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WV Department of  
Environmental Protection

## EQT PRODUCTION

Doddridge County, WV

OXF43

#516235 -MRC - Slot 516235

Main

Design: 516235 As Drilled

## Standard Survey Report

19 September, 2017



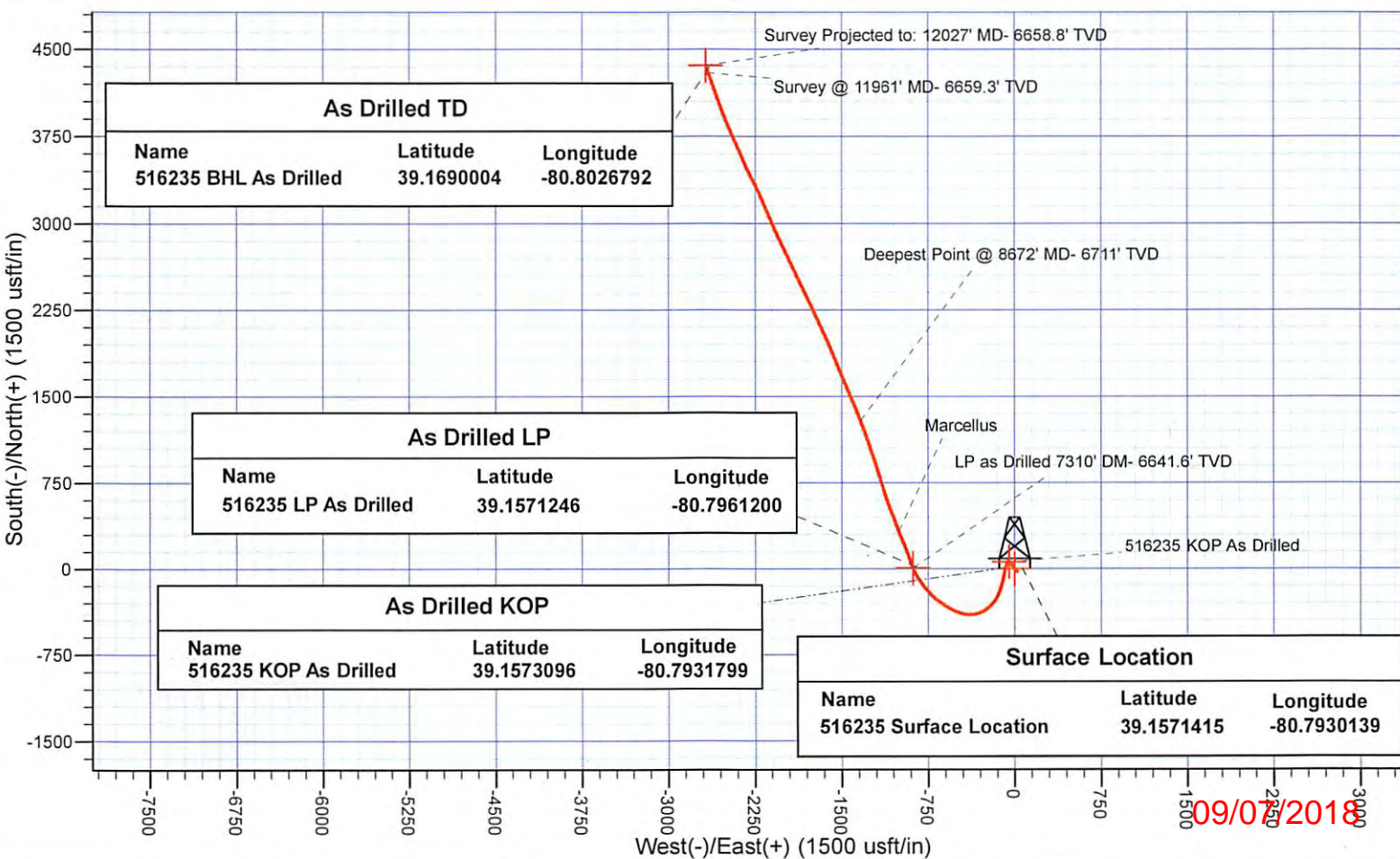
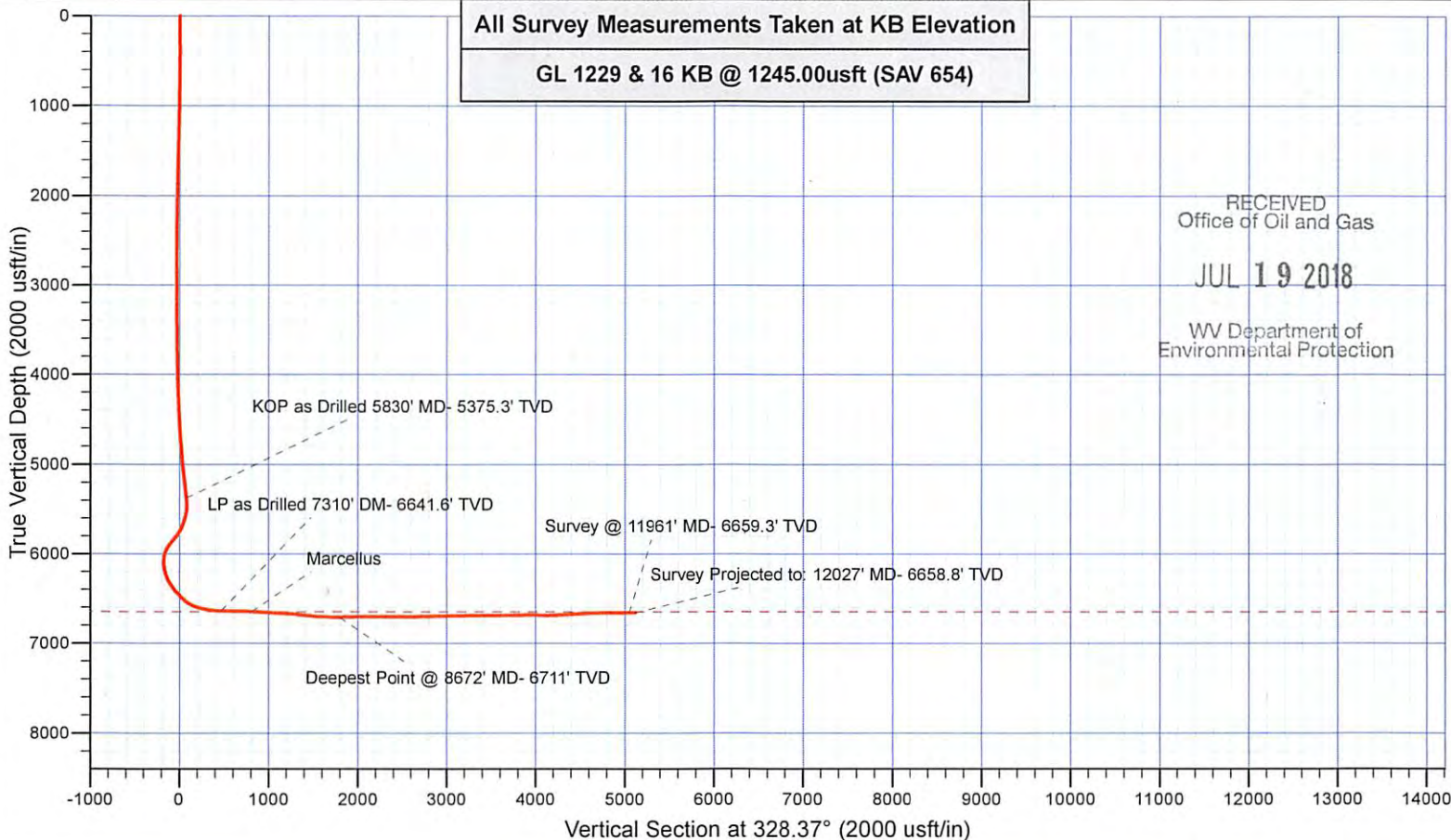
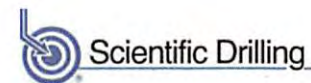
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Project: Doddridge County, WV  
Site: OXF43  
Well: #516235 -MRC  
Wellbore Main  
Design: 516235 As Drilled





