



EQT PRODUCTION

Doddridge County, WV

WEU2

Well #515877 - Marcellus

API #47-103-06723

Main Wellbore

Design: 515877 As Drilled Surveys

Standard Survey Report

10 November, 2015

Received
Office of Oil & Gas

FEB 25 2016



Where energy meets innovation.



Phoenix Technology Services
Survey Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Well #515877 - Marcellus
Company:	EQT PRODUCTION	TVD Reference:	KB 23 @ 1179.0usft
Project:	Doddridge County, WV	MD Reference:	KB 23 @ 1179.0usft
Site:	WEU2	North Reference:	Grid
Well:	Well #515877 - Marcellus	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	515877 As Drilled Surveys		

Project	Doddridge County, WV		
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		

Site	WEU2				
Site Position:		Northing:	283,820.10 usft	Latitude:	39.27
From:	Map	Easting:	1,640,046.30 usft	Longitude:	-80.77
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.81 °

Well	Well #515877 - Marcellus					
Well Position	+N/-S	0.0 usft	Northing:	283,835.29 usft	Latitude:	39° 16' 20.291 N
	+E/-W	0.0 usft	Easting:	1,640,072.10 usft	Longitude:	80° 46' 16.960 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	1,156.0 usft

Wellbore	Main Wellbore				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	10/12/2015	-7.77	66.72	52,253

Design	515877 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	129.70	

Survey Program	Date	11/10/2015			
From (')	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	4,801.0	515877 Gyrodata Gyros (Main Wellbore)	GYD_DP_MS	Gyrodata gyro-compassing and drop	
0.00	12,953.0	515877 PHX MWD (Main Wellbore)	PHX+MWD+HDGM	PHX+OWSG MWD + HDGM	

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	-1,179.0	0.0	0.0	0.0	0.00	0.00	0.00
110.0	0.41	217.36	110.0	-1,069.0	-0.3	-0.2	0.0	0.37	0.37	0.00
210.0	0.30	192.71	210.0	-969.0	-0.9	-0.5	0.1	0.19	-0.11	-24.65
310.0	0.13	152.23	310.0	-869.0	-1.2	-0.5	0.4	0.22	-0.17	-40.48
410.0	0.18	143.24	410.0	-769.0	-1.4	-0.4	0.6	0.06	0.05	-8.99
510.0	0.22	153.43	510.0	-669.0	-1.7	-0.2	1.0	0.05	0.04	10.19
610.0	0.25	157.59	610.0	-569.0	-2.1	0.0	1.3	0.03	0.03	4.16
710.0	0.43	144.24	710.0	-469.0	-2.6	0.3	1.9	0.20	0.18	-13.35

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Phoenix Technology Services
Survey Report



