



Phoenix Technology Services  
Survey Report



Database:	EDM 5000 1 Single User Db	Local Co-ordinate Reference:	Site Doddridge County 512476
Company:	EQT Production - Marcellus	TVD Reference:	KB @ 1275 0usft
Project:	Doddridge County, WV Grid	MD Reference:	KB @ 1275 0usft
Site:	Doddridge County 512476	North Reference:	Grid
Well:	Well #512476	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	512476 AS Drilled Surveys		

**Project** Doddridge County, WV Grid

<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		Using geodetic scale factor

**Site** Doddridge County 512476

<b>Site Position:</b>		<b>Northing:</b>	265,975.85 usft	<b>Latitude:</b>	39.22
<b>From:</b>	Map	<b>Easting:</b>	1,634,197.50 usft	<b>Longitude:</b>	-80.79
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	-0.82 °

**Well** Well #512476

<b>Well Position</b>	<b>+N-S</b>	0.0 usft	<b>Northing:</b>	265,975.85 usft	<b>Latitude:</b>	39° 13' 22.955 N
	<b>+E-W</b>	0.0 usft	<b>Easting:</b>	1,634,197.50 usft	<b>Longitude:</b>	80° 47' 28.389 W
<b>Position Uncertainty</b>		0.0 usft	<b>Wellhead Elevation:</b>	usft	<b>Ground Level:</b>	1,259.0 usft

**Wellbore** Main Wellbore

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010_14	6/4/2013	-8.41	66.86	52,386

**Design** 512476 AS Drilled Surveys

**Audit Notes:**

<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.0
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Vertical Section:	Depth From (TVD) (usft)	+N-S (usft)	+E-W (usft)	Direction (°)
	0.0	0.0	0.0	343.33

**Survey Program** Date 5/15/2014

From (')	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	5,148.0	VES Gyro @5148' MD (Main Wellbore)	GyroFlex	
0.00	13,776.0	512476 PHX MWD (Main Wellbore)	MWD	MWD - Standard

**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	-1,275.0	0.0	0.0	0.0	0.00	0.00	0.00
25.0	0.16	77.78	25.0	-1,250.0	0.0	0.0	0.0	0.64	0.64	0.00
50.0	0.24	85.21	50.0	-1,225.0	0.0	0.1	0.0	0.34	0.32	29.72
75.0	0.23	90.67	75.0	-1,200.0	0.0	0.2	0.0	0.10	-0.04	21.84
100.0	0.16	98.15	100.0	-1,175.0	0.0	0.3	-0.1	0.30	-0.28	29.92
125.0	0.24	99.62	125.0	-1,150.0	0.0	0.4	-0.1	0.32	0.32	5.88
150.0	0.20	91.29	150.0	-1,125.0	0.0	0.5	-0.1	0.20	-0.16	-33.32
175.0	0.36	98.60	175.0	-1,100.0	0.0	0.6	-0.2	0.65	0.64	29.24

03/25/2016



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Company:	EQT Production - Marcellus	TVD Reference:	KB @ 1275 0usft
Project:	Doddridge County, WV Grid	MD Reference:	KB @ 1275 0usft
Site:	Doddridge County 512476	North Reference:	Grid
Well:	Well #512476	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	512476 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)
200.0	0.15	100.16	200.0	-1,075.0	0.0	0.7	-0.2	0.84	-0.84	6.24
225.0	0.22	101.66	225.0	-1,050.0	-0.1	0.8	-0.3	0.28	0.28	6.00
250.0	0.16	102.12	250.0	-1,025.0	-0.1	0.9	-0.3	0.24	-0.24	1.84
275.0	0.13	98.82	275.0	-1,000.0	-0.1	0.9	-0.3	0.12	-0.12	-13.20
300.0	0.13	94.55	300.0	-975.0	-0.1	1.0	-0.4	0.04	0.00	-17.08
325.0	0.26	99.97	325.0	-950.0	-0.1	1.1	-0.4	0.52	0.52	21.68
350.0	0.20	97.77	350.0	-925.0	-0.1	1.2	-0.4	0.24	-0.24	-8.80
375.0	0.20	96.48	375.0	-900.0	-0.1	1.3	-0.5	0.02	0.00	-5.16
400.0	0.28	102.26	400.0	-875.0	-0.1	1.4	-0.5	0.33	0.32	23.12
425.0	0.47	104.22	425.0	-850.0	-0.2	1.5	-0.6	0.76	0.76	7.84
450.0	0.48	107.59	450.0	-825.0	-0.2	1.7	-0.7	0.12	0.04	13.48
475.0	0.53	110.48	475.0	-800.0	-0.3	1.9	-0.9	0.22	0.20	11.56
500.0	0.11	111.98	500.0	-775.0	-0.4	2.1	-0.9	1.68	-1.68	6.00
525.0	0.42	106.86	525.0	-750.0	-0.4	2.2	-1.0	1.24	1.24	-20.48
550.0	0.26	108.53	550.0	-725.0	-0.4	2.3	-1.1	0.64	-0.64	6.68
575.0	0.13	107.41	575.0	-700.0	-0.5	2.4	-1.1	0.52	-0.52	-4.48
600.0	0.18	105.26	600.0	-675.0	-0.5	2.5	-1.2	0.20	0.20	-8.60
625.0	0.37	107.10	625.0	-650.0	-0.5	2.6	-1.2	0.76	0.76	7.36
650.0	0.29	109.23	650.0	-625.0	-0.6	2.7	-1.3	0.32	-0.32	8.52
675.0	0.17	104.69	675.0	-600.0	-0.6	2.8	-1.4	0.49	-0.48	-18.16
700.0	0.17	108.26	700.0	-575.0	-0.6	2.9	-1.4	0.04	0.00	14.28
725.0	0.14	109.48	725.0	-550.0	-0.6	2.9	-1.5	0.12	-0.12	4.88
750.0	0.33	108.51	750.0	-525.0	-0.7	3.0	-1.5	0.76	0.76	-3.88
775.0	0.44	105.38	775.0	-500.0	-0.7	3.2	-1.6	0.45	0.44	-12.52
800.0	0.27	110.83	800.0	-475.0	-0.8	3.4	-1.7	0.69	-0.68	21.80
825.0	0.42	106.40	825.0	-450.0	-0.8	3.5	-1.8	0.61	0.60	-17.72
850.0	0.42	107.98	850.0	-425.0	-0.9	3.7	-1.9	0.05	0.00	6.32
875.0	0.41	109.14	875.0	-400.0	-0.9	3.8	-2.0	0.05	-0.04	4.64
900.0	0.15	112.35	900.0	-375.0	-1.0	4.0	-2.1	1.04	-1.04	12.84
925.0	0.32	111.67	925.0	-350.0	-1.0	4.1	-2.1	0.68	0.68	-2.72
950.0	0.22	115.40	950.0	-325.0	-1.1	4.2	-2.2	0.41	-0.40	14.92
975.0	0.22	118.77	975.0	-300.0	-1.1	4.2	-2.3	0.05	0.00	13.48
1,000.0	0.18	121.63	1,000.0	-275.0	-1.1	4.3	-2.3	0.16	-0.16	11.44
1,025.0	0.49	119.05	1,025.0	-250.0	-1.2	4.4	-2.4	1.24	1.24	-10.32
1,050.0	0.45	120.35	1,050.0	-225.0	-1.3	4.6	-2.6	0.17	-0.16	5.20
1,075.0	0.38	118.17	1,075.0	-200.0	-1.4	4.8	-2.7	0.29	-0.28	-8.72
1,100.0	0.50	123.63	1,100.0	-175.0	-1.5	4.9	-2.9	0.51	0.48	21.84
1,125.0	0.26	116.55	1,125.0	-150.0	-1.6	5.1	-3.0	0.98	-0.96	-28.32
1,150.0	0.30	114.57	1,150.0	-125.0	-1.6	5.2	-3.1	0.16	0.16	-7.92
1,175.0	0.15	110.23	1,175.0	-100.0	-1.7	5.3	-3.1	0.60	-0.60	-17.36
1,200.0	0.34	111.86	1,200.0	-75.0	-1.7	5.4	-3.2	0.76	0.76	6.52
1,225.0	0.12	115.05	1,225.0	-50.0	-1.8	5.5	-3.3	0.88	-0.88	12.76