JUL 19 2018



<b>Company:</b>	EQT PRODUCTION	WV Department of Environmental Protection	<b>Local Co-ordinate Reference:</b>	Well #516235 -MRC - Slot 516235
<b>Project:</b>	Doddridge County, WV		<b>TVD Reference:</b>	GL 1229 & 16 KB @ 1245.00usft (SAV 654)
<b>Site:</b>	OXF43		<b>MD Reference:</b>	GL 1229 & 16 KB @ 1245.00usft (SAV 654)
<b>Well:</b>	#516235 -MRC		<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Main		<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	516235 As Drilled		<b>Database:</b>	Northeast District

<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>	OXF43				
<b>Site Position:</b>		<b>Northing:</b>	241,913.00 usft	<b>Latitude:</b>	39.1569519
<b>From:</b>	Map	<b>Easting:</b>	1,633,421.76 usft	<b>Longitude:</b>	-80.7927349
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	-0.82 °

<b>Well</b>	#516235 -MRC - Slot 516235					
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	241,983.17 usft	<b>Latitude:</b>	39.1571415
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	1,633,343.65 usft	<b>Longitude:</b>	-80.7930139
<b>Position Uncertainty</b>		0.00 usft	<b>Wellhead Elevation:</b>	0.00 usft	<b>Ground Level:</b>	1,229.00 usft

<b>Wellbore</b>	Main				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	HDGM	9/6/2017	-7.77	66.42	51,935