Database:	EDM 5000.1 Single User On	Local Co-ordinate Reference:	Well (Main) #515877 - Marcelline
Company:	EQT PRODUCTION	TVD Reference:	KB 23' @ 1179.00ft
Project:	Cladonia County, WV	MD Reference:	KB 23' @ 1179.00ft
Site:	WEDJ	North Reference:	Grid
Well:	Well #515877 - Marcelline	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	515877 - As Directed 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)
810.0	0.41	147.86	810.0	-369.0	-3.2	0.7	2.6	0.03	-0.02	3.62
910.0	0.43	145.76	910.0	-269.0	-3.8	1.1	3.3	0.03	0.02	-2.10
1,010.0	0.54	153.46	1,010.0	-169.0	-4.6	1.5	4.1	0.13	0.11	7.70
1,110.0	0.76	159.37	1,110.0	-69.0	-5.6	2.0	5.1	0.23	0.22	5.91
1,210.0	0.98	159.16	1,210.0	31.0	-7.0	2.5	6.4	0.22	0.22	-0.21
1,310.0	1.11	157.41	1,309.9	130.9	-8.7	3.2	8.0	0.13	0.13	-1.75
1,410.0	1.25	150.43	1,409.9	230.9	-10.6	4.1	9.9	0.20	0.14	-6.98
1,510.0	1.41	145.05	1,509.9	330.9	-12.5	5.3	12.1	0.20	0.16	-5.38
1,610.0	1.52	143.40	1,609.9	430.9	-14.6	6.8	14.6	0.12	0.11	-1.65
1,710.0	1.80	145.05	1,709.8	530.8	-16.9	8.5	17.4	0.28	0.28	1.65
1,810.0	2.30	142.98	1,809.8	630.8	-19.8	10.6	20.8	0.51	0.50	-2.07
1,910.0	2.69	142.62	1,909.7	730.7	-23.3	13.3	25.1	0.39	0.39	-0.36
2,010.0	3.26	139.60	2,009.5	830.5	-27.3	16.5	30.2	0.59	0.57	-3.02
2,110.0	3.82	135.60	2,109.3	930.3	-31.9	20.7	36.3	0.61	0.56	-4.00
2,210.0	4.20	134.76	2,209.1	1,030.1	-36.8	25.6	43.2	0.38	0.38	-0.84
2,310.0	4.69	134.85	2,308.8	1,129.8	-42.3	31.1	51.0	0.49	0.49	0.09
2,410.0	4.95	135.07	2,408.4	1,229.4	-48.2	37.1	59.3	0.26	0.26	0.22
2,510.0	5.24	136.56	2,508.0	1,329.0	-54.6	43.3	68.2	0.32	0.29	1.49
2,610.0	5.23	137.45	2,607.6	1,428.6	-61.3	49.5	77.2	0.08	-0.01	0.89
2,710.0	5.33	138.99	2,707.2	1,528.2	-68.1	55.6	86.3	0.17	0.10	1.54
2,810.0	5.27	142.20	2,806.8	1,627.8	-75.3	61.5	95.4	0.30	-0.06	3.21
2,910.0	5.19	144.17	2,906.4	1,727.4	-82.6	66.9	104.2	0.20	-0.08	1.97
3,010.0	5.25	144.40	3,005.9	1,826.9	-90.0	72.2	113.0	0.06	0.06	0.23
3,110.0	5.13	146.26	3,105.5	1,926.5	-97.4	77.4	121.8	0.21	-0.12	1.86
3,210.0	3.72	146.42	3,205.2	2,026.2	-103.8	81.7	129.1	1.41	-1.41	0.16
3,310.0	2.83	147.64	3,305.1	2,126.1	-108.6	84.8	134.6	0.89	-0.89	1.22
3,410.0	2.04	150.11	3,405.0	2,226.0	-112.2	87.0	138.6	0.80	-0.79	2.47
3,510.0	1.63	158.52	3,504.9	2,325.9	-115.1	88.4	141.5	0.49	-0.41	8.41
3,610.0	1.30	158.00	3,604.9	2,425.9	-117.5	89.3	143.8	0.33	-0.33	-0.52
3,710.0	1.14	159.86	3,704.9	2,525.9	-119.5	90.1	145.6	0.16	-0.16	1.86
3,810.0	0.88	162.05	3,804.9	2,625.9	-121.1	90.7	147.1	0.26	-0.26	2.19
3,910.0	0.66	170.34	3,904.8	2,725.8	-122.4	91.0	148.2	0.25	-0.22	8.29
4,010.0	0.72	182.82	4,004.8	2,825.8	-123.6	91.1	149.0	0.16	0.06	12.48
4,110.0	0.69	193.47	4,104.8	2,925.8	-124.8	90.9	149.7	0.13	-0.03	10.65
4,210.0	0.75	203.57	4,204.8	3,025.8	-126.0	90.5	150.1	0.14	0.06	10.10
4,310.0	0.79	212.01	4,304.8	3,125.8	-127.2	89.9	150.4	0.12	0.04	8.44
4,410.0	0.71	216.73	4,404.8	3,225.8	-128.3	89.2	150.5	0.10	-0.08	4.72
4,510.0	0.79	219.47	4,504.8	3,325.8	-129.3	88.3	150.6	0.09	0.08	2.74
4,610.0	0.74	219.23	4,604.8	3,425.8	-130.3	87.5	150.6	0.05	-0.05	-0.24
4,710.0	0.79	229.94	4,704.8	3,525.8	-131.3	86.6	150.5	0.15	0.05	10.71
Gyro Tie On=4801' MD										
4,801.0	0.81	221.20	4,795.8	3,616.8	-132.2	85.7	150.3	0.14	0.02	-9.60
4,897.0	1.10	205.60	4,891.8	3,712.8	-133.5	84.8	150.5	0.40	0.30	-16.25