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Project:	Doddridge County, WV Grid	MD Reference:	KB @ 1275.0usft
Site:	Doddridge County 512476	North Reference:	Gnd
Well:	Well #512476	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	512476 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)
1,250.0	0.19	114.15	1,250.0	-25.0	-1.8	5.5	-3.3	0.28	0.28	-3.60
1,275.0	0.28	115.45	1,275.0	0.0	-1.8	5.6	-3.4	0.36	0.36	5.20
1,300.0	0.27	114.48	1,300.0	25.0	-1.9	5.7	-3.4	0.04	-0.04	-3.88
1,325.0	0.25	118.82	1,325.0	50.0	-1.9	5.8	-3.5	0.11	-0.08	17.36
1,350.0	0.37	122.40	1,350.0	75.0	-2.0	6.0	-3.6	0.49	0.48	14.32
1,375.0	0.47	128.89	1,375.0	100.0	-2.1	6.1	-3.8	0.44	0.40	25.96
1,400.0	0.43	129.83	1,400.0	125.0	-2.2	6.3	-3.9	0.16	-0.16	3.76
1,425.0	0.68	133.78	1,425.0	150.0	-2.4	6.4	-4.1	1.01	1.00	15.80
1,450.0	0.76	137.40	1,450.0	175.0	-2.6	6.7	-4.4	0.37	0.32	14.48
1,475.0	0.53	140.19	1,475.0	200.0	-2.8	6.8	-4.7	0.93	-0.92	11.16
1,500.0	0.86	143.83	1,500.0	225.0	-3.1	7.0	-5.0	1.33	1.32	14.56
1,525.0	0.82	148.40	1,525.0	250.0	-3.4	7.2	-5.3	0.31	-0.16	18.28
1,550.0	0.90	152.82	1,550.0	275.0	-3.7	7.4	-5.7	0.42	0.32	17.68
1,575.0	0.87	155.85	1,575.0	300.0	-4.0	7.6	-6.1	0.22	-0.12	12.12
1,600.0	1.03	162.58	1,600.0	325.0	-4.4	7.7	-6.5	0.78	0.64	26.92
1,625.0	0.88	165.57	1,625.0	350.0	-4.8	7.8	-6.9	0.63	-0.60	11.96
1,650.0	0.96	168.70	1,650.0	375.0	-5.2	7.9	-7.3	0.38	0.32	12.52
1,675.0	0.91	170.00	1,675.0	400.0	-5.6	8.0	-7.7	0.22	-0.20	5.20
1,700.0	0.87	176.06	1,699.9	424.9	-6.0	8.1	-8.1	0.41	-0.16	24.24
1,725.0	0.91	170.65	1,724.9	449.9	-6.4	8.1	-8.5	0.37	0.16	-21.64
1,750.0	0.89	169.81	1,749.9	474.9	-6.8	8.2	-8.8	0.10	-0.08	-3.36
1,775.0	0.82	168.28	1,774.9	499.9	-7.1	8.2	-9.2	0.29	-0.28	-6.12
1,800.0	0.74	167.79	1,799.9	524.9	-7.5	8.3	-9.6	0.32	-0.32	-1.96
1,825.0	0.77	169.87	1,824.9	549.9	-7.8	8.4	-9.9	0.16	0.12	8.32
1,850.0	0.82	167.69	1,849.9	574.9	-8.1	8.4	-10.2	0.23	0.20	-8.72
1,875.0	0.86	170.69	1,874.9	599.9	-8.5	8.5	-10.6	0.24	0.16	12.00
1,900.0	1.00	169.73	1,899.9	624.9	-8.9	8.6	-11.0	0.56	0.56	-3.84
1,925.0	0.91	171.17	1,924.9	649.9	-9.3	8.7	-11.4	0.37	-0.36	5.76
1,950.0	0.79	168.25	1,949.9	674.9	-9.7	8.7	-11.8	0.51	-0.48	-11.68
1,975.0	0.79	166.86	1,974.9	699.9	-10.0	8.8	-12.1	0.08	0.00	-5.56
2,000.0	0.72	163.95	1,999.9	724.9	-10.3	8.9	-12.4	0.32	-0.28	-11.64
2,025.0	0.83	165.00	2,024.9	749.9	-10.7	9.0	-12.8	0.44	0.44	4.20
2,050.0	0.83	160.87	2,049.9	774.9	-11.0	9.1	-13.1	0.24	0.00	-16.52
2,075.0	0.80	158.43	2,074.9	799.9	-11.3	9.2	-13.5	0.18	-0.12	-9.76
2,100.0	0.78	152.97	2,099.9	824.9	-11.7	9.3	-13.8	0.31	-0.08	-21.84
2,125.0	1.38	137.50	2,124.9	849.9	-12.0	9.6	-14.3	2.65	2.40	-61.88
2,150.0	2.16	126.93	2,149.9	874.9	-12.5	10.2	-14.9	3.37	3.12	-42.28
2,175.0	2.48	114.11	2,174.9	899.9	-13.0	11.1	-15.7	2.43	1.28	-51.28
2,200.0	2.31	110.63	2,199.8	924.8	-13.4	12.0	-16.3	0.89	-0.68	-13.92
2,225.0	2.18	103.84	2,224.8	949.8	-13.7	13.0	-16.9	1.18	-0.52	-27.16
2,250.0	2.10	94.47	2,249.8	974.8	-13.9	13.9	-17.3	1.43	-0.32	-37.48
2,275.0	2.31	85.10	2,274.8	999.8	-13.9	14.8	-17.5	1.67	0.84	-37.48
2,300.0	2.49	77.21	2,299.8	1,024.8	-13.7	15.9	-17.7	1.50	0.72	-31.56