<b>Design</b>	516235 As Drilled				
<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>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	328.37	

<b>Survey Program</b>	<b>Date</b>	9/19/2017			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
100.00	5,287.00	Survey #2 Gyro Data Final Gyro (Main)	GYD_DP_MS	Gyrodata gyro-compassing and drop	
5,349.00	12,027.00	Survey #3 SDI MWD (Main)	SDI MWD	SDI MWD - Standard ver 1.0.1	

<b>Survey</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Vertical Section (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.23	113.34	100.00	-0.08	0.18	-0.16	0.23	0.23	0.00	
200.00	0.24	126.19	200.00	-0.28	0.54	-0.52	0.05	0.01	12.85	
300.00	0.10	143.20	300.00	-0.48	0.76	-0.80	0.15	-0.14	17.01	
400.00	0.13	136.90	400.00	-0.63	0.89	-1.00	0.03	0.03	-6.30	
500.00	0.13	154.23	500.00	-0.81	1.02	-1.23	0.04	0.00	17.33	
600.00	0.37	173.11	600.00	-1.24	1.10	-1.63	0.25	0.24	18.88	
700.00	0.40	172.91	699.99	-1.90	1.19	-2.24	0.03	0.03	-0.20	
800.00	0.44	169.71	799.99	-2.63	1.30	-2.92	0.05	0.04	-3.20	
900.00	0.54	161.57	899.99	-3.45	1.51	-3.73	0.12	0.10	-8.14	

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<b>Company:</b>	EQT PRODUCTION	WV Department of Environmental Protection	<b>Local Co-ordinate Reference:</b>	Well #516235 -MRC - Slot 516235
<b>Project:</b>	Doddridge County, WV		<b>TVD Reference:</b>	GL 1229 & 16 KB @ 1245.00usft (SAV 654)
<b>Site:</b>	OXF43	<b>MD Reference:</b>	GL 1229 & 16 KB @ 1245.00usft (SAV 654)	
<b>Well:</b>	#516235 -MRC	<b>North Reference:</b>	Grid	
<b>Wellbore:</b>	Main	<b>Survey Calculation Method:</b>	Minimum Curvature	
<b>Design:</b>	516235 As Drilled	<b>Database:</b>	Northeast District	

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	0.88	158.15	999.98	-4.61	1.95	-4.95	0.34	0.34	-3.42
1,100.00	1.03	157.31	1,099.97	-6.15	2.58	-6.59	0.15	0.15	-0.84
1,200.00	1.39	158.58	1,199.94	-8.11	3.37	-8.68	0.36	0.36	1.27
1,300.00	1.52	157.47	1,299.91	-10.47	4.32	-11.18	0.13	0.13	-1.11
1,400.00	1.50	154.01	1,399.88	-12.87	5.40	-13.79	0.09	-0.02	-3.46
1,500.00	1.23	138.01	1,499.85	-14.84	6.70	-16.15	0.46	-0.27	-16.00
1,600.00	1.12	119.76	1,599.83	-16.13	8.26	-18.06	0.39	-0.11	-18.25
1,700.00	1.22	121.44	1,699.81	-17.17	10.02	-19.87	0.11	0.10	1.68
1,800.00	1.34	120.64	1,799.78	-18.32	11.93	-21.85	0.12	0.12	-0.80
1,900.00	1.50	123.08	1,899.75	-19.63	14.04	-24.07	0.17	0.16	2.44
2,000.00	1.46	119.26	1,999.72	-20.96	16.24	-26.37	0.11	-0.04	-3.82
2,100.00	1.28	115.13	2,099.69	-22.06	18.37	-28.42	0.21	-0.18	-4.13
2,200.00	1.06	109.81	2,199.67	-22.85	20.25	-30.07	0.25	-0.22	-5.32
2,300.00	0.89	112.97	2,299.65	-23.47	21.83	-31.43	0.18	-0.17	3.16
2,400.00	0.55	114.21	2,399.65	-23.97	22.99	-32.46	0.34	-0.34	1.24
2,500.00	0.33	117.60	2,499.64	-24.30	23.68	-33.11	0.22	-0.22	3.39
2,600.00	0.09	82.28	2,599.64	-24.42	24.01	-33.38	0.26	-0.24	-35.32
2,700.00	0.16	38.35	2,699.64	-24.30	24.18	-33.37	0.11	0.07	-43.93
2,800.00	0.27	312.70	2,799.64	-24.03	24.09	-33.09	0.30	0.11	-85.65
2,900.00	0.30	322.12	2,899.64	-23.66	23.76	-32.61	0.06	0.03	9.42
3,000.00	0.37	320.07	2,999.64	-23.21	23.39	-32.03	0.07	0.07	-2.05
3,100.00	0.40	310.55	3,099.64	-22.73	22.92	-31.38	0.07	0.03	-9.52
3,200.00	0.38	319.26	3,199.63	-22.26	22.43	-30.72	0.06	-0.02	8.71
3,300.00	0.46	308.98	3,299.63	-21.75	21.91	-30.01	0.11	0.08	-10.28
3,400.00	0.63	321.67	3,399.63	-21.07	21.25	-29.08	0.21	0.17	12.69
3,500.00	0.58	306.92	3,499.62	-20.33	20.51	-28.07	0.16	-0.05	-14.75
3,600.00	0.60	308.42	3,599.62	-19.70	19.69	-27.10	0.03	0.02	1.50
3,700.00	0.61	310.68	3,699.61	-19.03	18.88	-26.11	0.03	0.01	2.26
3,800.00	0.64	308.09	3,799.61	-18.34	18.04	-25.07	0.04	0.03	-2.59
3,900.00	1.01	314.15	3,899.59	-17.38	16.96	-23.70	0.38	0.37	6.06
4,000.00	1.34	316.80	3,999.57	-15.92	15.53	-21.70	0.33	0.33	2.65
4,100.00	1.63	313.92	4,099.54	-14.08	13.71	-19.17	0.30	0.29	-2.88
4,200.00	1.78	314.76	4,199.50	-12.00	11.58	-16.29	0.15	0.15	0.84
4,300.00	2.12	314.06	4,299.44	-9.62	9.15	-12.98	0.34	0.34	-0.70
4,400.00	2.53	317.14	4,399.35	-6.71	6.32	-9.03	0.43	0.41	3.08
4,500.00	3.08	317.49	4,499.23	-3.11	3.00	-4.22	0.55	0.55	0.35
4,600.00	3.65	318.40	4,599.06	1.25	-0.93	1.55	0.57	0.57	0.91
4,700.00	4.60	320.92	4,698.80	6.74	-5.57	8.66	0.97	0.95	2.52
4,800.00	5.12	323.14	4,798.44	13.42	-10.78	17.08	0.55	0.52	2.22
4,900.00	5.51	322.81	4,898.01	20.82	-16.35	26.30	0.39	0.39	-0.33
5,000.00	5.56	325.42	4,997.55	28.63	-22.01	35.92	0.26	0.05	2.61
5,100.00	6.09	325.28	5,097.03	36.98	-27.78	46.05	0.53	0.53	-0.14
5,200.00	6.45	326.27	5,196.43	46.01	-33.92	56.96	0.38	0.36	0.99