Received
Office of Oil & Gas
FEB 25 2016



Phoenix Technology Services
Survey Report



Database:	EDM 5000.1 Single User Ob	Local Co-ordinate Reference:	Well Well #515877 - Marcellus
Company:	EQT PRODUCTION	TVD Reference:	KS 23 @ 1174.0usft
Project:	Goodhope County WV	MD Reference:	KB 29 @ 1174.0usft
Site:	WELU2	North Reference:	Grid
Well:	Well #515877 - Marcellus	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	515877 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)
4,928.0	1.20	207.40	4,922.8	3,743.8	-134.1	84.5	150.7	0.34	0.32	5.81
4,959.0	1.30	206.20	4,953.7	3,774.7	-134.7	84.2	150.8	0.33	0.32	-3.87
4,991.0	2.70	144.70	4,985.7	3,806.7	-135.6	84.5	151.6	7.41	4.38	-192.19
5,022.0	5.90	116.40	5,016.6	3,837.6	-136.9	86.4	153.9	12.09	10.32	-91.29
5,054.0	8.40	105.60	5,048.4	3,869.4	-138.3	90.1	157.6	8.84	7.81	-33.75
5,085.0	10.80	102.50	5,079.0	3,900.0	-139.5	95.1	162.3	7.92	7.74	-10.00
5,117.0	13.50	102.20	5,110.2	3,931.2	-141.0	101.7	168.3	8.44	8.44	-0.94
5,148.0	15.70	101.80	5,140.2	3,961.2	-142.6	109.3	175.2	7.10	7.10	-1.29
5,179.0	18.10	103.90	5,169.9	3,990.9	-144.6	118.1	183.2	7.99	7.74	6.77
5,211.0	20.10	104.50	5,200.1	4,021.1	-147.2	128.3	192.7	6.28	6.25	1.88
5,242.0	22.50	104.50	5,229.0	4,050.0	-150.0	139.2	202.9	7.74	7.74	0.00
5,274.0	25.80	103.50	5,258.2	4,079.2	-153.1	151.9	214.7	10.39	10.31	-3.13
5,305.0	28.90	103.40	5,285.7	4,106.7	-156.5	165.7	227.4	10.00	10.00	-0.32
5,337.0	32.70	102.60	5,313.2	4,134.2	-160.1	181.7	242.1	11.94	11.88	-2.50
5,368.0	35.60	103.30	5,338.9	4,159.9	-164.0	198.6	257.6	9.44	9.35	2.26
5,400.0	40.00	104.40	5,364.1	4,185.1	-168.7	217.7	275.3	13.91	13.75	3.44
5,431.0	43.40	105.30	5,387.3	4,208.3	-174.0	237.6	294.0	11.14	10.97	2.90
5,463.0	46.60	105.80	5,409.9	4,230.9	-180.1	259.4	314.6	10.06	10.00	1.56
5,494.0	49.90	105.50	5,430.6	4,251.6	-186.3	281.7	335.7	10.67	10.65	-0.97
5,525.0	53.20	104.90	5,449.8	4,270.8	-192.7	305.1	357.8	10.75	10.65	-1.94
5,557.0	56.60	104.70	5,468.2	4,289.2	-199.4	330.4	381.6	10.64	10.63	-0.63
5,588.0	60.40	104.20	5,484.4	4,305.4	-206.0	356.0	405.5	12.33	12.26	-1.61
5,620.0	63.60	103.30	5,499.4	4,320.4	-212.7	383.4	430.9	10.30	10.00	-2.81
5,651.0	66.90	101.50	5,512.4	4,333.4	-218.7	410.9	455.9	11.88	10.65	-5.81
5,714.0	71.70	100.50	5,534.7	4,355.7	-230.0	468.7	507.5	7.76	7.62	-1.59
5,745.0	72.00	100.40	5,544.3	4,365.3	-235.3	497.7	533.2	1.02	0.97	-0.32
5,840.0	71.10	99.90	5,574.4	4,395.4	-251.2	586.4	611.6	1.07	-0.95	-0.53
5,934.0	71.50	100.00	5,604.5	4,425.5	-266.6	674.1	688.9	0.44	0.43	0.53
6,029.0	70.00	100.50	5,635.9	4,456.9	-282.5	762.4	767.0	1.66	-1.58	-0.21
6,123.0	69.90	100.30	5,668.1	4,489.1	-298.5	849.2	844.0	0.23	-0.11	FEB 25 2016
6,217.0	69.10	102.40	5,701.0	4,522.0	-315.8	935.5	921.5	2.26	-0.85	2.23
6,312.0	70.30	102.20	5,734.0	4,555.0	-334.8	1,022.6	1,000.6	1.28	1.26	-0.21
6,406.0	71.60	101.80	5,764.7	4,585.7	-353.2	1,109.5	1,079.3	1.44	1.38	-0.43
6,500.0	70.20	102.30	5,795.4	4,616.4	-371.8	1,196.4	1,157.9	1.57	-1.49	0.53
6,595.0	71.00	101.90	5,827.0	4,648.0	-390.6	1,284.0	1,237.4	0.93	0.84	-0.42
6,689.0	69.20	101.10	5,859.0	4,680.0	-408.2	1,370.6	1,315.2	2.08	-1.91	-0.85
6,783.0	69.90	100.60	5,891.8	4,712.8	-424.8	1,457.1	1,392.4	0.90	0.74	-0.53
6,877.0	68.10	101.10	5,925.5	4,746.5	-441.3	1,543.3	1,469.2	1.98	-1.91	0.53
6,972.0	68.90	100.70	5,960.3	4,781.3	-458.0	1,630.1	1,546.7	0.93	0.84	-0.42
7,066.0	69.80	100.20	5,993.5	4,814.5	-473.9	1,716.6	1,623.4	1.08	0.96	-0.53
7,160.0	70.30	99.80	6,025.5	4,846.5	-489.3	1,803.6	1,700.2	0.67	0.53	-0.43
7,254.0	69.00	101.40	6,058.2	4,879.2	-505.5	1,890.2	1,777.2	2.11	-1.38	1.70