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Project:	Doddridge County, WV Grid	MD Reference:	KB @ 1275 0usft
Site:	Doddridge County 512476	North Reference:	Grid
Well:	Well #512476	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	512476 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)
2,325.0	2.54	71.06	2,324.7	1,049.7	-13.4	16.9	-17.7	1.10	0.20	-24.60
2,350.0	2.71	63.65	2,349.7	1,074.7	-13.0	18.0	-17.6	1.52	0.68	-29.64
2,375.0	2.65	55.28	2,374.7	1,099.7	-12.4	19.0	-17.3	1.58	-0.24	-33.48
2,400.0	2.66	50.19	2,399.7	1,124.7	-11.7	19.9	-16.9	0.94	0.04	-20.36
2,425.0	2.66	46.45	2,424.6	1,149.6	-10.9	20.8	-16.4	0.69	0.00	-14.96
2,450.0	2.55	40.68	2,449.6	1,174.6	-10.1	21.6	-15.8	1.14	-0.44	-23.08
2,475.0	2.52	38.10	2,474.6	1,199.6	-9.2	22.3	-15.2	0.47	-0.12	-10.32
2,500.0	2.40	31.96	2,499.6	1,224.6	-8.3	22.9	-14.6	1.16	-0.48	-24.56
2,525.0	2.61	29.78	2,524.5	1,249.5	-7.4	23.4	-13.8	0.92	0.84	-8.72
2,550.0	2.55	24.04	2,549.5	1,274.5	-6.4	23.9	-13.0	1.06	-0.24	-22.96
2,575.0	2.63	22.71	2,574.5	1,299.5	-5.4	24.4	-12.1	0.40	0.32	-5.32
2,600.0	2.49	21.52	2,599.5	1,324.5	-4.3	24.8	-11.3	0.60	-0.56	-4.76
2,625.0	2.70	22.11	2,624.4	1,349.4	-3.3	25.2	-10.4	0.85	0.84	2.36
2,650.0	2.79	24.37	2,649.4	1,374.4	-2.2	25.7	-9.5	0.56	0.36	9.04
2,675.0	2.87	24.44	2,674.4	1,399.4	-1.1	26.2	-8.5	0.32	0.32	0.28
2,700.0	2.70	26.33	2,699.4	1,424.4	0.0	26.7	-7.6	0.77	-0.68	7.56
2,725.0	2.66	25.37	2,724.3	1,449.3	1.1	27.2	-6.8	0.24	-0.16	-3.84
2,750.0	2.84	27.04	2,749.3	1,474.3	2.2	27.8	-5.9	0.79	0.72	6.68
2,775.0	2.87	28.08	2,774.3	1,499.3	3.3	28.4	-5.0	0.24	0.12	4.16
2,800.0	2.95	28.10	2,799.2	1,524.2	4.4	28.9	-4.1	0.32	0.32	0.08
2,825.0	2.81	26.83	2,824.2	1,549.2	5.5	29.5	-3.2	0.62	-0.56	-5.08
2,850.0	3.06	24.22	2,849.2	1,574.2	6.7	30.1	-2.2	1.13	1.00	-10.44
2,875.0	3.08	22.82	2,874.1	1,599.1	7.9	30.6	-1.2	0.31	0.08	-5.60
2,900.0	3.38	20.01	2,899.1	1,624.1	9.2	31.1	-0.1	1.36	1.20	-11.24
2,925.0	3.20	18.65	2,924.1	1,649.1	10.5	31.6	1.0	0.78	-0.72	-5.44
2,950.0	3.11	14.00	2,949.0	1,674.0	11.9	32.0	2.2	1.08	-0.36	-18.60
2,975.0	3.30	13.70	2,974.0	1,699.0	13.2	32.3	3.4	0.76	0.76	-1.20
3,000.0	3.23	9.14	2,998.9	1,723.9	14.6	32.6	4.7	1.08	-0.28	-18.24
3,025.0	3.39	10.31	3,023.9	1,748.9	16.0	32.8	5.9	0.69	0.64	4.68
3,050.0	3.35	9.07	3,048.9	1,773.9	17.5	33.1	7.3	0.33	-0.16	-4.96
3,075.0	2.80	5.45	3,073.8	1,798.8	18.8	33.3	8.5	2.33	-2.20	-14.48
3,100.0	2.98	10.59	3,098.8	1,823.8	20.1	33.4	9.6	1.26	0.72	20.56
3,125.0	2.62	4.33	3,123.8	1,848.8	21.3	33.6	10.7	1.89	-1.44	-25.04
3,150.0	2.66	9.43	3,148.7	1,873.7	22.4	33.7	11.8	0.95	0.16	20.40
3,175.0	2.56	10.49	3,173.7	1,898.7	23.5	33.9	12.8	0.44	-0.40	4.24
3,200.0	2.51	6.08	3,198.7	1,923.7	24.6	34.1	13.8	0.81	-0.20	-17.64
3,225.0	2.24	11.96	3,223.7	1,948.7	25.7	34.3	14.7	1.45	-1.08	23.52
3,250.0	2.09	8.39	3,248.6	1,973.6	26.6	34.4	15.6	0.81	-0.60	-14.28
3,275.0	1.87	10.30	3,273.6	1,998.6	27.4	34.6	16.4	0.92	-0.88	7.64
3,300.0	1.52	6.19	3,298.6	2,023.6	28.2	34.7	17.0	1.48	-1.40	-16.44
3,325.0	1.66	357.97	3,323.6	2,048.6	28.9	34.7	17.7	1.07	0.56	-32.88
3,350.0	1.39	350.38	3,348.6	2,073.6	29.5	34.6	18.3	1.35	-1.08	-30.36