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<b>Well:</b>	#516235 -MRC	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Main	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	516235 As Drilled	<b>Database:</b>	Northeast District

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)	
5,287.00	6.49	327.60	5,282.88	54.23	-39.26	66.76	0.18	0.05	1.53	
5,349.00	6.12	319.76	5,344.50	59.71	-43.28	73.53	1.51	-0.60	-12.65	
5,379.99	7.67	297.05	5,375.27	61.91	-46.19	76.93	10.02	5.00	-73.30	
<b>KOP as Drilled 5830' MD- 5375.3' TVD</b>										
5,380.00	7.67	297.04	5,375.28	61.91	-46.19	76.94	10.02	6.52	-57.05	
5,412.00	10.01	272.72	5,406.91	63.01	-50.87	80.33	13.62	7.31	-76.00	
5,443.00	11.89	249.56	5,437.36	62.03	-56.56	82.47	15.30	6.06	-74.71	
5,475.00	12.99	228.28	5,468.63	58.48	-62.33	82.48	14.64	3.44	-66.50	
5,507.00	12.93	209.90	5,499.82	52.98	-66.80	80.14	12.83	-0.19	-57.44	
5,538.00	13.00	191.86	5,530.05	46.56	-69.25	75.96	13.01	0.23	-58.19	
5,570.00	15.79	191.21	5,561.04	38.76	-70.84	70.15	8.73	8.72	-2.03	
5,602.00	18.65	191.97	5,591.60	29.49	-72.75	63.26	8.96	8.94	2.38	
5,633.00	21.42	194.44	5,620.72	19.15	-75.19	55.74	9.34	8.94	7.97	
5,664.00	24.88	194.85	5,649.22	7.36	-78.27	47.32	11.17	11.16	1.32	
5,696.00	28.80	193.91	5,677.77	-6.63	-81.85	37.28	12.32	12.25	-2.94	
5,728.00	32.56	193.46	5,705.29	-22.49	-85.71	25.80	11.77	11.75	-1.41	
5,759.00	36.21	191.73	5,730.86	-39.58	-89.51	13.25	12.19	11.77	-5.58	
5,791.00	40.16	192.14	5,756.01	-58.93	-93.61	-1.08	12.37	12.34	1.28	
5,822.00	43.88	191.22	5,779.04	-79.25	-97.80	-16.18	12.16	12.00	-2.97	
5,854.00	47.23	192.54	5,801.44	-101.60	-102.51	-32.75	10.87	10.47	4.13	
5,885.00	49.90	194.09	5,821.96	-124.21	-107.87	-49.19	9.39	8.61	5.00	
5,917.00	50.94	197.54	5,842.35	-147.93	-114.59	-65.86	8.92	3.25	10.78	
5,949.00	51.47	199.31	5,862.40	-171.59	-122.48	-81.87	4.62	1.66	5.53	
5,980.00	51.85	200.59	5,881.63	-194.44	-130.77	-96.98	3.46	1.23	4.13	
6,012.00	52.00	200.72	5,901.36	-218.02	-139.66	-112.39	0.57	0.47	0.41	
6,043.00	51.67	205.39	5,920.53	-240.43	-149.20	-126.47	11.89	-1.06	15.06	
6,075.00	50.99	209.91	5,940.53	-262.55	-160.78	-139.23	11.23	-2.13	14.13	
6,106.00	49.54	214.72	5,960.35	-282.70	-173.51	-149.71	12.81	-4.68	15.52	
6,138.00	48.70	219.59	5,981.30	-301.97	-188.11	-158.46	11.80	-2.63	15.22	
6,170.00	47.14	225.22	6,002.75	-319.51	-204.10	-165.01	13.94	-4.88	17.59	
6,201.00	45.41	228.70	6,024.18	-334.80	-220.46	-169.45	9.85	-5.58	11.23	
6,233.00	41.77	231.96	6,047.36	-348.89	-237.43	-172.55	13.37	-11.38	10.19	
6,265.00	38.40	235.00	6,071.84	-361.16	-253.97	-174.33	12.18	-10.53	9.50	
6,296.00	34.76	240.14	6,096.74	-371.09	-269.53	-174.62	15.34	-11.74	16.58	
6,328.00	33.77	243.42	6,123.19	-379.61	-285.39	-173.55	6.55	-3.09	10.25	
6,359.00	33.60	248.64	6,148.99	-386.60	-301.09	-171.27	9.35	-0.55	16.84	
6,391.00	34.14	251.78	6,175.56	-392.63	-317.87	-167.60	5.72	1.69	9.81	
6,422.00	35.71	256.87	6,200.98	-397.40	-334.95	-162.72	10.67	5.06	16.42	
6,454.00	37.30	261.35	6,226.71	-400.99	-353.63	-155.97	9.70	4.97	14.00	
6,486.00	38.75	266.39	6,251.92	-403.07	-373.22	-147.47	10.70	4.53	15.75	
6,517.00	39.33	272.25	6,276.00	-403.30	-392.72	-137.44	12.05	1.87	18.90	
6,549.00	40.46	276.01	6,300.56	-401.81	-413.18	-125.44	8.32	3.53	11.75	
6,581.00	40.70	280.71	6,324.87	-398.79	-433.77	-112.07	9.58	0.75	14.69	



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<b>Wellbore:</b>	Main	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	516235 As Drilled	<b>Database:</b>	Northeast District

