well_Planner1

**Survey**

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,541.00	6.10	103.60	4,539.34	-86.43	11.04	57.42	8.95	8.71	-26.13
4,573.00	8.00	94.60	4,571.10	-87.01	14.92	60.96	6.85	5.94	-28.13
4,604.00	10.60	89.80	4,601.69	-87.17	19.92	65.20	8.75	8.39	-15.48
4,636.00	14.20	87.00	4,632.93	-86.96	26.78	70.77	11.40	11.25	-8.75
4,667.00	17.40	87.20	4,662.76	-86.53	35.21	77.53	10.32	10.32	0.65
4,699.00	20.70	87.80	4,693.00	-86.08	45.64	85.93	10.33	10.31	1.88
4,730.00	23.80	89.10	4,721.69	-85.77	57.38	95.49	10.12	10.00	4.19
4,762.00	25.80	94.40	4,750.74	-86.20	70.78	106.85	9.34	6.25	16.56
4,793.00	28.50	98.80	4,778.33	-87.85	84.82	119.42	10.85	8.71	14.19
4,825.00	31.90	102.20	4,805.98	-90.81	100.63	134.19	11.89	10.63	10.63
4,857.00	35.40	103.30	4,832.62	-94.73	117.92	150.72	11.10	10.94	3.44
4,888.00	39.10	103.30	4,857.29	-99.05	136.18	168.28	11.94	11.94	0.00
4,920.00	42.80	103.80	4,881.45	-103.96	156.56	187.93	11.61	11.56	1.56
4,951.00	46.00	105.60	4,903.60	-109.47	177.54	208.41	11.09	10.32	5.81
4,983.00	48.90	107.40	4,925.24	-116.18	200.13	230.90	9.96	9.06	5.63
5,014.00	52.50	108.80	4,944.87	-123.63	222.93	253.97	12.13	11.61	4.52
5,046.00	56.70	109.30	4,963.40	-132.15	247.58	279.18	13.19	13.13	1.56
5,077.00	60.60	109.20	4,979.53	-140.88	272.57	304.78	12.58	12.58	-0.32
5,172.00	72.70	106.70	5,017.12	-167.62	355.40	388.43	12.96	12.74	-2.63
5,267.00	73.60	102.20	5,044.67	-190.29	443.42	474.11	4.63	0.95	-4.74
5,361.00	72.30	100.30	5,072.23	-207.83	531.56	557.02	2.38	-1.38	-2.02
5,456.00	71.20	102.20	5,101.98	-225.42	620.04	640.25	2.22	-1.16	2.00
5,550.00	69.80	104.30	5,133.36	-245.72	706.28	723.13	2.58	-1.49	2.23
5,645.00	68.30	103.40	5,167.33	-266.97	792.42	806.45	1.81	-1.58	-0.95
5,739.00	69.60	102.40	5,201.09	-286.55	877.93	888.32	1.70	1.38	-1.06
5,834.00	69.20	102.40	5,234.52	-305.64	964.78	971.04	0.42	-0.42	0.00
5,929.00	71.00	102.60	5,266.85	-324.98	1,051.99	1,054.18	1.91	1.89	0.21
6,023.00	72.10	104.30	5,296.60	-345.72	1,138.71	1,137.70	2.08	1.17	1.81
6,118.00	71.20	103.40	5,326.51	-367.30	1,226.25	1,222.38	1.31	-0.95	-0.95
6,213.00	72.80	105.00	5,355.87	-389.47	1,313.83	1,307.41	2.32	1.68	1.68
6,307.00	72.30	104.00	5,384.06	-411.93	1,400.65	1,391.97	1.15	-0.53	-1.06
6,402.00	71.30	103.20	5,413.73	-433.15	1,488.36	1,476.59	1.32	-1.05	-0.84
6,496.00	70.40	101.50	5,444.57	-452.14	1,575.10	1,559.15	1.96	-0.96	-1.81
6,591.00	70.10	104.50	5,476.67	-472.25	1,662.21	1,642.64	2.99	-0.32	3.16
6,685.00	69.30	104.10	5,509.29	-494.03	1,747.64	1,725.67	0.94	-0.85	-0.43
6,780.00	67.70	102.60	5,544.10	-514.44	1,833.63	1,808.41	2.23	-1.68	-1.58
6,875.00	69.20	103.00	5,579.00	-534.02	1,919.79	1,890.82	1.63	1.58	0.42
6,969.00	70.60	104.70	5,611.30	-555.15	2,005.49	1,973.72	2.26	1.49	1.81
7,064.00	69.60	103.60	5,643.64	-576.99	2,092.11	2,057.77	1.51	-1.05	-1.16
7,158.00	70.10	104.10	5,676.02	-598.12	2,177.79	2,140.64	0.73	0.53	0.53
7,253.00	68.90	103.40	5,709.29	-619.27	2,264.22	2,224.15	1.44	-1.26	-0.74
7,347.00	70.70	104.00	5,741.75	-640.16	2,349.92	2,306.92	2.01	1.91	0.64
7,442.00	70.30	103.70	5,773.46	-661.60	2,436.87	2,391.02	0.52	-0.42	-0.32
7,573.00	69.10	104.70	5,818.91	-691.74	2,555.98	2,506.66	1.16	-0.92	0.76