Phoenix Technology Services

Survey Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Doddridge County 512476
Company:	EQT Production - Marcellus	TVD Reference:	KB @ 1275 0usft
Project:	Doddndge County, WV Grid	MD Reference:	KB @ 1275 0usft
Site:	Doddndge County 512476	North Reference:	Grid
Well:	Well #512476	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	512476 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)
3,375.0	1.29	348.84	3,373.6	2,098.6	30.1	34.5	18.9	0.43	-0.40	-6.16
3,400.0	0.98	349.89	3,398.6	2,123.6	30.6	34.4	19.4	1.24	-1.24	4.20
3,425.0	1.23	345.28	3,423.6	2,148.6	31.0	34.3	19.9	1.06	1.00	-18.44
3,450.0	0.82	343.73	3,448.6	2,173.6	31.5	34.2	20.3	1.64	-1.64	-6.20
3,475.0	0.89	345.34	3,473.6	2,198.6	31.8	34.1	20.7	0.30	0.28	6.44
3,500.0	0.93	337.49	3,498.6	2,223.6	32.2	34.0	21.1	0.52	0.16	-31.40
3,525.0	0.94	331.90	3,523.6	2,248.6	32.6	33.8	21.5	0.37	0.04	-22.36
3,550.0	1.12	325.00	3,548.6	2,273.6	33.0	33.6	22.0	0.87	0.72	-27.60
3,575.0	1.22	315.77	3,573.6	2,298.6	33.4	33.3	22.4	0.85	0.40	-36.92
3,600.0	1.59	303.34	3,598.5	2,323.5	33.7	32.8	22.9	1.91	1.48	-49.72
3,625.0	2.38	295.15	3,623.5	2,348.5	34.1	32.0	23.5	3.35	3.16	-32.76
3,650.0	2.50	290.88	3,648.5	2,373.5	34.6	31.0	24.2	0.87	0.48	-17.08
3,675.0	2.20	288.60	3,673.5	2,398.5	34.9	30.1	24.8	1.26	-1.20	-9.12
3,700.0	2.17	291.08	3,698.5	2,423.5	35.2	29.2	25.4	0.40	-0.12	9.92
3,725.0	1.99	293.54	3,723.5	2,448.5	35.6	28.3	26.0	0.80	-0.72	9.84
3,750.0	1.79	290.11	3,748.4	2,473.4	35.9	27.6	26.5	0.92	-0.80	-13.72
3,775.0	1.42	295.98	3,773.4	2,498.4	36.2	26.9	26.9	1.62	-1.48	23.48
3,800.0	0.99	300.24	3,798.4	2,523.4	36.4	26.5	27.3	1.76	-1.72	17.04
3,825.0	0.74	315.83	3,823.4	2,548.4	36.6	26.2	27.6	1.36	-1.00	62.36
3,850.0	0.84	349.63	3,848.4	2,573.4	36.9	26.0	27.9	1.88	0.40	135.20
3,875.0	1.34	24.03	3,873.4	2,598.4	37.4	26.1	28.3	3.21	2.00	137.60
3,900.0	1.87	45.21	3,898.4	2,623.4	37.9	26.5	28.7	3.15	2.12	84.72
3,925.0	2.36	65.32	3,923.4	2,648.4	38.4	27.3	29.0	3.53	1.96	80.44
3,950.0	2.28	72.97	3,948.4	2,673.4	38.8	28.2	29.1	1.28	-0.32	30.60
3,975.0	2.17	76.10	3,973.3	2,698.3	39.0	29.2	29.0	0.66	-0.44	12.52
4,000.0	1.90	81.69	3,998.3	2,723.3	39.2	30.0	29.0	1.34	-1.08	22.36
4,025.0	1.66	87.46	4,023.3	2,748.3	39.3	30.8	28.8	1.20	-0.96	23.08
4,050.0	1.42	87.73	4,048.3	2,773.3	39.3	31.5	28.6	0.96	-0.96	1.08
4,075.0	1.31	97.36	4,073.3	2,798.3	39.3	32.1	28.5	1.02	-0.44	38.52
4,100.0	1.12	93.05	4,098.3	2,823.3	39.2	32.6	28.3	0.84	-0.76	-17.24
4,125.0	1.22	87.39	4,123.3	2,848.3	39.2	33.1	28.1	0.61	0.40	-22.64
4,150.0	0.92	89.62	4,148.3	2,873.3	39.3	33.6	28.0	1.21	-1.20	8.92
4,175.0	0.75	70.31	4,173.3	2,898.3	39.3	33.9	27.9	1.31	-0.68	-77.24
4,200.0	0.74	50.15	4,198.3	2,923.3	39.5	34.2	28.0	1.04	-0.04	-80.64
4,225.0	0.62	25.37	4,223.3	2,948.3	39.7	34.4	28.2	1.26	-0.48	-99.12
4,250.0	0.95	24.00	4,248.3	2,973.3	40.0	34.5	28.4	1.32	1.32	-5.48
4,275.0	0.79	20.91	4,273.3	2,998.3	40.4	34.7	28.7	0.67	-0.64	-12.36
4,300.0	0.74	18.99	4,298.3	3,023.3	40.7	34.8	29.0	0.22	-0.20	-7.68
4,325.0	0.92	15.27	4,323.3	3,048.3	41.0	34.9	29.3	0.75	0.72	-14.88
4,350.0	0.93	14.53	4,348.3	3,073.3	41.4	35.0	29.6	0.06	0.04	-2.96
4,375.0	1.19	18.56	4,373.3	3,098.3	41.9	35.1	30.0	1.08	1.04	16.12
4,400.0	1.18	14.32	4,398.3	3,123.3	42.4	35.3	30.5	0.35	-0.04	-16.96
4,425.0	1.27	13.88	4,423.3	3,148.3	42.9	35.4	30.9	0.36	0.36	-1.76



Phoenix Technology Services  
Survey Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Doddridge County 512476
Company:	EQT Production - Marcellus	TVD Reference:	KB @ 1275 0usft
Project:	Doddridge County, WV Grid	MD Reference:	KB @ 1275 0usft
Site:	Doddridge County 512476	North Reference:	Grid
Well:	Well #512476	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	512476 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)
4,450.0	1.49	10.24	4,448.2	3,173.2	43.5	35.5	31.4	0.95	0.88	-14.56
4,475.0	1.44	6.21	4,473.2	3,198.2	44.1	35.6	32.0	0.46	-0.20	-16.12
4,500.0	1.41	2.16	4,498.2	3,223.2	44.7	35.7	32.6	0.42	-0.12	-16.20
4,525.0	1.58	357.95	4,523.2	3,248.2	45.4	35.7	33.2	0.81	0.68	-16.84
4,550.0	1.80	343.14	4,548.2	3,273.2	46.1	35.5	34.0	1.95	0.88	-59.24
4,575.0	1.78	331.96	4,573.2	3,298.2	46.8	35.2	34.7	1.40	-0.08	-44.72
4,600.0	1.67	332.32	4,598.2	3,323.2	47.5	34.9	35.5	0.44	-0.44	1.44
4,625.0	1.92	324.34	4,623.2	3,348.2	48.1	34.5	36.2	1.41	1.00	-31.92
4,650.0	2.13	319.57	4,648.2	3,373.2	48.8	33.9	37.0	1.08	0.84	-19.08
4,675.0	2.13	318.40	4,673.1	3,398.1	49.5	33.3	37.9	0.17	0.00	-4.68
4,700.0	2.07	320.98	4,698.1	3,423.1	50.2	32.7	38.7	0.45	-0.24	10.32
4,725.0	2.33	317.48	4,723.1	3,448.1	50.9	32.1	39.6	1.17	1.04	-14.00
4,750.0	2.35	314.60	4,748.1	3,473.1	51.7	31.4	40.5	0.48	0.08	-11.52
4,775.0	2.30	311.19	4,773.1	3,498.1	52.4	30.6	41.4	0.59	-0.20	-13.64
4,800.0	2.38	310.14	4,798.0	3,523.0	53.0	29.9	42.2	0.36	0.32	-4.20
4,825.0	2.21	306.19	4,823.0	3,548.0	53.7	29.1	43.1	0.93	-0.68	-15.80
4,850.0	2.19	309.92	4,848.0	3,573.0	54.2	28.3	43.8	0.58	-0.08	14.92
4,875.0	2.50	311.61	4,873.0	3,598.0	54.9	27.6	44.7	1.27	1.24	6.76
4,900.0	2.72	307.44	4,898.0	3,623.0	55.6	26.7	45.7	1.16	0.88	-16.68
4,925.0	2.76	307.79	4,922.9	3,647.9	56.4	25.7	46.6	0.17	0.16	1.40
4,950.0	2.85	305.38	4,947.9	3,672.9	57.1	24.7	47.6	0.59	0.36	-9.64
4,975.0	2.63	303.39	4,972.9	3,697.9	57.8	23.8	48.5	0.96	-0.88	-7.96
5,000.0	2.99	307.84	4,997.8	3,722.8	58.5	22.8	49.5	1.68	1.44	17.80
5,025.0	3.09	309.52	5,022.8	3,747.8	59.3	21.7	50.6	0.54	0.40	6.72
5,050.0	2.93	305.09	5,047.8	3,772.8	60.1	20.7	51.7	1.13	-0.64	-17.72
5,075.0	2.81	305.34	5,072.7	3,797.7	60.8	19.7	52.6	0.48	-0.48	1.00
5,100.0	2.90	306.85	5,097.7	3,822.7	61.6	18.7	53.6	0.47	0.36	6.04
5,125.0	3.18	308.28	5,122.7	3,847.7	62.4	17.6	54.7	1.16	1.12	5.72
<b>Gyro Tie In=5148' MD</b>										
5,148.0	3.18	308.54	5,145.6	3,870.6	63.2	16.6	55.8	0.06	0.00	1.13
5,170.0	3.40	311.40	5,167.6	3,892.6	64.0	15.6	56.8	1.25	1.00	13.00
<b>KOP=5170' MD</b>										
5,202.0	2.30	2.00	5,199.6	3,924.6	65.3	15.0	58.2	8.22	-3.44	158.13
5,234.0	5.50	55.30	5,231.5	3,956.5	66.8	16.2	59.3	14.12	10.00	166.56
5,265.0	9.10	63.30	5,262.2	3,987.2	68.7	19.7	60.2	12.04	11.61	25.81
5,297.0	11.30	64.40	5,293.7	4,018.7	71.2	24.7	61.1	6.90	6.88	3.44
5,328.0	12.60	72.80	5,324.1	4,049.1	73.5	30.7	61.6	6.99	4.19	27.10
5,360.0	13.80	84.60	5,355.2	4,080.2	74.9	37.8	60.9	9.20	3.75	36.88
5,391.0	16.00	91.60	5,385.2	4,110.2	75.1	45.8	58.8	9.16	7.10	22.58
5,423.0	18.30	93.70	5,415.8	4,140.8	74.7	55.2	55.7	7.44	7.19	6.56
5,454.0	20.60	94.00	5,445.0	4,170.0	74.0	65.5	52.1	7.43	7.42	0.97
5,486.0	24.20	94.50	5,474.6	4,199.6	73.1	77.7	47.7	11.27	11.25	1.56
5,517.0	26.60	93.90	5,502.6	4,227.6	72.1	90.9	43.0	7.79	7.74	-1.94