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Phoenix Technology Services
Survey Report



Database:	EDM 5000 / Single Date EQ	Local Co-ordinate Reference:	Well Well #515877 - Marcellus
Company:	EQT PRODUCTION	TVD Reference:	KB 23 @ 1179.8usft
Project:	Goddridge County WV	MD Reference:	KB 23 @ 1179.8usft
Site:	WEUZ	North Reference:	Grid
Well:	Well #515877 - Marcellus	Survey Calculation Method:	Minimum Curvatures
Wellbore:	Main Wellbore		
Design:	515877 - 4D 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)	
7,349.0	69.60	101.50	6,091.8	4,912.8	-523.1	1,977.3	1,855.5	0.64	0.63	0.11	
7,443.0	70.00	100.70	6,124.3	4,945.3	-540.1	2,063.9	1,932.9	0.90	0.43	-0.85	
7,537.0	69.60	102.60	6,156.7	4,977.7	-557.9	2,150.3	2,010.8	1.94	-0.43	2.02	
7,632.0	70.30	101.80	6,189.3	5,010.3	-576.8	2,237.5	2,089.9	1.08	0.74	-0.84	
7,726.0	70.40	101.00	6,220.9	5,041.9	-594.3	2,324.3	2,167.9	0.81	0.11	-0.85	
7,821.0	70.30	101.90	6,252.8	5,073.8	-612.0	2,412.0	2,246.7	0.90	-0.11	0.95	
7,915.0	69.40	101.60	6,285.2	5,106.2	-630.0	2,498.4	2,324.6	1.00	-0.96	-0.32	
8,009.0	68.90	102.70	6,318.7	5,139.7	-648.5	2,584.2	2,402.5	1.22	-0.53	1.17	
8,104.0	68.90	101.70	6,352.9	5,173.9	-667.2	2,670.9	2,481.1	0.98	0.00	-1.05	
8,198.0	69.70	101.50	6,386.1	5,207.1	-684.9	2,757.0	2,558.7	0.87	0.85	-0.21	
8,292.0	71.40	101.40	6,417.4	5,238.4	-702.5	2,843.9	2,636.7	1.81	1.81	-0.11	
8,386.0	70.60	101.20	6,448.0	5,269.0	-719.9	2,931.0	2,714.9	0.87	-0.85	-0.21	
8,481.0	69.60	102.40	6,480.3	5,301.3	-738.2	3,018.5	2,793.9	1.59	-1.05	1.26	
8,575.0	70.00	102.00	6,512.8	5,333.8	-756.8	3,104.7	2,872.1	0.58	0.43	-0.43	
8,670.0	70.80	101.40	6,544.7	5,365.7	-775.0	3,192.3	2,951.1	1.03	0.84	-0.63	
8,764.0	69.00	103.10	6,577.0	5,398.0	-793.7	3,278.6	3,029.5	2.56	-1.91	1.81	
8,795.0	68.90	102.70	6,588.1	5,409.1	-800.2	3,306.8	3,055.3	1.25	-0.32	-1.29	