**Company:** EQT PRODUCTION  
**Project:** Doddridge County, WV  
**Site:** WEU2  
**Well:** Well #515876- Marcellus  
**Wellbore:** Main Wellbore  
**Design:** 515876 As Drilled Surveys

**Local Co-ordinate Reference:** Well Well #515876- Marcellus  
**TVD Reference:** KB@23 @ 1179.00usft  
**MD Reference:** KB@23 @ 1179.00usft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Database:** Well\_Planner1

**Survey**

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,668.00	70.30	105.30	5,851.87	-714.80	2,642.04	2,590.93	1.40	1.26	0.63
7,762.00	71.70	104.70	5,882.47	-737.80	2,727.88	2,674.99	1.61	1.49	-0.64
7,857.00	73.40	104.40	5,910.96	-760.56	2,815.60	2,760.47	1.81	1.79	-0.32
7,952.00	69.70	103.60	5,941.02	-782.37	2,903.03	2,845.17	3.98	-3.89	-0.84
8,046.00	71.70	103.30	5,972.08	-803.00	2,989.30	2,928.27	2.15	2.13	-0.32
8,141.00	68.90	104.20	6,004.11	-824.25	3,076.17	3,012.20	3.08	-2.95	0.95
8,236.00	69.90	104.10	6,037.53	-845.99	3,162.40	3,095.87	1.06	1.05	-0.11
8,330.00	67.70	103.60	6,071.52	-866.97	3,247.48	3,178.17	2.39	-2.34	-0.53
8,425.00	69.00	102.70	6,106.57	-887.05	3,333.46	3,260.71	1.63	1.37	-0.95
8,520.00	70.40	102.10	6,139.53	-906.18	3,420.48	3,343.59	1.59	1.47	-0.63
8,614.00	69.30	105.20	6,171.92	-927.00	3,506.23	3,426.34	3.31	-1.17	3.30
8,709.00	70.30	105.10	6,204.72	-950.30	3,592.28	3,510.74	1.06	1.05	-0.11
8,803.00	68.30	104.20	6,237.94	-972.54	3,677.35	3,593.73	2.31	-2.13	-0.96
8,898.00	69.30	103.30	6,272.30	-993.59	3,763.38	3,676.85	1.37	1.05	-0.95
8,993.00	70.20	103.20	6,305.18	-1,014.02	3,850.13	3,760.23	0.95	0.95	-0.11
9,087.00	68.90	104.00	6,338.02	-1,034.72	3,935.74	3,842.81	1.60	-1.38	0.85
9,182.00	70.10	103.90	6,371.29	-1,056.18	4,022.10	3,926.43	1.27	1.26	-0.11
9,277.00	71.20	103.60	6,402.77	-1,077.48	4,109.16	4,010.55	1.20	1.16	-0.32
9,371.00	67.70	104.30	6,435.76	-1,098.69	4,194.57	4,093.25	3.79	-3.72	0.74
9,466.00	68.10	104.20	6,471.50	-1,120.36	4,279.88	4,176.12	0.43	0.42	-0.11
9,561.00	68.70	103.80	6,506.47	-1,141.72	4,365.59	4,259.15	0.74	0.63	-0.42
9,656.00	72.10	104.80	6,538.34	-1,163.83	4,452.29	4,343.43	3.71	3.58	1.05
9,751.00	72.80	104.70	6,566.98	-1,186.89	4,539.89	4,428.97	0.74	0.74	-0.11
9,845.00	72.80	104.60	6,594.78	-1,209.60	4,626.76	4,513.72	0.10	0.00	-0.11
9,877.00	73.10	105.90	6,604.16	-1,217.65	4,656.28	4,542.70	4.00	0.94	4.06
9,908.00	72.60	110.10	6,613.31	-1,226.80	4,684.44	4,571.18	13.05	-1.61	13.55
9,940.00	72.80	113.30	6,622.82	-1,238.10	4,712.83	4,601.03	9.57	0.63	10.00
9,972.00	74.00	115.40	6,631.97	-1,250.74	4,740.76	4,631.26	7.32	3.75	6.56
9,999.10	75.92	118.29	6,639.00	-1,262.56	4,764.11	4,657.23	12.50	7.09	10.66
<b>Top of Tully@6639'TVD</b>									
10,003.00	76.20	118.70	6,639.94	-1,264.37	4,767.43	4,661.00	12.50	7.16	10.55
10,035.00	77.10	120.50	6,647.33	-1,279.75	4,794.50	4,692.04	6.15	2.81	5.63
10,066.00	78.60	124.10	6,653.86	-1,295.94	4,820.11	4,722.33	12.34	4.84	11.61
10,098.00	80.20	126.80	6,659.74	-1,314.18	4,845.73	4,753.77	9.68	5.00	8.44
10,122.81	80.04	128.72	6,664.00	-1,329.15	4,865.05	4,778.15	7.65	-0.65	7.74
<b>Top of Hamilton@6664'TVD</b>									
10,129.00	80.00	129.20	6,665.07	-1,332.98	4,869.79	4,784.23	7.65	-0.62	7.75
10,161.00	79.70	132.40	6,670.71	-1,353.56	4,893.64	4,815.50	9.89	-0.94	10.00
10,193.00	80.10	135.30	6,676.33	-1,375.38	4,916.35	4,846.53	9.01	1.25	9.06
10,224.00	81.40	136.50	6,681.31	-1,397.35	4,937.64	4,876.46	5.67	4.19	3.87
10,256.00	82.20	139.00	6,685.87	-1,420.80	4,958.94	4,907.22	8.13	2.50	7.81
10,287.00	82.80	140.30	6,689.92	-1,444.22	4,978.84	4,936.80	4.59	1.94	4.19
10,287.63	82.82	140.33	6,690.00	-1,444.70	4,979.24	4,937.40	5.44	2.81	4.70