Phoenix Technology Services  
Survey Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Doddridge County 512476
Company:	EQT Production - Marcellus	TVD Reference:	KB @ 1275 Dusst
Project:	Doddridge County, WV Grid	MD Reference:	KB @ 1275 Ousst
Site:	Doddridge County 512476	North Reference:	Grid
Well:	Well #512476	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	512476 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)
5,549.0	29.10	94.90	5,530.9	4,255.9	71.0	105.8	37.6	7.95	7.81	3.13
5,580.0	30.90	95.50	5,557.7	4,282.7	69.6	121.3	31.9	5.89	5.81	1.94
5,612.0	34.90	94.50	5,584.6	4,309.6	68.1	138.6	25.5	12.61	12.50	-3.13
5,643.0	38.20	92.80	5,609.5	4,334.5	66.9	157.0	19.1	11.13	10.65	-5.48
5,675.0	41.30	91.10	5,634.1	4,359.1	66.2	177.5	12.5	10.27	9.69	-5.31
5,706.0	41.10	90.40	5,657.4	4,382.4	65.9	197.9	6.4	1.62	-0.65	-2.26
5,737.0	41.60	89.50	5,680.7	4,405.7	66.0	218.4	0.6	2.51	1.61	-2.90
5,769.0	41.30	88.70	5,704.7	4,429.7	66.3	239.5	-5.2	1.90	-0.94	-2.50
5,800.0	40.50	87.60	5,728.1	4,453.1	66.9	259.8	-10.4	3.47	-2.58	-3.55
<b>512475 Top of Perf</b>										
5,811.3	40.68	87.82	5,736.7	4,461.7	67.2	267.2	-12.2	2.02	1.58	1.94
5,863.0	41.50	88.80	5,775.6	4,500.6	68.2	301.1	-21.0	2.02	1.59	1.90
5,926.0	40.80	89.40	5,823.1	4,548.1	68.9	342.6	-32.3	1.28	-1.11	0.95
5,989.0	42.00	90.10	5,870.3	4,595.3	69.1	384.2	-44.0	2.04	1.90	1.11
6,051.0	42.00	91.20	5,916.4	4,641.4	68.6	425.7	-56.4	1.19	0.00	1.77
6,114.0	41.10	90.00	5,963.5	4,688.5	68.2	467.5	-68.8	1.91	-1.43	-1.90
6,177.0	41.30	88.10	6,011.0	4,736.0	68.8	509.0	-80.0	2.01	0.32	-3.02
6,240.0	40.50	87.60	6,058.6	4,783.6	70.4	550.2	-90.4	1.37	-1.27	-0.79
6,272.0	39.90	86.60	6,083.0	4,808.0	71.4	570.8	-95.3	2.75	-1.88	-3.13
6,303.0	39.80	80.80	6,106.8	4,831.8	73.6	590.6	-98.8	11.99	-0.32	-18.71
6,334.0	41.80	74.20	6,130.3	4,855.3	78.0	610.3	-100.3	15.33	6.45	-21.29
6,366.0	43.10	68.90	6,153.9	4,878.9	84.9	630.8	-99.6	11.89	4.06	-16.56
<b>512473 Top of Perf</b>										
6,380.4	43.25	66.33	6,164.5	4,889.5	88.6	639.9	-98.6	12.23	1.06	-17.81
6,397.0	43.50	63.40	6,176.5	4,901.5	93.4	650.2	-96.9	12.23	1.49	-17.68
6,429.0	43.60	58.20	6,199.7	4,924.7	104.2	669.4	-92.2	11.20	0.31	-16.25
6,460.0	43.60	58.00	6,222.1	4,947.1	115.5	687.6	-86.5	0.44	0.00	-0.65
6,492.0	43.00	53.80	6,245.4	4,970.4	127.8	705.8	-80.0	9.19	-1.88	-13.13
6,523.0	42.50	47.80	6,268.2	4,993.2	141.1	722.0	-71.9	13.23	-1.61	-19.35
6,555.0	41.90	41.00	6,291.9	5,016.9	156.4	737.1	-61.5	14.39	-1.88	-21.25
6,586.0	41.40	36.40	6,315.1	5,040.1	172.5	750.0	-49.8	9.99	-1.61	-14.84
6,618.0	41.00	34.40	6,339.2	5,064.2	189.6	762.2	-36.9	4.30	-1.25	-6.25
6,649.0	41.00	31.90	6,362.6	5,087.6	206.7	773.3	-23.8	5.29	0.00	-8.06
6,681.0	42.00	28.40	6,386.5	5,111.5	225.0	783.9	-9.3	7.89	3.13	-10.94
6,712.0	43.20	24.40	6,409.4	5,134.4	243.8	793.2	6.1	9.55	3.87	-12.90
6,743.0	44.30	23.30	6,431.8	5,156.8	263.4	801.9	22.4	4.31	3.55	-3.55
6,775.0	45.50	21.40	6,454.4	5,179.4	284.3	810.5	38.9	5.62	3.75	-5.94
6,807.0	49.10	16.60	6,476.1	5,201.1	306.5	818.1	59.0	15.75	11.25	-15.00
6,838.0	52.40	12.00	6,495.7	5,220.7	329.8	824.0	79.6	15.66	10.65	-14.84
6,869.0	53.30	9.10	6,514.5	5,239.5	354.1	828.5	101.6	8.00	2.90	-9.35
6,901.0	54.80	6.20	6,533.3	5,258.3	379.7	832.0	125.2	8.71	4.69	-9.06
<b>512474 Top of Perf</b>										
6,918.0	55.45	4.27	6,543.0	5,266.0	393.6	833.2	138.1	10.07	3.80	-11.36



