



EQT Production - Marcellus

Doddridge County, WV Grid

Doddridge County 514317

Well #514317

Main Wellbore

Design: As Drilled Surveys

Standard Survey Report

29 December, 2013

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Doddridge County 514317
Company:	EQT Production - Marcellus	TVD Reference:	KB @ 1134.0usft
Project:	Doddridge County, WV Grid	MD Reference:	KB @ 1134.0usft
Site:	Doddridge County 514317	North Reference:	Grid
Well:	Well #514317	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 514317				
Site Position:		Northing:	324,429.50 usft	Latitude:	39.38
From:	Map	Easting:	1,654,144.10 usft	Longitude:	-80.72
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.78 °

Well	Well #514317					
Well Position	+N/-S	0.0 usft	Northing:	324,429.50 usft	Latitude:	39° 23' 3.422 N
	+E/-W	0.0 usft	Easting:	1,654,144.10 usft	Longitude:	80° 43' 25.069 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	1,111.0 usft

Wellbore	Main Wellbore				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010_14	12/17/2013	-8.52	66.93	52,397

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	181.98	

Survey Program	Date	12/29/2013			
From (')	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	5,789.0	514317 Gyrodata Gyro (Main Wellbore)	GYD_DP_MS	Gyrodata gyro-compassing and drop	
0.00	15,546.0	514317 MWD (Main Wellbore)	MWD	MWD - Standard	

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	-1,134.0	0.0	0.0	0.0	0.00	0.00	0.00
113.0	0.07	198.24	113.0	-1,021.0	-0.1	0.0	0.1	0.06	0.06	0.00
213.0	0.04	193.55	213.0	-921.0	-0.2	0.0	0.2	0.03	-0.03	-4.69
313.0	0.16	261.06	313.0	-821.0	-0.2	-0.2	0.2	0.15	0.12	67.51
413.0	0.18	263.69	413.0	-721.0	-0.3	-0.5	0.3	0.02	0.02	2.63
513.0	0.18	258.52	513.0	-621.0	-0.3	-0.8	0.3	0.02	0.00	-5.17
613.0	0.16	264.01	613.0	-521.0	-0.3	-1.1	0.4	0.03	-0.02	5.49
713.0	0.15	284.29	713.0	-421.0	-0.3	-1.4	0.4	0.06	-0.01	20.28