<b>Company:</b>	EQT PRODUCTION	<b>Local Co-ordinate Reference:</b>	Well Well #515876- Marcellus
<b>Project:</b>	Doddridge County, WV	<b>TVD Reference:</b>	KB@23 @ 1179.00usft
<b>Site:</b>	WEU2	<b>MD Reference:</b>	KB@23 @ 1179.00usft
<b>Well:</b>	Well #515876- Marcellus	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Main Wellbore	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	515876 As Drilled Surveys	<b>Database:</b>	Well_Planner1

**Survey**

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
<b>Top of Marcellus@6690'TVD</b>									
10,319.00	83.70	141.80	6,693.68	-1,468.93	4,998.81	4,967.17	5.44	2.81	4.69
10,351.00	84.90	144.70	6,696.86	-1,494.44	5,017.86	4,997.22	9.77	3.75	9.06
10,375.63	85.14	147.48	6,699.00	-1,514.80	5,031.54	5,019.94	11.29	0.96	11.29
<b>Top of Purcell@6699'TVD</b>									
10,382.00	85.20	148.20	6,699.54	-1,520.18	5,034.93	5,025.75	11.29	0.99	11.29
10,414.00	85.50	149.70	6,702.13	-1,547.50	5,051.38	5,054.65	4.77	0.94	4.69
10,461.00	89.30	151.30	6,704.26	-1,588.36	5,074.49	5,096.64	8.77	8.09	3.40
10,508.00	90.60	152.60	6,704.30	-1,629.84	5,096.59	5,138.13	3.91	2.77	2.77
<b>LP=10508'MD / 6704.30'TVD</b>									
10,603.00	90.90	152.10	6,703.06	-1,713.98	5,140.67	5,221.69	0.61	0.32	-0.53
10,698.00	91.10	151.10	6,701.40	-1,797.53	5,185.85	5,305.82	1.07	0.21	-1.05
10,793.00	88.70	151.20	6,701.57	-1,880.74	5,231.69	5,390.30	2.53	-2.53	0.11
10,887.00	88.10	150.90	6,704.19	-1,962.96	5,277.17	5,473.95	0.71	-0.64	-0.32
10,982.00	88.30	150.50	6,707.18	-2,045.76	5,323.64	5,558.73	0.47	0.21	-0.42
11,076.00	91.20	154.30	6,707.59	-2,129.04	5,367.17	5,641.35	5.08	3.09	4.04
<b>Deepest Point of well=11076'MD / 6707.59'TVD</b>									
11,171.00	92.20	153.20	6,704.77	-2,214.20	5,409.17	5,723.74	1.56	1.05	-1.16
11,266.00	90.90	153.60	6,702.20	-2,299.12	5,451.69	5,806.43	1.43	-1.37	0.42
11,360.00	91.80	151.70	6,699.98	-2,382.58	5,494.86	5,888.85	2.24	0.96	-2.02
11,455.00	92.40	150.20	6,696.50	-2,465.57	5,540.96	5,973.43	1.70	0.63	-1.58
11,550.00	89.90	150.50	6,694.60	-2,548.11	5,587.94	6,058.49	2.65	-2.63	0.32
11,644.00	90.60	150.60	6,694.19	-2,629.96	5,634.16	6,142.54	0.75	0.74	0.11
11,739.00	91.20	149.80	6,692.69	-2,712.39	5,681.36	6,227.72	1.05	0.63	-0.84
11,834.00	92.00	150.10	6,690.04	-2,794.59	5,728.92	6,313.07	0.90	0.84	0.32
11,929.00	90.00	151.60	6,688.38	-2,877.53	5,775.18	6,397.77	2.63	-2.11	1.58
12,023.00	90.50	151.90	6,687.97	-2,960.34	5,819.67	6,480.91	0.62	0.53	0.32
12,118.00	91.10	151.40	6,686.65	-3,043.93	5,864.78	6,565.01	0.82	0.63	-0.53
12,212.00	91.50	151.20	6,684.51	-3,126.36	5,909.91	6,648.48	0.48	0.43	-0.21
12,307.00	91.70	151.10	6,681.86	-3,209.54	5,955.73	6,732.93	0.24	0.21	-0.11
12,402.00	91.80	151.30	6,678.96	-3,292.75	6,001.47	6,817.35	0.24	0.11	0.21
12,496.00	88.80	149.30	6,678.47	-3,374.39	6,048.04	6,901.56	3.84	-3.19	-2.13
12,591.00	90.50	153.00	6,679.05	-3,457.58	6,093.87	6,986.03	4.29	1.79	3.89
12,686.00	90.80	152.90	6,677.97	-3,542.18	6,137.07	7,069.11	0.33	0.32	-0.11
12,781.00	91.30	152.60	6,676.23	-3,626.62	6,180.56	7,152.34	0.61	0.53	-0.32
12,875.00	91.90	152.60	6,673.61	-3,710.04	6,223.80	7,234.79	0.64	0.64	0.00
12,970.00	92.20	152.20	6,670.21	-3,794.18	6,267.78	7,318.26	0.53	0.32	-0.42
13,063.00	91.30	150.00	6,667.37	-3,875.55	6,312.71	7,400.96	2.55	-0.97	-2.37
13,159.00	89.60	146.50	6,666.61	-3,957.17	6,363.21	7,488.43	4.05	-1.77	-3.65
13,254.00	89.30	150.90	6,667.53	-4,038.32	6,412.55	7,574.68	4.64	-0.32	4.63
13,349.00	89.60	150.60	6,668.44	-4,121.20	6,458.97	7,659.46	0.45	0.32	-0.32
13,443.00	90.20	153.10	6,668.60	-4,204.08	6,503.31	7,742.53	2.74	0.64	2.66
13,538.00	90.50	152.60	6,668.02	-4,288.61	6,546.66	7,825.69	0.61	0.32	-0.53
13,633.00	91.30	153.00	6,666.53	-4,373.09	6,590.08	7,908.88	0.94	0.84	0.42