Phoenix Technology Services  
Survey Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Doddridge County 512476
Company:	EQT Production - Marcellus	TVD Reference:	KB @ 1275.0usft
Project:	Doddridge County, WV Grid	MD Reference:	KB @ 1275.0usft
Site:	Doddridge County 512476	North Reference:	Gnd
Well:	Well #512476	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	512476 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)
6,932.0	56.00	2.70	6,550.9	5,275.9	405.2	834.0	149.0	10.07	3.96	-11.20
6,964.0	59.20	1.40	6,568.0	5,293.0	432.2	834.9	174.6	10.57	10.00	-4.06
6,995.0	62.70	359.90	6,583.1	5,308.1	459.3	835.2	200.4	12.06	11.29	-4.84
7,026.0	65.30	358.90	6,596.6	5,321.6	487.1	834.9	227.2	8.87	8.39	-3.23
7,058.0	65.30	357.40	6,610.0	5,335.0	516.2	834.0	255.3	4.26	0.00	-4.69
7,089.0	66.90	354.40	6,622.6	5,347.6	544.4	832.0	283.0	10.24	5.16	-9.68
7,121.0	70.30	352.00	6,634.3	5,359.3	574.0	828.4	312.3	12.71	10.63	-7.50
<b>Top of Marcellus@5636' TVD</b>										
7,126.3	70.93	351.72	6,636.0	5,361.0	578.9	827.7	317.2	12.91	11.92	-5.25
7,152.0	74.00	350.40	6,643.8	5,368.8	603.2	823.9	341.5	12.91	11.94	-5.14
7,184.0	74.60	349.10	6,652.4	5,377.4	633.5	818.4	372.2	4.34	1.88	-4.06
7,215.0	77.30	347.10	6,659.9	5,384.9	662.9	812.2	402.1	10.72	8.71	-6.45
7,247.0	77.70	344.50	6,666.9	5,391.9	693.2	804.6	433.3	8.03	1.25	-8.13
7,278.0	81.90	342.70	6,672.4	5,397.4	722.4	795.9	463.8	14.70	13.55	-5.81
7,310.0	86.50	341.20	6,675.6	5,400.6	752.7	786.1	495.7	15.11	14.38	-4.69
<b>612476 LP 510' VS</b>										
7,326.6	88.53	339.59	6,676.3	5,401.3	768.3	780.5	512.2	15.61	12.25	-9.69
<b>LP=7341' MD/ 6677' TVD</b>										
7,341.0	90.30	338.20	6,676.5	5,401.5	781.8	775.3	526.6	15.61	12.26	-9.67
7,372.0	92.30	334.90	6,675.8	5,400.8	810.2	763.0	557.3	12.44	6.45	-10.65
7,396.0	91.70	332.70	6,674.9	5,399.9	831.7	752.4	581.0	9.50	-2.50	-9.17
<b>612476 LP</b>										
7,397.5	91.65	332.67	6,674.9	5,399.9	833.0	751.7	582.5	4.01	-3.33	-2.22
7,459.0	89.60	331.30	6,674.2	5,399.2	887.3	722.8	642.8	4.01	-3.33	-2.22
7,522.0	89.60	331.10	6,674.6	5,399.6	942.5	692.5	704.3	0.32	0.00	-0.32
7,585.0	90.10	330.60	6,674.8	5,399.8	997.5	661.8	765.9	1.12	0.79	-0.79
7,648.0	90.30	330.50	6,674.6	5,399.6	1,052.4	630.8	827.3	0.35	0.32	-0.16
7,712.0	90.40	329.70	6,674.2	5,399.2	1,107.9	598.9	889.6	1.26	0.16	-1.25
7,775.0	90.30	330.70	6,673.8	5,398.8	1,162.6	567.6	950.9	1.60	-0.16	1.59
7,838.0	89.70	332.50	6,673.8	5,398.8	1,218.0	537.6	1,012.6	3.01	-0.95	2.86
7,901.0	89.70	331.80	6,674.1	5,399.1	1,273.7	508.2	1,074.4	1.11	0.00	-1.11
7,963.0	90.00	331.80	6,674.3	5,399.3	1,328.3	478.9	1,135.2	0.48	0.48	0.00
8,026.0	89.50	333.80	6,674.6	5,399.6	1,384.3	450.1	1,197.1	3.27	-0.79	3.17
8,089.0	90.00	334.00	6,674.8	5,399.8	1,440.9	422.4	1,259.3	0.85	0.79	0.32
8,152.0	89.80	335.00	6,675.0	5,400.0	1,497.8	395.3	1,321.5	1.62	-0.32	1.59
8,215.0	90.10	334.80	6,675.0	5,400.0	1,554.8	368.6	1,383.8	0.57	0.48	-0.32
8,277.0	90.10	334.00	6,674.9	5,399.9	1,610.7	341.8	1,445.1	1.29	0.00	-1.29
8,340.0	90.20	333.90	6,674.7	5,399.7	1,667.3	314.1	1,507.2	0.22	0.16	-0.16
8,403.0	90.50	334.10	6,674.4	5,399.4	1,724.0	286.5	1,569.4	0.57	0.48	0.32
8,466.0	89.00	331.10	6,674.6	5,399.6	1,779.9	257.5	1,631.3	5.32	-2.38	-4.76
8,529.0	88.70	331.10	6,675.9	5,400.9	1,835.0	227.1	1,692.8	0.48	-0.48	0.00
8,593.0	89.10	333.00	6,677.1	5,402.1	1,891.6	197.1	1,755.6	3.03	0.63	2.97
8,656.0	88.90	332.70	6,678.2	5,403.2	1,947.6	168.3	1,817.5	0.57	-0.32	-0.48