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)
6,613.00	41.70	283.89	6,348.95	-394.29	-454.35	-97.44	7.25	3.13	9.94
6,644.00	42.92	288.63	6,371.88	-388.44	-474.37	-81.97	11.02	3.94	15.29
6,676.00	44.17	290.92	6,395.07	-380.98	-495.11	-64.74	6.29	3.91	7.16
6,708.00	45.67	295.28	6,417.74	-372.11	-515.88	-46.29	10.70	4.69	13.63
6,740.00	46.64	297.93	6,439.91	-361.77	-536.51	-26.67	6.70	3.03	8.28
6,771.00	47.46	299.22	6,461.03	-350.92	-556.43	-6.98	4.03	2.65	4.16
6,803.00	48.12	299.66	6,482.53	-339.27	-577.08	13.76	2.30	2.06	1.38
6,835.00	50.23	301.33	6,503.45	-326.98	-597.94	35.17	7.69	6.59	5.22
6,866.00	52.65	303.08	6,522.77	-314.06	-618.44	56.93	8.97	7.81	5.65
6,898.00	55.90	306.00	6,541.46	-299.32	-639.83	80.69	12.57	10.16	9.13
6,930.00	59.70	308.74	6,558.51	-282.88	-661.33	105.96	13.91	11.88	8.56
6,961.00	63.38	309.28	6,573.28	-265.73	-682.50	131.67	11.97	11.87	1.74
6,993.00	68.04	311.74	6,586.44	-246.78	-704.66	159.43	16.16	14.56	7.69
7,025.00	72.24	314.87	6,597.31	-226.13	-726.55	188.48	16.03	13.13	9.78
7,057.00	75.43	319.32	6,606.22	-203.62	-747.46	218.61	16.66	9.97	13.91
7,088.00	77.09	322.99	6,613.59	-180.17	-766.34	248.48	12.68	5.35	11.84
7,120.00	78.17	323.78	6,620.44	-155.09	-784.98	279.62	4.15	3.38	2.47
7,151.00	79.93	324.66	6,626.33	-130.40	-802.77	309.97	6.32	5.68	2.84
7,183.00	81.07	325.80	6,631.61	-104.47	-820.77	341.49	5.00	3.56	3.56
7,215.00	83.45	328.70	6,635.92	-77.81	-837.92	373.18	11.66	7.44	9.06
7,247.00	85.91	330.64	6,638.89	-50.31	-854.00	405.03	9.77	7.69	6.06
7,278.00	87.58	334.77	6,640.65	-22.81	-868.19	435.89	14.35	5.39	13.32
7,309.99	88.99	338.72	6,641.61	6.56	-880.81	467.51	13.10	4.41	12.34
<b>LP as Drilled 7310' DM- 6641.6' TVD</b>									
7,310.00	88.99	338.72	6,641.61	6.57	-880.82	467.52	13.10	4.42	12.34
7,341.00	88.72	341.36	6,642.23	35.70	-891.40	497.87	8.56	-0.87	8.52
7,404.00	88.99	341.10	6,643.49	95.34	-911.66	559.28	0.59	0.43	-0.41
7,467.00	88.72	338.81	6,644.75	154.51	-933.25	620.98	3.66	-0.43	-3.63
7,531.00	88.90	337.41	6,646.08	213.88	-957.11	684.04	2.21	0.28	-2.19
7,595.00	89.08	336.79	6,647.20	272.82	-982.01	747.29	1.01	0.28	-0.97
7,658.00	87.23	340.39	6,649.23	331.43	-1,004.99	809.25	6.42	-2.94	5.71
7,721.00	87.05	339.51	6,652.38	390.54	-1,026.56	870.89	1.42	-0.29	-1.40
7,784.00	86.61	338.72	6,655.86	449.31	-1,048.99	932.69	1.43	-0.70	-1.25
7,848.00	86.79	338.46	6,659.54	508.80	-1,072.31	995.57	0.49	0.28	-0.41
7,912.00	86.61	341.62	6,663.23	568.84	-1,094.12	1,058.13	4.94	-0.28	4.94
7,974.00	87.14	341.10	6,666.61	627.50	-1,113.91	1,118.46	1.20	0.85	-0.84
8,038.00	87.05	341.80	6,669.85	688.10	-1,134.24	1,180.72	1.10	-0.14	1.09
8,101.00	87.41	341.62	6,672.90	747.85	-1,153.99	1,241.94	0.64	0.57	-0.29
8,164.00	83.62	342.77	6,677.82	807.63	-1,173.19	1,302.92	6.28	-6.02	1.83
8,227.00	83.89	343.03	6,684.68	867.49	-1,191.60	1,363.54	0.59	0.43	0.41
8,291.00	83.89	341.80	6,691.49	928.15	-1,210.83	1,425.28	1.91	0.00	-1.92
8,354.00	84.15	341.36	6,698.05	987.60	-1,230.63	1,486.28	0.81	0.41	-0.70
8,418.00	87.05	341.45	6,702.96	1,048.07	-1,250.97	1,548.44	4.53	4.53	0.14
8,482.00	87.58	341.36	6,705.96	1,108.67	-1,271.36	1,610.72	0.84	0.83	-0.14

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<b>Company:</b>	EQT PRODUCTION	WV Department of	<b>Local Co-ordinate Reference:</b>	Well #516235 -MRC - Slot 516235
<b>Project:</b>	Doddridge County, WV	Environmental Protection	<b>TVD Reference:</b>	GL 1229 & 16 KB @ 1245.00usft (SAV 654)
<b>Site:</b>	OXF43		<b>MD Reference:</b>	GL 1229 & 16 KB @ 1245.00usft (SAV 654)
<b>Well:</b>	#516235 -MRC		<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Main		<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	516235 As Drilled		<b>Database:</b>	Northeast District