8,827.0	69.20	102.60	6,599.6	5,420.6	-806.7	3,335.9	3,081.9	0.98	0.94	-0.31	
8,858.0	69.60	105.60	6,610.5	5,431.5	-813.8	3,364.1	3,108.1	9.15	1.29	9.68	
8,890.0	70.90	110.50	6,621.3	5,442.3	-823.1	3,392.7	3,136.0	14.97	4.06	15.31	
8,921.0	72.40	113.60	6,631.0	5,452.0	-834.2	3,420.0	3,164.1	10.65	4.84	10.00	
8,952.0	73.50	116.90	6,640.1	5,461.1	-846.8	3,446.8	3,192.8	10.78	3.55	10.65	
8,984.0	75.20	119.30	6,648.8	5,469.8	-861.3	3,473.9	3,223.0	8.97	5.31	7.50	
9,015.0	75.90	121.20	6,656.5	5,477.5	-876.4	3,499.9	3,252.6	6.35	2.26	6.13	
9,047.0	76.50	123.10	6,664.1	5,485.1	-893.0	3,526.2	3,283.4	6.06	1.88	5.94	
9,078.0	77.60	124.90	6,671.1	5,492.1	-909.9	3,551.2	3,313.4	6.68	3.55	5.81	
9,109.0	78.00	127.90	6,677.6	5,498.6	-927.8	3,575.6	3,343.7	9.55	1.29	9.68	
9,141.0	77.60	130.80	6,684.4	5,505.4	-947.7	3,599.8	3,374.9	8.95	-1.25	9.06	
9,172.0	78.20	133.80	6,690.9	5,511.9	-968.1	3,622.2	3,405.2	9.66	1.94	9.68	
9,204.0	78.90	137.30	6,697.3	5,518.3	-990.5	3,644.2	3,436.4	10.94	2.19	10.94	
9,235.0	78.30	140.50	6,703.4	5,524.4	-1,013.3	3,664.1	3,466.4	10.30	-1.94	10.32	
9,267.0	77.90	143.60	6,710.0	5,531.0	-1,038.0	3,683.4	3,497.0	9.56	-1.25	9.69	
9,298.0	78.90	147.20	6,716.2	5,537.2	-1,063.0	3,700.6	3,526.2	11.82	3.23	11.61	
9,330.0	81.00	150.20	6,721.8	5,542.8	-1,089.9	3,717.0	3,556.0	11.33	6.56	9.38	
9,361.0	83.40	152.60	6,726.0	5,547.0	-1,116.9	3,731.7	3,584.5	10.90	7.74	7.74	
515877 LP @3814' VS P2											
9,386.1	85.44	154.48	6,728.5	5,549.5	-1,139.3	3,742.8	3,607.4	11.04	8.12	7.51	
515877 PLAT LP2 @3											
9,386.2	85.44	154.48	6,728.5	5,549.5	-1,139.4	3,742.9	3,607.5	0.00	0.00	0.00	
515877 PLAT LP2 @2 - 515877 LP @3814' VS P2											
9,386.7	85.49	154.53	6,728.5	5,549.5	-1,139.8	3,743.1	3,607.9	13.13	9.68	8.90	
9,393.0	86.00	155.00	6,729.0	5,550.0	-1,145.5	3,745.8	3,613.6	11.07	8.16	7.50	
9,424.0	87.40	155.50	6,730.8	5,551.8	-1,173.6	3,758.7	3,641.5	4.79	4.52	1.61	