17-06249

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Site:	Doddridge County 514317	North Reference:	Grid
Well:	Well #514317	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)	
813.0	0.18	299.07	813.0	-321.0	-0.2	-1.6	0.3	0.05	0.03	14.78	
913.0	0.15	331.28	913.0	-221.0	0.0	-1.8	0.1	0.10	-0.03	32.21	
1,013.0	0.22	328.50	1,013.0	-121.0	0.2	-2.0	-0.2	0.07	0.07	-2.78	
1,113.0	0.65	353.69	1,113.0	-21.0	1.0	-2.1	-0.9	0.46	0.43	25.19	
1,213.0	0.81	356.56	1,213.0	79.0	2.2	-2.3	-2.2	0.16	0.16	2.87	
1,313.0	0.98	355.61	1,313.0	179.0	3.8	-2.4	-3.7	0.17	0.17	-0.95	
1,413.0	1.04	355.78	1,413.0	279.0	5.6	-2.5	-5.5	0.06	0.06	0.17	
1,513.0	1.11	358.48	1,512.9	378.9	7.4	-2.6	-7.3	0.09	0.07	2.70	
1,613.0	1.43	350.21	1,612.9	478.9	9.6	-2.8	-9.5	0.37	0.32	-8.27	
1,713.0	1.59	349.12	1,712.9	578.9	12.2	-3.3	-12.1	0.16	0.16	-1.09	
1,813.0	1.72	345.25	1,812.8	678.8	15.0	-3.9	-14.9	0.17	0.13	-3.87	
1,913.0	1.72	344.08	1,912.8	778.8	17.9	-4.7	-17.8	0.04	0.00	-1.17	
2,013.0	2.02	339.73	2,012.7	878.7	21.0	-5.8	-20.8	0.33	0.30	-4.35	
2,113.0	2.23	341.20	2,112.7	978.7	24.5	-7.0	-24.3	0.22	0.21	1.47	
2,213.0	2.58	340.30	2,212.6	1,078.6	28.5	-8.4	-28.2	0.35	0.35	-0.90	
2,313.0	3.06	342.23	2,312.5	1,178.5	33.1	-10.0	-32.8	0.49	0.48	1.93	
2,413.0	3.28	342.43	2,412.3	1,278.3	38.4	-11.6	-38.0	0.22	0.22	0.20	
2,513.0	3.65	341.48	2,512.1	1,378.1	44.2	-13.5	-43.7	0.37	0.37	-0.95	
2,613.0	3.95	339.96	2,611.9	1,477.9	50.4	-15.7	-49.8	0.32	0.30	-1.52	
2,713.0	4.05	339.08	2,711.7	1,577.7	56.9	-18.1	-56.3	0.12	0.10	-0.88	
2,813.0	4.14	335.74	2,811.4	1,677.4	63.5	-20.9	-62.8	0.25	0.09	-3.34	
2,913.0	4.20	334.73	2,911.1	1,777.1	70.1	-23.9	-69.3	0.09	0.06	-1.01	
3,013.0	4.24	333.44	3,010.9	1,876.9	76.8	-27.1	-75.8	0.10	0.04	-1.29	
3,113.0	4.31	332.88	3,110.6	1,976.6	83.4	-30.5	-82.3	0.08	0.07	-0.56	
3,213.0	4.44	331.64	3,210.3	2,076.3	90.2	-34.1	-88.9	0.16	0.13	-1.24	
3,313.0	4.59	329.50	3,310.0	2,176.0	97.0	-37.9	-95.6	0.23	0.15	-2.14	
3,413.0	4.74	327.84	3,409.7	2,275.7	104.0	-42.2	-102.4	0.20	0.15	-1.66	
3,513.0	4.87	326.86	3,509.3	2,375.3	111.0	-46.7	-109.3	0.15	0.13	-0.98	
3,613.0	5.09	326.95	3,608.9	2,474.9	118.3	-51.4	-116.4	0.22	0.22	0.09	
3,713.0	5.31	325.64	3,708.5	2,574.5	125.8	-56.5	-123.8	0.25	0.22	-1.31	
3,813.0	5.54	324.95	3,808.1	2,674.1	133.6	-61.8	-131.4	0.24	0.23	-0.69	
3,913.0	5.61	324.24	3,907.6	2,773.6	141.5	-67.5	-139.1	0.10	0.07	-0.71	
4,013.0	5.75	323.73	4,007.1	2,873.1	149.5	-73.3	-146.9	0.15	0.14	-0.51	
4,113.0	5.79	322.94	4,106.6	2,972.6	157.6	-79.3	-154.8	0.09	0.04	-0.79	
4,213.0	5.46	325.02	4,206.1	3,072.1	165.5	-85.1	-162.5	0.39	-0.33	2.08	
4,313.0	5.09	326.36	4,305.7	3,171.7	173.1	-90.2	-169.9	0.39	-0.37	1.34	
4,413.0	4.96	328.63	4,405.3	3,271.3	180.5	-94.9	-177.1	0.24	-0.13	2.27	
4,513.0	4.87	328.87	4,504.9	3,370.9	187.8	-99.4	-184.3	0.09	-0.09	0.24	
4,613.0	4.83	330.08	4,604.6	3,470.6	195.1	-103.7	-191.4	0.11	-0.04	1.21	
4,713.0	4.86	331.04	4,704.2	3,570.2	202.4	-107.8	-198.6	0.09	0.03	0.96	
4,813.0	4.87	331.80	4,803.9	3,669.9	209.9	-111.9	-205.9	0.07	0.01	0.76	
4,913.0	4.86	331.83	4,903.5	3,769.5	217.4	-115.9	-213.2	0.01	-0.01	0.03	