<b>Company:</b>	EQT PRODUCTION	<b>Local Co-ordinate Reference:</b>	Well Well #515876- Marcellus
<b>Project:</b>	Doddridge County, WV	<b>TVD Reference:</b>	KB@23 @ 1179.00usft
<b>Site:</b>	WEU2	<b>MD Reference:</b>	KB@23 @ 1179.00usft
<b>Well:</b>	Well #515876- Marcellus	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Main Wellbore	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	515876 As Drilled Surveys	<b>Database:</b>	Well_Planner1

**Survey**

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,668.00	91.40	152.70	6,665.70	-4,404.22	6,606.05	7,939.51	0.90	0.29	-0.86
<b>FINAL Survey: 13668'MD / 6665.70'TVD</b>									
13,721.00	91.40	152.70	6,664.41	-4,451.31	6,630.35	7,985.96	0.00	0.00	0.00
<b>PTB: 13721'MD / 6664.41'TVD</b>									

**Formations**

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
9,999.10	6,639.00	Top of Tully@6639'TVD		0.00	
10,122.81	6,664.00	Top of Hamilton@6664'TVD		0.00	
10,287.63	6,690.00	Top of Marcellus@6690'TVD		0.00	
10,375.63	6,699.00	Top of Purcell@6699'TVD		0.00	

**Design Annotations**

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
3,655.00	3,654.43	-55.00	12.18	Gyro Tie In =3655' MD - PRO D+MWD+OWSG (2)
3,690.00	3,689.41	-56.11	12.17	KOP=3690'MD - PRO D+MWD+OWSG (2)
10,508.00	6,704.30	-1,629.84	5,096.59	LP=10508'MD / 6704.30'TVD
11,076.00	6,707.59	-2,129.04	5,367.17	Deepest Point of well=11076'MD / 6707.59'TVD
13,668.00	6,665.70	-4,404.22	6,606.05	FINAL Survey: 13668'MD / 6665.70'TVD
13,721.00	6,664.41	-4,451.31	6,630.35	PTB: 13721'MD / 6664.41'TVD

Checked By: _____	Approved By: _____	Date: _____
-------------------	--------------------	-------------