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Phoenix Technology Services
Survey Report



Database:	EOM 5000.1 Single User Dr	Local Co-ordinate Reference:	Well Well #51687T - Marcellus
Company:	EQT PRODUCTION	TVD Reference:	KB 23 @ 1179.0usft
Project:	Doddridge County, WV	MD Reference:	YB 23 @ 1179.0usft
Site:	WBU2	North Reference:	Grid
Well:	Well #51687T - Marcellus	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	51687T 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)
LP=9456' MD/6733' TVD										
9,456.0	90.00	155.50	6,731.5	5,552.5	-1,202.7	3,772.0	3,670.3	8.13	8.13	0.00
9,518.0	92.80	154.90	6,730.0	5,551.0	-1,259.0	3,798.0	3,726.3	4.62	4.52	-0.97
9,613.0	90.90	153.80	6,726.9	5,547.9	-1,344.6	3,839.1	3,812.6	2.31	-2.00	-1.16
9,707.0	91.30	152.90	6,725.1	5,546.1	-1,428.6	3,881.2	3,898.7	1.05	0.43	-0.96
9,801.0	89.70	153.50	6,724.3	5,545.3	-1,512.5	3,923.6	3,984.9	1.82	-1.70	0.64
9,896.0	89.70	153.00	6,724.8	5,545.8	-1,597.3	3,966.4	4,072.0	0.53	0.00	-0.53
9,990.0	89.80	152.90	6,725.2	5,546.2	-1,681.0	4,009.1	4,158.3	0.15	0.11	-0.11
10,084.0	89.90	154.80	6,725.4	5,546.4	-1,765.4	4,050.5	4,244.1	2.02	0.11	2.02
10,178.0	90.30	154.40	6,725.3	5,546.3	-1,850.3	4,090.9	4,329.4	0.60	0.43	-0.43
10,272.0	90.60	154.70	6,724.5	5,545.5	-1,935.2	4,131.3	4,414.7	0.45	0.32	0.32
10,367.0	90.80	154.80	6,723.4	5,544.4	-2,021.1	4,171.8	4,500.7	0.24	0.21	0.11
10,461.0	90.70	152.80	6,722.1	5,543.1	-2,105.4	4,213.3	4,586.5	2.13	-0.11	-2.13
10,556.0	90.10	150.80	6,721.5	5,542.5	-2,189.1	4,258.2	4,674.5	2.20	-0.63	-2.11
10,650.0	91.30	153.20	6,720.3	5,541.3	-2,272.1	4,302.3	4,761.5	2.85	1.28	2.55
10,745.0	92.00	155.50	6,717.6	5,538.6	-2,357.7	4,343.4	4,847.8	2.53	0.74	2.42
10,839.0	92.20	154.80	6,714.1	5,535.1	-2,442.9	4,382.9	4,932.6	0.77	0.21	-0.74
10,933.0	91.30	157.70	6,711.3	5,532.3	-2,528.9	4,420.7	5,016.6	3.23	-0.96	3.09
11,027.0	91.30	158.10	6,709.1	5,530.1	-2,616.0	4,456.1	5,099.5	0.43	0.00	0.43
11,121.0	91.80	157.30	6,706.6	5,527.6	-2,702.9	4,491.7	5,182.4	1.00	0.53	-0.85
11,215.0	91.10	157.50	6,704.2	5,525.2	-2,789.7	4,527.8	5,265.6	0.77	-0.74	0.21
11,310.0	90.20	161.60	6,703.1	5,524.1	-2,878.7	4,561.0	5,348.0	4.42	-0.95	4.32
11,404.0	90.90	161.50	6,702.2	5,523.2	-2,967.8	4,590.8	5,427.9	0.75	0.74	-0.11