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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)	
5,013.0	5.06	334.01	5,003.1	3,869.1	225.1	-119.8	-220.8	0.27	0.20	2.18	
5,113.0	4.82	334.85	5,102.8	3,968.8	232.8	-123.6	-228.4	0.25	-0.24	0.84	
5,213.0	5.00	337.21	5,202.4	4,068.4	240.7	-127.0	-236.1	0.27	0.18	2.36	
5,313.0	5.03	338.71	5,302.0	4,168.0	248.8	-130.3	-244.1	0.13	0.03	1.50	
5,413.0	4.52	347.96	5,401.7	4,267.7	256.7	-132.7	-252.0	0.92	-0.51	9.25	
5,513.0	3.78	356.09	5,501.4	4,367.4	263.8	-133.8	-259.1	0.94	-0.74	8.13	
5,613.0	3.55	2.92	5,601.2	4,467.2	270.2	-133.8	-265.4	0.49	-0.23	6.83	
5,713.0	3.33	19.81	5,701.0	4,567.0	276.0	-132.7	-271.3	1.03	-0.22	16.89	
Gyro Tie In MD=5789'											
5,789.0	3.65	29.87	5,776.9	4,642.9	280.2	-130.7	-275.5	0.91	0.42	13.24	
5,834.0	2.30	8.30	5,821.8	4,687.8	282.4	-129.9	-277.7	3.85	-3.00	-47.93	
5,866.0	4.20	281.50	5,853.8	4,719.8	283.2	-130.9	-278.5	14.60	5.94	-271.25	
5,897.0	8.40	268.50	5,884.6	4,750.6	283.4	-134.3	-278.6	14.22	13.55	-41.94	
5,929.0	11.10	272.50	5,916.1	4,782.1	283.5	-139.7	-278.5	8.69	8.44	12.50	
5,960.0	12.20	279.70	5,946.5	4,812.5	284.1	-146.0	-278.9	5.87	3.55	23.23	
5,991.0	14.30	277.60	5,976.7	4,842.7	285.2	-153.0	-279.8	6.95	6.77	-6.77	
6,023.0	16.80	274.60	6,007.5	4,873.5	286.1	-161.5	-280.4	8.20	7.81	-9.38	
6,054.0	20.30	272.90	6,036.9	4,902.9	286.7	-171.3	-280.6	11.42	11.29	-5.48	
6,086.0	22.70	267.40	6,066.6	4,932.6	286.7	-183.1	-280.2	9.79	7.50	-17.19	
6,117.0	24.10	259.40	6,095.1	4,961.1	285.3	-195.3	-278.4	11.19	4.52	-25.81	
6,149.0	26.70	253.60	6,124.0	4,990.0	282.1	-208.6	-274.7	11.24	8.13	-18.13	
6,180.0	30.10	252.40	6,151.3	5,017.3	277.7	-222.7	-269.9	11.12	10.97	-3.87	
6,211.0	33.50	253.40	6,177.6	5,043.6	272.9	-238.3	-264.6	11.10	10.97	3.23	
6,243.0	37.00	255.70	6,203.8	5,069.8	268.0	-256.1	-259.0	11.70	10.94	7.19	
6,274.0	40.20	257.10	6,228.0	5,094.0	263.5	-274.9	-253.9	10.70	10.32	4.52	
6,306.0	41.90	257.00	6,252.1	5,118.1	258.8	-295.4	-248.5	5.32	5.31	-0.31	
6,337.0	43.30	257.30	6,274.9	5,140.9	254.1	-315.8	-243.1	4.56	4.52	0.97	
6,368.0	45.40	257.40	6,297.1	5,163.1	249.4	-337.0	-237.6	6.78	6.77	0.32	
6,400.0	48.60	255.70	6,318.9	5,184.9	243.9	-359.7	-231.4	10.73	10.00	-5.31	
6,431.0	53.30	255.00	6,338.4	5,204.4	237.8	-383.0	-224.5	15.26	15.16	-2.26	
6,462.0	56.80	254.20	6,356.2	5,222.2	231.1	-407.5	-216.9	11.49	11.29	-2.58	
6,494.0	60.00	252.50	6,373.0	5,239.0	223.3	-433.6	-208.2	10.98	10.00	-5.31	
6,525.0	63.60	252.90	6,387.6	5,253.6	215.2	-459.7	-199.2	11.67	11.61	1.29	
6,557.0	67.80	254.10	6,400.8	5,266.8	206.9	-487.6	-189.9	13.56	13.13	3.75	
6,588.0	69.80	254.80	6,412.0	5,278.0	199.1	-515.5	-181.2	6.79	6.45	2.26	
6,683.0	69.60	255.80	6,444.9	5,310.9	176.5	-601.7	-155.7	1.01	-0.21	1.05	
6,777.0	69.50	255.70	6,477.8	5,343.8	154.8	-687.0	-131.1	0.15	-0.11	-0.11	
6,871.0	69.30	256.00	6,510.9	5,376.9	133.3	-772.4	-106.6	0.37	-0.21	0.32	
6,966.0	68.90	257.50	6,544.8	5,410.8	113.0	-858.7	-83.3	1.53	-0.42	1.58	
7,060.0	70.80	256.80	6,577.1	5,443.1	93.4	-944.8	-60.7	2.14	2.02	-0.74	
7,154.0	70.90	255.10	6,608.0	5,474.0	71.8	-1,030.9	-36.2	1.71	0.11	-1.81	
7,247.0	69.90	255.50	6,639.2	5,505.2	49.6	-1,115.6	-11.1	1.15	-1.08	0.43	
7,342.0	69.60	256.20	6,672.0	5,538.0	27.8	-1,202.1	13.7	0.76	-0.32	0.74	