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)
8,545.00	87.85	341.36	6,708.47	1,168.31	-1,291.48	1,672.06	0.43	0.43	0.00
8,609.00	88.90	338.90	6,710.29	1,228.47	-1,313.22	1,734.68	4.18	1.64	-3.84
8,671.98	89.78	338.99	6,711.01	1,287.25	-1,335.85	1,796.59	1.40	1.40	0.14
<b>Deepest Point @ 8672' MD- 6711' TVD</b>									
8,672.00	89.78	338.99	6,711.01	1,287.26	-1,335.85	1,796.61	1.40	1.40	0.14
8,736.00	91.89	337.05	6,710.08	1,346.60	-1,359.80	1,859.69	4.48	3.30	-3.03
8,799.00	92.86	337.93	6,707.47	1,404.75	-1,383.90	1,921.84	2.08	1.54	1.40
8,862.00	91.10	337.23	6,705.29	1,462.95	-1,407.91	1,983.99	3.01	-2.79	-1.11
8,926.00	90.48	337.41	6,704.41	1,521.99	-1,432.59	2,047.20	1.01	-0.97	0.28
8,990.00	90.84	336.44	6,703.67	1,580.87	-1,457.67	2,110.48	1.62	0.56	-1.52
9,053.00	90.92	336.88	6,702.70	1,638.71	-1,482.63	2,172.82	0.71	0.13	0.70
9,117.00	88.64	337.84	6,702.95	1,697.77	-1,507.26	2,236.03	3.87	-3.56	1.50
9,180.00	88.90	337.93	6,704.30	1,756.12	-1,530.97	2,298.14	0.44	0.41	0.14
9,242.00	89.25	337.84	6,705.30	1,813.55	-1,554.31	2,359.28	0.58	0.56	-0.15
9,305.00	89.34	337.67	6,706.08	1,871.86	-1,578.16	2,421.44	0.31	0.14	-0.27
9,369.00	89.60	336.44	6,706.67	1,930.79	-1,603.11	2,484.70	1.96	0.41	-1.92
9,432.00	90.04	335.03	6,706.87	1,988.22	-1,629.00	2,547.18	2.34	0.70	-2.24
9,496.00	90.57	335.74	6,706.53	2,046.41	-1,655.65	2,610.70	1.38	0.83	1.11
9,559.00	90.92	336.18	6,705.71	2,103.94	-1,681.32	2,673.14	0.89	0.56	0.70
9,622.00	91.36	334.94	6,704.46	2,161.28	-1,707.38	2,735.63	2.09	0.70	-1.97
9,686.00	92.07	334.86	6,702.54	2,219.21	-1,734.51	2,799.18	1.12	1.11	-0.13
9,749.00	93.12	334.86	6,699.69	2,276.18	-1,761.25	2,861.72	1.67	1.67	0.00
9,812.00	91.45	334.59	6,697.18	2,333.10	-1,788.13	2,924.28	2.69	-2.65	-0.43
9,876.00	90.92	334.07	6,695.85	2,390.77	-1,815.84	2,987.92	1.16	-0.83	-0.81
9,939.00	91.89	334.07	6,694.31	2,447.41	-1,843.38	3,050.59	1.54	1.54	0.00
10,002.00	91.89	334.07	6,692.23	2,504.04	-1,870.92	3,113.24	0.00	0.00	0.00
10,065.00	89.25	336.09	6,691.60	2,561.16	-1,897.46	3,175.80	5.28	-4.19	3.21
10,128.00	89.43	335.47	6,692.33	2,618.62	-1,923.30	3,238.27	1.02	0.29	-0.98
10,191.00	89.43	334.68	6,692.96	2,675.74	-1,949.85	3,300.83	1.25	0.00	-1.25
10,255.00	89.96	333.98	6,693.30	2,733.43	-1,977.57	3,364.48	1.37	0.83	-1.09
10,318.00	90.57	333.27	6,693.00	2,789.87	-2,005.56	3,427.22	1.49	0.97	-1.13
10,381.00	91.01	336.18	6,692.14	2,846.82	-2,032.45	3,489.82	4.67	0.70	4.62
10,444.00	91.01	335.65	6,691.03	2,904.33	-2,058.16	3,552.26	0.84	0.00	-0.84
10,508.00	91.54	335.21	6,689.60	2,962.52	-2,084.76	3,615.76	1.08	0.83	-0.69
10,571.00	90.48	337.14	6,688.49	3,020.14	-2,110.20	3,678.16	3.49	-1.68	3.06
10,634.00	90.31	337.76	6,688.06	3,078.32	-2,134.36	3,740.37	1.02	-0.27	0.98
10,697.00	90.57	337.58	6,687.57	3,136.60	-2,158.30	3,802.54	0.50	0.41	-0.29
10,761.00	90.04	335.21	6,687.23	3,195.24	-2,183.92	3,865.91	3.79	-0.83	-3.70
10,824.00	90.04	333.98	6,687.19	3,252.14	-2,210.95	3,928.54	1.95	0.00	-1.95
10,887.00	89.60	332.48	6,687.39	3,308.39	-2,239.33	3,991.31	2.48	-0.70	-2.38
10,950.00	87.93	331.96	6,688.74	3,364.11	-2,268.68	4,054.15	2.78	-2.65	-0.83
11,012.00	89.16	332.48	6,690.32	3,418.95	-2,297.57	4,115.99	2.15	1.98	0.84
11,075.00	91.80	335.38	6,689.79	3,475.52	-2,325.25	4,178.68	6.22	4.19	4.60