11,499.0	89.20	158.10	6,702.2	5,523.2	-3,057.0	4,623.6	5,510.0	4.00	-1.79	-3.58
11,593.0	89.90	156.30	6,702.9	5,523.9	-3,143.6	4,660.0	5,593.4	2.05	0.74	-1.91
11,688.0	90.70	158.20	6,702.4	5,523.4	-3,231.2	4,696.7	5,677.6	2.17	0.84	2.00
11,782.0	90.20	157.20	6,701.7	5,522.7	-3,318.2	4,732.4	5,760.6	1.19	-0.53	-1.06
11,876.0	90.30	152.50	6,701.2	5,522.2	-3,403.3	4,772.3	5,845.7	5.00	0.11	-5.00
11,971.0	90.90	151.70	6,700.2	5,521.2	-3,487.2	4,816.8	5,933.5	1.05	0.63	-0.84
12,065.0	90.90	149.50	6,698.8	5,519.8	-3,569.1	4,862.9	6,021.3	2.34	0.00	-2.34
12,160.0	89.60	153.40	6,698.4	5,519.4	-3,652.5	4,908.3	6,109.5	4.33	-1.37	4.11
12,254.0	89.80	152.90	6,698.9	5,519.9	-3,736.4	4,950.8	6,195.8	0.57	0.21	-0.53
12,348.0	90.00	152.60	6,699.0	5,520.0	-3,820.0	4,993.8	6,282.3	0.38	0.21	-0.32
12,442.0	90.30	152.00	6,698.8	5,519.8	-3,903.2	5,037.5	6,369.1	0.71	0.32	-0.64
12,537.0	90.80	152.30	6,697.9	5,518.9	-3,987.2	5,081.9	6,456.9	0.61	0.53	0.32
12,631.0	91.50	152.00	6,696.0	5,517.0	-4,070.3	5,125.8	6,543.7	0.81	0.74	-0.32
12,725.0	91.80	151.40	6,693.3	5,514.3	-4,153.0	5,170.3	6,630.8	0.71	0.32	-0.64
12,819.0	92.20	151.90	6,690.0	5,511.0	-4,235.7	5,214.9	6,718.0	0.68	0.43	0.53
Final Survey=12900' MD/6884' TVD										
12,900.0	92.50	151.40	6,686.7	5,507.7	-4,306.9	5,253.4	6,793.0	0.72	0.37	-0.62
PROJ to Bit=12953' MD/6884' TVD - 51687T Plat TD p2 - 51687T Plat TD p3										
12,953.0	92.50	151.40	6,684.3	5,505.3	-4,353.4	5,278.7	6,842.2	0.00	0.00	0.00

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Phoenix Technology Services
Survey Report



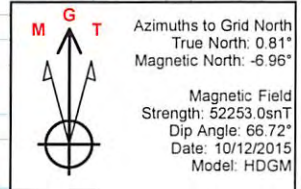
Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Well #515877 - Marcellus
Company:	EQT PRODUCTION	TVD Reference:	KB 23' @ 1179.0usft
Project:	Doddridge County, WV	MD Reference:	KB 23' @ 1179.0usft
Site:	WEL2	North Reference:	Grid
Well:	Well #515877 - Marcellus	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	515877 As Drilled Surveys		

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
4,801.0	4,795.8	-132.2	85.7	Gyro Tie On=4801' MD
9,456.0	6,731.5	-1,202.7	3,772.0	LP=9456' MD/6732' TVD
12,900.0	6,686.7	-4,306.9	5,253.4	Final Survey=12900' MD/6687' TVD
12,953.0	6,684.3	-4,353.4	5,278.7	PROJ to Bit=12953' MD/6684' TVD