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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)	
7,436.0	69.90	253.90	6,704.6	5,570.6	5.0	-1,287.3	39.4	2.32	0.32	-2.45	
7,530.0	70.30	256.40	6,736.6	5,602.6	-17.6	-1,372.7	65.0	2.54	0.43	2.66	
7,624.0	70.50	251.10	6,768.1	5,634.1	-42.4	-1,457.7	92.6	5.32	0.21	-5.64	
7,718.0	71.30	252.10	6,798.9	5,664.9	-70.4	-1,542.0	123.6	1.32	0.85	1.06	
7,749.0	71.30	252.10	6,808.8	5,674.8	-79.4	-1,569.9	133.5	0.00	0.00	0.00	
7,781.0	71.30	251.00	6,819.1	5,685.1	-89.0	-1,598.6	144.1	3.26	0.00	-3.44	
7,812.0	71.00	245.70	6,829.1	5,695.1	-99.9	-1,625.9	155.9	16.21	-0.97	-17.10	
7,844.0	70.20	241.90	6,839.8	5,705.8	-113.2	-1,653.0	170.1	11.48	-2.50	-11.88	
7,875.0	70.60	238.40	6,850.2	5,716.2	-127.7	-1,678.3	185.5	10.71	1.29	-11.29	
7,906.0	70.40	235.80	6,860.5	5,726.5	-143.6	-1,702.8	202.2	7.93	-0.65	-8.39	
7,938.0	71.40	231.40	6,871.0	5,737.0	-161.5	-1,727.2	221.0	13.36	3.13	-13.75	
7,969.0	72.00	228.30	6,880.7	5,746.7	-180.5	-1,749.7	240.7	9.69	1.94	-10.00	
8,000.0	72.80	225.50	6,890.1	5,756.1	-200.7	-1,771.2	261.7	8.99	2.58	-9.03	
8,032.0	73.40	222.80	6,899.4	5,765.4	-222.7	-1,792.6	284.4	8.29	1.88	-8.44	
8,063.0	74.00	220.10	6,908.1	5,774.1	-245.0	-1,812.2	307.3	8.58	1.94	-8.71	
8,095.0	75.00	216.90	6,916.6	5,782.6	-269.1	-1,831.4	332.1	10.13	3.13	-10.00	
8,126.0	76.10	213.50	6,924.4	5,790.4	-293.6	-1,848.7	357.2	11.20	3.55	-10.97	
8,157.0	76.80	210.60	6,931.7	5,797.7	-319.2	-1,864.7	383.3	9.37	2.26	-9.35	
8,189.0	77.80	207.70	6,938.7	5,804.7	-346.4	-1,879.9	411.1	9.38	3.13	-9.06	
8,220.0	77.80	204.50	6,945.2	5,811.2	-373.6	-1,893.3	438.7	10.09	0.00	-10.32	
8,251.0	79.60	201.80	6,951.3	5,817.3	-401.6	-1,905.2	467.0	10.33	5.81	-8.71	
8,283.0	81.10	200.20	6,956.7	5,822.7	-431.0	-1,916.5	496.9	6.80	4.69	-5.00	
8,314.0	83.60	198.40	6,960.8	5,826.8	-460.0	-1,926.7	526.2	9.91	8.06	-5.81	
8,346.0	85.10	195.60	6,964.0	5,830.0	-490.5	-1,936.0	556.9	9.89	4.69	-8.75	
8,377.0	86.50	194.10	6,966.2	5,832.2	-520.3	-1,943.9	587.1	6.61	4.52	-4.84	
8,408.0	86.90	189.50	6,968.0	5,834.0	-550.6	-1,950.2	617.6	14.87	1.29	-14.84	
8,440.0	87.80	186.40	6,969.5	5,835.5	-582.3	-1,954.6	649.4	10.08	2.81	-9.69	
8,471.0	88.50	182.30	6,970.5	5,836.5	-613.2	-1,957.0	680.3	13.41	2.26	-13.23	
8,502.0	88.60	179.40	6,971.3	5,837.3	-644.2	-1,957.4	711.3	9.36	0.32	-9.35	
8,534.0	89.80	175.80	6,971.7	5,837.7	-676.1	-1,956.1	743.2	11.86	3.75	-11.25	
8,565.0	89.50	173.30	6,971.9	5,837.9	-707.0	-1,953.2	773.9	8.12	-0.97	-8.06	
8,659.0	88.80	167.30	6,973.3	5,839.3	-799.6	-1,937.3	865.9	6.43	-0.74	-6.38	
8,753.0	91.50	166.20	6,973.1	5,839.1	-891.1	-1,915.8	956.6	3.10	2.87	-1.17	
8,847.0	89.20	165.90	6,972.5	5,838.5	-982.3	-1,893.1	1,047.0	2.47	-2.45	-0.32	
8,941.0	88.70	165.50	6,974.2	5,840.2	-1,073.4	-1,869.9	1,137.2	0.68	-0.53	-0.43	
9,036.0	91.00	166.30	6,974.5	5,840.5	-1,165.5	-1,846.8	1,228.5	2.56	2.42	0.84	
9,130.0	91.50	165.10	6,972.4	5,838.4	-1,256.6	-1,823.6	1,318.7	1.38	0.53	-1.28	
9,224.0	91.00	165.70	6,970.4	5,836.4	-1,347.5	-1,799.9	1,408.8	0.83	-0.53	0.64	
9,318.0	85.00	162.30	6,973.6	5,839.6	-1,437.7	-1,774.0	1,498.1	7.33	-6.38	-3.62	
9,412.0	88.10	161.40	6,979.3	5,845.3	-1,526.9	-1,744.8	1,586.2	3.43	3.30	-0.96	
9,507.0	88.20	164.40	6,982.4	5,848.4	-1,617.6	-1,716.9	1,675.9	3.16	0.11	3.16	
9,601.0	88.40	165.70	6,985.2	5,851.2	-1,708.4	-1,692.6	1,765.8	1.40	0.21	1.38	
9,695.0	90.50	167.20	6,986.1	5,852.1	-1,799.8	-1,670.6	1,856.3	2.75	2.23	1.60	