Phoenix Technology Services  
Survey Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Doddridge County 512476
Company:	EQT Production - Marcellus	TVD Reference:	KB @ 1275.0usft
Project:	Doddridge County, WV Grid	MD Reference:	KB @ 1275.0usft
Site:	Doddridge County 512476	North Reference:	Grid
Well:	Well #512476	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	512476 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)
8,719.0	88.70	332.50	6,679.5	5,404.5	2,003.5	139.3	1,879.4	0.45	-0.32	-0.32
8,782.0	88.80	336.10	6,680.9	5,405.9	2,060.3	112.0	1,941.6	5.72	0.16	5.71
8,845.0	88.40	335.40	6,682.5	5,407.5	2,117.7	86.2	2,004.0	1.28	-0.63	-1.11
8,908.0	88.50	334.60	6,684.2	5,409.2	2,174.8	59.5	2,066.3	1.28	0.16	-1.27
8,971.0	88.70	336.20	6,685.7	5,410.7	2,232.0	33.3	2,128.7	2.56	0.32	2.54
9,034.0	88.20	335.70	6,687.4	5,412.4	2,289.5	7.7	2,191.2	1.12	-0.79	-0.79
9,097.0	88.00	334.40	6,689.5	5,414.5	2,346.6	-18.9	2,253.5	2.09	-0.32	-2.06
<b>Top of Onondaga@6690' TVD</b>										
9,111.0	87.84	334.27	6,690.0	5,415.0	2,359.2	-24.9	2,267.3	1.46	-1.11	-0.95
9,160.0	87.30	333.80	6,692.1	5,417.1	2,403.3	-46.4	2,315.6	1.46	-1.11	-0.95
9,223.0	87.60	333.80	6,694.9	5,419.9	2,459.7	-74.2	2,377.7	0.48	0.48	0.00
9,287.0	88.00	336.90	6,697.3	5,422.3	2,517.8	-100.8	2,441.0	4.88	0.63	4.84
9,350.0	87.90	337.40	6,699.6	5,424.6	2,575.9	-125.3	2,503.6	0.81	-0.16	0.79
9,414.0	88.10	337.90	6,701.8	5,426.8	2,635.0	-149.6	2,567.2	0.84	0.31	0.78
9,478.0	88.00	338.10	6,704.0	5,429.0	2,694.3	-173.6	2,630.9	0.35	-0.16	0.31
9,541.0	88.00	337.90	6,706.2	5,431.2	2,752.7	-197.2	2,693.6	0.32	0.00	-0.32
9,604.0	87.20	337.60	6,708.8	5,433.8	2,811.0	-221.0	2,756.3	1.36	-1.27	-0.48
9,667.0	86.70	336.20	6,712.2	5,437.2	2,868.8	-245.7	2,818.8	2.36	-0.79	-2.22
9,730.0	86.90	336.30	6,715.7	5,440.7	2,926.4	-271.0	2,881.2	0.35	0.32	0.16
9,793.0	87.50	336.90	6,718.8	5,443.8	2,984.1	-296.0	2,943.7	1.35	0.95	0.95
9,856.0	88.50	336.70	6,721.0	5,446.0	3,042.0	-320.8	3,006.2	1.62	1.59	-0.32
9,919.0	89.10	336.30	6,722.3	5,447.3	3,099.8	-345.9	3,068.8	1.14	0.95	-0.63
9,982.0	88.90	336.20	6,723.4	5,448.4	3,157.4	-371.3	3,131.3	0.35	-0.32	-0.16
10,045.0	88.90	336.10	6,724.6	5,449.6	3,215.0	-396.8	3,193.8	0.16	0.00	-0.16
10,108.0	88.70	335.80	6,725.9	5,450.9	3,272.6	-422.4	3,256.2	0.57	-0.32	-0.48
10,171.0	87.90	333.40	6,727.8	5,452.8	3,329.4	-449.4	3,318.5	4.01	-1.27	-3.81
10,234.0	87.60	332.70	6,730.3	5,455.3	3,385.6	-478.0	3,380.4	1.21	-0.48	-1.11
10,297.0	88.90	336.40	6,732.2	5,457.2	3,442.4	-505.0	3,442.6	6.22	2.06	5.87
10,360.0	88.80	335.50	6,733.5	5,458.5	3,499.9	-530.7	3,505.1	1.44	-0.16	-1.43
10,422.0	88.70	335.00	6,734.8	5,459.8	3,556.2	-556.6	3,566.5	0.82	-0.16	-0.81
10,485.0	88.60	335.30	6,736.3	5,461.3	3,613.4	-583.1	3,628.8	0.50	-0.16	0.48
10,549.0	88.60	334.70	6,737.9	5,462.9	3,671.3	-610.1	3,692.1	0.94	0.00	-0.94
10,612.0	88.50	334.00	6,739.5	5,464.5	3,728.1	-637.4	3,754.3	1.12	-0.16	-1.11
10,675.0	88.20	333.40	6,741.3	5,466.3	3,784.6	-665.3	3,816.4	1.06	-0.48	-0.95
10,738.0	88.30	332.50	6,743.2	5,468.2	3,840.7	-693.9	3,878.3	1.44	0.16	-1.43
10,801.0	88.00	331.50	6,745.2	5,470.2	3,896.3	-723.5	3,940.1	1.66	-0.48	-1.59
10,864.0	88.70	332.50	6,747.0	5,472.0	3,951.9	-753.1	4,001.8	1.94	1.11	1.59
10,927.0	88.80	331.40	6,748.4	5,473.4	4,007.4	-782.7	4,063.6	1.75	0.16	-1.75
10,990.0	89.00	330.50	6,749.6	5,474.6	4,062.5	-813.3	4,125.1	1.46	0.32	-1.43
11,053.0	88.60	329.60	6,750.9	5,475.9	4,117.1	-844.7	4,186.4	1.56	-0.63	-1.43
11,116.0	89.50	331.20	6,752.0	5,477.0	4,171.8	-875.8	4,247.8	2.91	1.43	2.54
11,179.0	89.10	332.60	6,752.8	5,477.8	4,227.4	-905.5	4,309.5	2.31	-0.63	2.22
11,242.0	89.40	332.30	6,753.6	5,478.6	4,283.3	-934.6	4,371.4	0.67	0.48	-0.48