<b>Company:</b>	EQT PRODUCTION	<b>Local Co-ordinate Reference:</b>	Well #516235 -MRC - Slot 516235
<b>Project:</b>	Doddridge County, WV	<b>TVD Reference:</b>	GL 1229 & 16 KB @ 1245.00usft (SAV 654)
<b>Site:</b>	OXF43	<b>MD Reference:</b>	GL 1229 & 16 KB @ 1245.00usft (SAV 654)
<b>Well:</b>	#516235 -MRC	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Main	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	516235 As Drilled	<b>Database:</b>	Northeast District

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)	
11,139.00	92.59	338.11	6,687.34	3,534.27	-2,350.50	4,241.94	4.44	1.23	4.27	
11,203.00	93.30	336.09	6,684.05	3,593.15	-2,375.37	4,305.11	3.34	1.11	-3.16	
11,266.00	93.56	335.38	6,680.28	3,650.48	-2,401.21	4,367.48	1.20	0.41	-1.13	
11,329.00	94.26	335.47	6,675.98	3,707.64	-2,427.35	4,429.86	1.12	1.11	0.14	
11,392.00	93.12	337.23	6,671.93	3,765.23	-2,452.57	4,492.11	3.32	-1.81	2.79	
11,456.00	92.95	336.79	6,668.54	3,824.06	-2,477.53	4,555.30	0.74	-0.27	-0.69	
11,519.00	93.12	336.18	6,665.21	3,881.75	-2,502.63	4,617.58	1.00	0.27	-0.97	
11,582.00	91.01	338.55	6,662.94	3,939.85	-2,526.86	4,679.76	5.03	-3.35	3.76	
11,645.00	90.84	339.95	6,661.92	3,998.75	-2,549.17	4,741.62	2.24	-0.27	2.22	
11,709.00	90.40	340.22	6,661.23	4,058.92	-2,570.97	4,804.28	0.81	-0.69	0.42	
11,772.00	90.48	340.57	6,660.74	4,118.27	-2,592.11	4,865.89	0.57	0.13	0.56	
11,835.00	90.48	340.57	6,660.21	4,177.68	-2,613.07	4,927.47	0.00	0.00	0.00	
11,898.00	90.40	340.13	6,659.73	4,237.01	-2,634.25	4,989.09	0.71	-0.13	-0.70	
11,960.98	90.40	340.22	6,659.29	4,296.25	-2,655.61	5,050.74	0.14	0.00	0.14	
<b>Survey @ 11961' MD- 6659.3' TVD</b>										
11,961.00	90.40	340.22	6,659.29	4,296.27	-2,655.62	5,050.76	0.14	0.00	0.14	
12,026.98	90.40	340.22	6,658.83	4,358.35	-2,677.94	5,115.33	0.00	0.00	0.00	
<b>Survey Projected to: 12027' MD- 6658.8' TVD</b>										
12,027.00	90.40	340.22	6,658.83	4,358.37	-2,677.95	5,115.35	0.00	0.00	0.00	

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
516235 Surface Location - hit/miss target - Shape - Point	0.00	0.00	0.00	0.00	0.00	241,983.17	1,633,343.65	39.1571415	-80.7930139
516235 KOP As Drilled - actual wellpath hits target center - Point	0.00	360.00	5,375.27	61.91	-46.19	242,045.08	1,633,297.46	39.1573096	-80.7931799
516235 LP As Drilled - actual wellpath misses target center by 0.01usft at 7310.00usft MD (6641.61 TVD, 6.57 N, -880.82 E) - Point	0.00	0.00	6,641.60	6.57	-880.82	241,989.73	1,632,462.83	39.1571247	-80.7961200
516235 BHL As Drilled - actual wellpath misses target center by 0.01usft at 12026.99usft MD (6658.83 TVD, 4358.36 N, -2677.95 E) - Point	0.00	0.00	6,658.82	4,358.36	-2,677.95	246,341.53	1,630,665.70	39.1690004	-80.8026792

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<b>Company:</b>	EQT PRODUCTION	<b>Local Co-ordinate Reference:</b>	Well #516235 -MRC - Slot 516235
<b>Project:</b>	Doddridge County, WV	<b>TVD Reference:</b>	GL 1229 & 16 KB @ 1245.00usft (SAV 654)
<b>Site:</b>	OXF43	<b>MD Reference:</b>	GL 1229 & 16 KB @ 1245.00usft (SAV 654)
<b>Well:</b>	#516235 -MRC	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Main	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	516235 As Drilled	<b>Database:</b>	Northeast District

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
5,379.99	5,375.27	61.91	-46.19	KOP as Drilled 5830' MD- 5375.3' TVD
7,309.99	6,641.61	6.56	-880.81	LP as Drilled 7310' DM- 6641.6' TVD
8,671.98	6,711.01	1,287.25	-1,335.85	Deepest Point @ 8672' MD- 6711' TVD
11,960.98	6,659.29	4,296.25	-2,655.61	Survey @ 11961' MD- 6659.3' TVD
12,026.98	6,658.83	4,358.35	-2,677.94	Survey Projected to: 12027' MD- 6658.8' TVD

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

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