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Doddridge County 514317
Company:	EQT Production - Marcellus	TVD Reference:	KB @ 1134.0usft
Project:	Doddridge County, WV Grd	MD Reference:	KB @ 1134.0usft
Site:	Doddridge County 514317	North Reference:	Grid
Well:	Well #514317	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)	
9,789.0	91.00	167.70	6,984.8	5,850.8	-1,891.5	-1,650.2	1,947.3	0.75	0.53	0.53	
9,883.0	89.10	167.70	6,984.7	5,850.7	-1,983.4	-1,630.2	2,038.4	2.02	-2.02	0.00	
9,977.0	89.10	168.30	6,986.2	5,852.2	-2,075.3	-1,610.6	2,129.6	0.64	0.00	0.64	
10,071.0	89.80	167.30	6,987.1	5,853.1	-2,167.2	-1,590.8	2,220.8	1.30	0.74	-1.06	
10,166.0	89.10	165.50	6,988.0	5,854.0	-2,259.5	-1,568.4	2,312.3	2.03	-0.74	-1.89	
10,260.0	90.60	165.60	6,988.3	5,854.3	-2,350.5	-1,545.0	2,402.4	1.60	1.60	0.11	
10,354.0	90.40	165.70	6,987.5	5,853.5	-2,441.6	-1,521.7	2,492.6	0.24	-0.21	0.11	
10,448.0	91.30	167.00	6,986.1	5,852.1	-2,532.9	-1,499.5	2,583.1	1.68	0.96	1.38	
10,542.0	88.90	167.10	6,985.9	5,851.9	-2,624.5	-1,478.4	2,674.0	2.56	-2.55	0.11	
10,636.0	89.10	167.20	6,987.5	5,853.5	-2,716.2	-1,457.5	2,764.8	0.24	0.21	0.11	
10,731.0	89.00	166.80	6,989.1	5,855.1	-2,808.7	-1,436.2	2,856.6	0.43	-0.11	-0.42	
10,825.0	88.80	166.10	6,990.9	5,856.9	-2,900.1	-1,414.1	2,947.1	0.77	-0.21	-0.74	
10,919.0	88.60	165.40	6,993.1	5,859.1	-2,991.2	-1,391.0	3,037.4	0.77	-0.21	-0.74	
11,013.0	90.20	165.10	6,994.0	5,860.0	-3,082.1	-1,367.1	3,127.4	1.73	1.70	-0.32	
11,107.0	90.50	165.10	6,993.5	5,859.5	-3,172.9	-1,342.9	3,217.3	0.32	0.32	0.00	
11,202.0	91.30	165.80	6,992.0	5,858.0	-3,264.8	-1,319.0	3,308.4	1.12	0.84	0.74	
11,296.0	91.50	165.40	6,989.7	5,855.7	-3,355.9	-1,295.7	3,398.5	0.48	0.21	-0.43	
11,390.0	89.00	165.80	6,989.3	5,855.3	-3,446.9	-1,272.3	3,488.7	2.69	-2.66	0.43	
11,484.0	89.10	165.80	6,990.8	5,856.8	-3,538.0	-1,249.2	3,579.0	0.11	0.11	0.00	