Phoenix Technology Services  
Survey Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Doddridge County 512476
Company:	EQT Production - Marcellus	TVD Reference:	KB @ 1275.0usft
Project:	Doddridge County, WV Grid	MD Reference:	KB @ 1275.0usft
Site:	Doddridge County 512476	North Reference:	Grid
Well:	Well #512476	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	512476 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)
11,305.0	90.20	333.10	6,753.8	5,478.8	4,339.3	-963.5	4,433.3	1.80	1.27	1.27
11,368.0	88.60	334.30	6,754.5	5,479.5	4,395.7	-991.4	4,495.4	3.17	-2.54	1.90
11,431.0	87.70	333.00	6,756.5	5,481.5	4,452.1	-1,019.4	4,557.5	2.51	-1.43	-2.06
11,494.0	88.20	334.00	6,758.8	5,483.8	4,508.5	-1,047.5	4,619.5	1.77	0.79	1.59
11,557.0	88.40	336.80	6,760.6	5,485.6	4,565.7	-1,073.7	4,681.9	4.45	0.32	4.44
11,620.0	88.30	336.60	6,762.4	5,487.4	4,623.6	-1,098.6	4,744.4	0.35	-0.16	-0.32
Deepest Point of Well=11683' MD/5764' TVD										
11,683.0	89.60	337.00	6,763.6	5,488.6	4,681.5	-1,123.4	4,807.0	2.16	2.06	0.63
11,746.0	91.30	337.90	6,763.1	5,488.1	4,739.7	-1,147.6	4,869.7	3.05	2.70	1.43
11,809.0	91.30	337.40	6,761.7	5,486.7	4,797.9	-1,171.5	4,932.3	0.79	0.00	-0.79
11,872.0	91.60	337.60	6,760.1	5,485.1	4,856.1	-1,195.6	4,995.0	0.57	0.48	0.32
11,935.0	91.40	336.90	6,758.4	5,483.4	4,914.2	-1,220.0	5,057.6	1.16	-0.32	-1.11
11,998.0	90.20	336.60	6,757.5	5,482.5	4,972.0	-1,244.8	5,120.2	1.96	-1.90	-0.48
12,061.0	90.50	335.50	6,757.2	5,482.2	5,029.6	-1,270.4	5,182.7	1.81	0.48	-1.75
12,124.0	90.80	337.30	6,756.4	5,481.4	5,087.3	-1,295.6	5,245.2	2.90	0.48	2.86
12,187.0	91.00	336.80	6,755.5	5,480.5	5,145.4	-1,320.2	5,307.8	0.85	0.32	-0.79
12,250.0	91.00	336.20	6,754.4	5,479.4	5,203.1	-1,345.3	5,370.4	0.95	0.00	-0.95
12,312.0	90.90	335.40	6,753.3	5,478.3	5,259.7	-1,370.7	5,431.8	1.30	-0.16	-1.29
12,375.0	90.80	335.50	6,752.4	5,477.4	5,317.0	-1,396.9	5,494.2	0.22	-0.16	0.16
12,438.0	91.00	334.70	6,751.4	5,476.4	5,374.1	-1,423.4	5,556.6	1.31	0.32	-1.27
12,501.0	91.20	334.00	6,750.2	5,475.2	5,430.9	-1,450.7	5,618.8	1.16	0.32	-1.11
12,564.0	91.30	334.10	6,748.8	5,473.8	5,487.5	-1,478.3	5,680.9	0.22	0.16	0.16
12,627.0	90.20	335.60	6,748.0	5,473.0	5,544.5	-1,505.0	5,743.2	2.95	-1.75	2.38
12,690.0	90.20	335.30	6,747.8	5,472.8	5,601.8	-1,531.2	5,805.7	0.48	0.00	-0.48
12,753.0	90.10	335.30	6,747.6	5,472.6	5,659.1	-1,557.5	5,868.0	0.16	-0.16	0.00
12,815.0	90.50	335.80	6,747.3	5,472.3	5,715.5	-1,583.2	5,929.5	1.03	0.65	0.81
12,878.0	90.70	335.50	6,746.6	5,471.6	5,772.9	-1,609.2	5,991.9	0.57	0.32	-0.48
12,941.0	90.70	335.00	6,745.9	5,470.9	5,830.1	-1,635.5	6,054.3	0.79	0.00	-0.79
13,005.0	90.70	334.80	6,745.1	5,470.1	5,888.1	-1,662.7	6,117.6	0.31	0.00	-0.31
13,067.0	91.60	335.50	6,743.8	5,468.8	5,944.3	-1,688.7	6,178.9	1.84	1.45	1.13
13,130.0	91.30	335.70	6,742.2	5,467.2	6,001.7	-1,714.7	6,241.3	0.57	-0.48	0.32
13,193.0	90.90	335.00	6,741.0	5,466.0	6,058.9	-1,741.0	6,303.7	1.28	-0.63	-1.11
13,256.0	91.00	334.30	6,740.0	5,465.0	6,115.8	-1,768.0	6,366.0	1.12	0.16	-1.11
13,319.0	92.40	334.70	6,738.1	5,463.1	6,172.7	-1,795.1	6,428.2	2.31	2.22	0.63
13,382.0	92.40	334.30	6,735.5	5,460.5	6,229.5	-1,822.2	6,490.4	0.63	0.00	-0.63
13,446.0	92.00	334.40	6,733.0	5,458.0	6,287.1	-1,849.9	6,553.6	0.64	-0.63	0.16
13,508.0	91.90	333.50	6,730.9	5,455.9	6,342.8	-1,877.1	6,614.7	1.46	-0.16	-1.45
13,571.0	91.60	332.90	6,729.0	5,454.0	6,399.0	-1,905.5	6,676.7	1.06	-0.48	-0.95
13,634.0	92.10	333.40	6,727.0	5,452.0	6,455.2	-1,933.9	6,738.7	1.12	0.79	0.79
Last Survey=13697' MD/ 6725' TVD										
13,697.0	91.60	333.10	6,724.9	5,449.9	6,511.4	-1,962.3	6,800.7	0.93	-0.79	-0.48
512476 TD										
13,772.6	91.60	333.10	6,722.8	5,447.8	6,578.8	-1,996.4	6,875.0	0.00	0.00	0.00



**Phoenix Technology Services**  
Survey Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Doddridge County 512476
Company:	EQT Production - Marcellus	TVD Reference:	KB @ 1275 0usft
Project:	Doddridge County, WV Grid	MD Reference:	KB @ 1275 0usft
Site:	Doddridge County 512476	North Reference:	Grid
Well:	Well #512476	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	512476 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)
Projection to TD=13776' MD/ 6723' TVD										
13,776.0	91.60	333.10	6,722.7	5,447.7	6,581.8	-1,998.0	6,878.4	0.00	0.00	0.00

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,126.3	6,636.0	Top of Marcellus@6636' TVD		0.00	
9,111.0	6,690.0	Top of Onondaga@6690' TVD		0.00	

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
5,148.0	5,145.6	63.2	16.6	Gyro Tie In=5148' MD
5,202.0	5,199.6	65.3	15.0	KOP=5170' MD
7,341.0	6,676.5	781.8	775.3	LP=7341' MD/ 6677' TVD
11,683.0	6,763.6	4,681.5	-1,123.4	Deepest Point of Well=11683' MD/6764' TVD
13,697.0	6,724.9	6,511.4	-1,962.3	Last Survey=13697' MD/ 6725' TVD
13,776.0	6,722.7	6,581.8	-1,998.0	Projection to TD=13776' MD/ 6723' TVD

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



# EQT Production - Marcellus

KB Elevation=1275 FT  
 Ground Elevation= 1259 FT  
 Measurements were taken from KB Elevation

Project: Doddridge County, WV Grid  
 Site: Doddridge County 512476  
 Well: Well #512476  
 Wellbore: Main Wellbore  
 Design: 512476 AS Drilled Surveys