11,578.0	89.00	165.10	6,992.4	5,858.4	-3,629.0	-1,225.6	3,669.1	0.75	-0.11	-0.74	
11,673.0	89.10	165.70	6,994.0	5,860.0	-3,720.9	-1,201.7	3,760.1	0.64	0.11	0.63	
11,767.0	89.90	165.30	6,994.8	5,860.8	-3,811.9	-1,178.1	3,850.3	0.95	0.85	-0.43	
11,861.0	88.70	166.00	6,995.9	5,861.9	-3,903.0	-1,154.9	3,940.5	1.48	-1.28	0.74	
11,955.0	87.80	166.20	6,998.8	5,864.8	-3,994.2	-1,132.3	4,030.8	0.98	-0.96	0.21	
12,049.0	88.50	165.80	7,001.8	5,867.8	-4,085.3	-1,109.6	4,121.2	0.86	0.74	-0.43	
12,144.0	89.90	167.10	7,003.2	5,869.2	-4,177.7	-1,087.3	4,212.7	2.01	1.47	1.37	
12,238.0	90.60	166.60	7,002.7	5,868.7	-4,269.2	-1,065.9	4,303.4	0.92	0.74	-0.53	
12,332.0	90.70	165.60	7,001.7	5,867.7	-4,360.4	-1,043.3	4,393.8	1.07	0.11	-1.06	
12,427.0	91.60	165.00	6,999.8	5,865.8	-4,452.3	-1,019.2	4,484.8	1.14	0.95	-0.63	
12,521.0	88.80	163.90	6,999.4	5,865.4	-4,542.9	-994.0	4,574.4	3.20	-2.98	-1.17	
12,615.0	90.20	166.30	7,000.3	5,866.3	-4,633.7	-969.9	4,664.4	2.96	1.49	2.55	
12,710.0	89.20	164.60	7,000.8	5,866.6	-4,725.6	-946.0	4,755.4	2.08	-1.05	-1.79	
12,804.0	91.10	165.10	7,000.5	5,866.5	-4,816.4	-921.4	4,845.3	2.09	2.02	0.53	
12,898.0	91.40	164.00	6,998.5	5,864.5	-4,906.9	-896.4	4,934.9	1.21	0.32	-1.17	
12,992.0	90.90	165.20	6,996.6	5,862.6	-4,997.5	-871.4	5,024.6	1.38	-0.53	1.28	
13,086.0	89.30	166.70	6,996.4	5,862.4	-5,088.7	-848.6	5,115.0	2.33	-1.70	1.60	
13,180.0	90.00	166.90	6,997.0	5,863.0	-5,180.2	-827.2	5,205.7	0.77	0.74	0.21	
13,274.0	90.40	167.10	6,996.7	5,862.7	-5,271.8	-806.0	5,296.5	0.48	0.43	0.21	
13,368.0	90.70	167.10	6,995.8	5,861.8	-5,363.5	-785.0	5,387.3	0.32	0.32	0.00	
13,463.0	89.60	167.90	6,995.5	5,861.5	-5,456.2	-764.5	5,479.3	1.43	-1.16	0.84	
13,556.0	89.60	167.90	6,996.2	5,862.2	-5,547.1	-745.0	5,569.5	0.00	0.00	0.00	
13,650.0	89.90	167.20	6,996.6	5,862.6	-5,638.9	-724.7	5,660.6	0.81	0.32	-0.74	

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Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Doddridge County 514317
Company:	EQT Production - Marcellus	TVD Reference:	KB @ 1134.0usft
Project:	Doddridge County, WV Grid	MD Reference:	KB @ 1134.0usft
Site:	Doddridge County 514317	North Reference:	Grid
Well:	Well #514317	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)
13,745.0	90.10	166.30	6,996.6	5,862.6	-5,731.4	-702.9	5,752.2	0.97	0.21	-0.95
13,839.0	90.20	166.50	6,996.3	5,862.3	-5,822.8	-680.8	5,842.8	0.24	0.11	0.21
13,933.0	90.50	166.70	6,995.8	5,861.8	-5,914.2	-659.1	5,933.4	0.38	0.32	0.21
14,027.0	90.50	165.90	6,994.9	5,860.9	-6,005.5	-636.8	6,023.9	0.85	0.00	-0.85
14,122.0	90.60	166.10	6,994.0	5,860.0	-6,097.7	-613.8	6,115.2	0.24	0.11	0.21
14,216.0	88.30	166.50	6,994.9	5,860.9	-6,189.0	-591.5	6,205.7	2.48	-2.45	0.43
14,310.0	88.00	165.90	6,998.0	5,864.0	-6,280.2	-569.1	6,296.1	0.71	-0.32	-0.64
14,404.0	90.70	166.10	6,999.0	5,865.0	-6,371.4	-546.4	6,386.5	2.88	2.87	0.21
14,498.0	91.70	165.90	6,997.1	5,863.1	-6,462.6	-523.7	6,476.8	1.08	1.06	-0.21
14,593.0	90.70	166.70	6,995.1	5,861.1	-6,554.9	-501.2	6,568.3	1.35	-1.05	0.84
14,687.0	90.90	166.50	6,993.8	5,859.8	-6,646.3	-479.4	6,658.9	0.30	0.21	-0.21
14,781.0	90.60	165.60	6,992.5	5,858.5	-6,737.5	-456.7	6,749.3	1.01	-0.32	-0.96
14,875.0	88.70	161.80	6,993.1	5,859.1	-6,827.7	-430.4	6,838.5	4.52	-2.02	-4.04
14,969.0	90.50	164.20	6,993.8	5,859.8	-6,917.6	-402.9	6,927.4	3.19	1.91	2.55
15,063.0	91.20	164.00	6,992.4	5,858.4	-7,008.0	-377.1	7,016.9	0.77	0.74	-0.21
15,157.0	90.20	164.00	6,991.2	5,857.2	-7,098.4	-351.2	7,106.3	1.06	-1.06	0.00
15,252.0	90.60	163.70	6,990.5	5,856.5	-7,189.6	-324.8	7,196.5	0.53	0.42	-0.32
15,347.0	91.20	163.90	6,989.1	5,855.1	-7,280.8	-298.3	7,286.8	0.67	0.63	0.21
15,443.0	91.50	163.10	6,986.8	5,852.8	-7,372.9	-271.0	7,377.8	0.89	0.31	-0.83
Last Survey MD=15489'										
15,489.0	91.90	163.90	6,985.4	5,851.4	-7,416.9	-258.0	7,421.4	1.94	0.87	1.74
Projection to TD MD=15546'										
15,546.0	91.90	163.90	6,983.5	5,849.5	-7,471.7	-242.2	7,475.6	0.00	0.00	0.00

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
5,789.0	5,776.9	280.2	-130.7	Gyro Tie In MD=5789'
15,489.0	6,985.4	-7,416.9	-258.0	Last Survey MD=15489'
15,546.0	6,983.5	-7,471.7	-242.2	Projection to TD MD=15546'

Checked By: _____ Approved By: _____ Date: _____



17-06249

Project: Doddridge County, WV Grid
 Site: Doddridge County 514317
 Well: Well #514317
 Wellbore: Main Wellbore
 Design: As Drilled Surveys