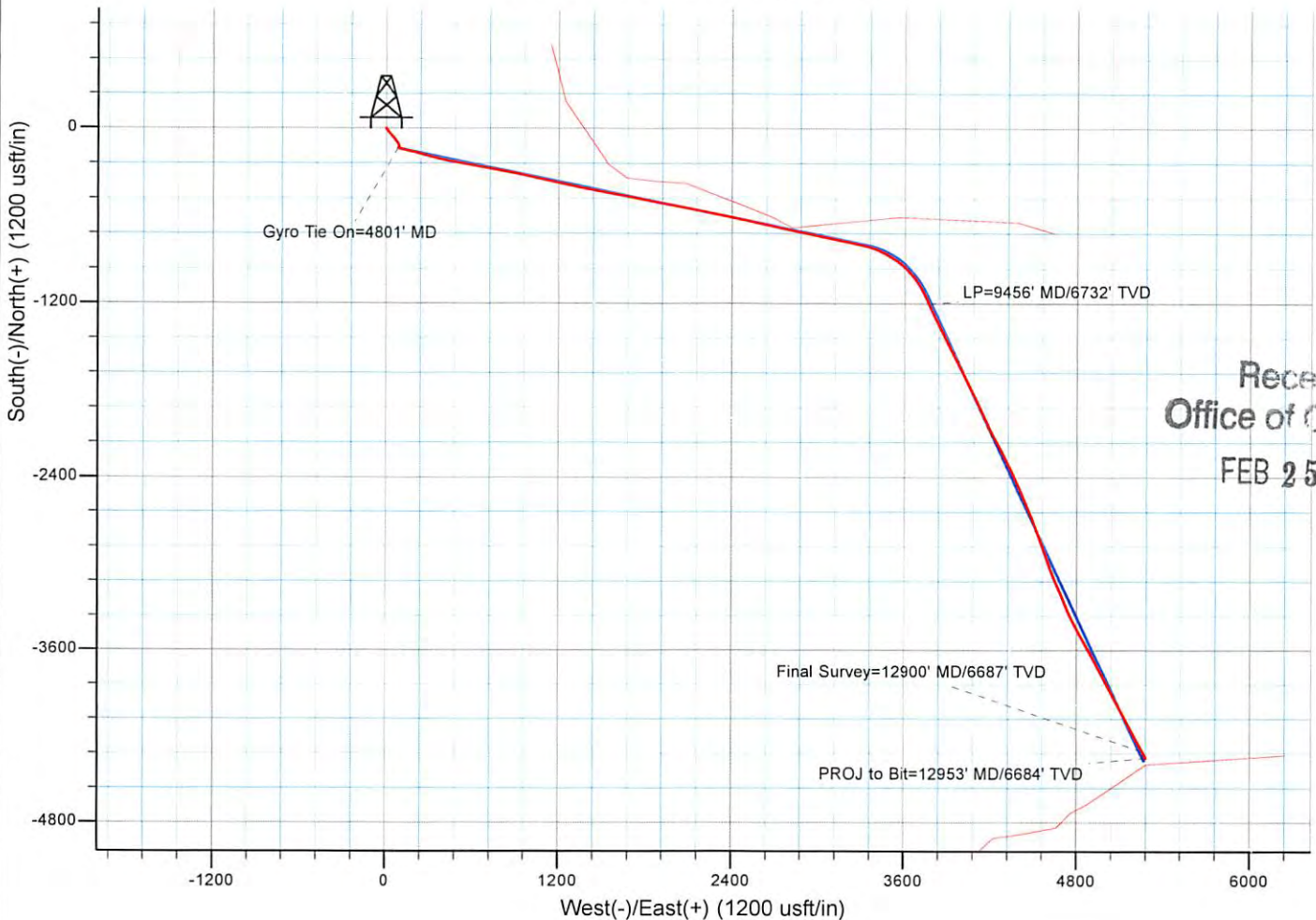
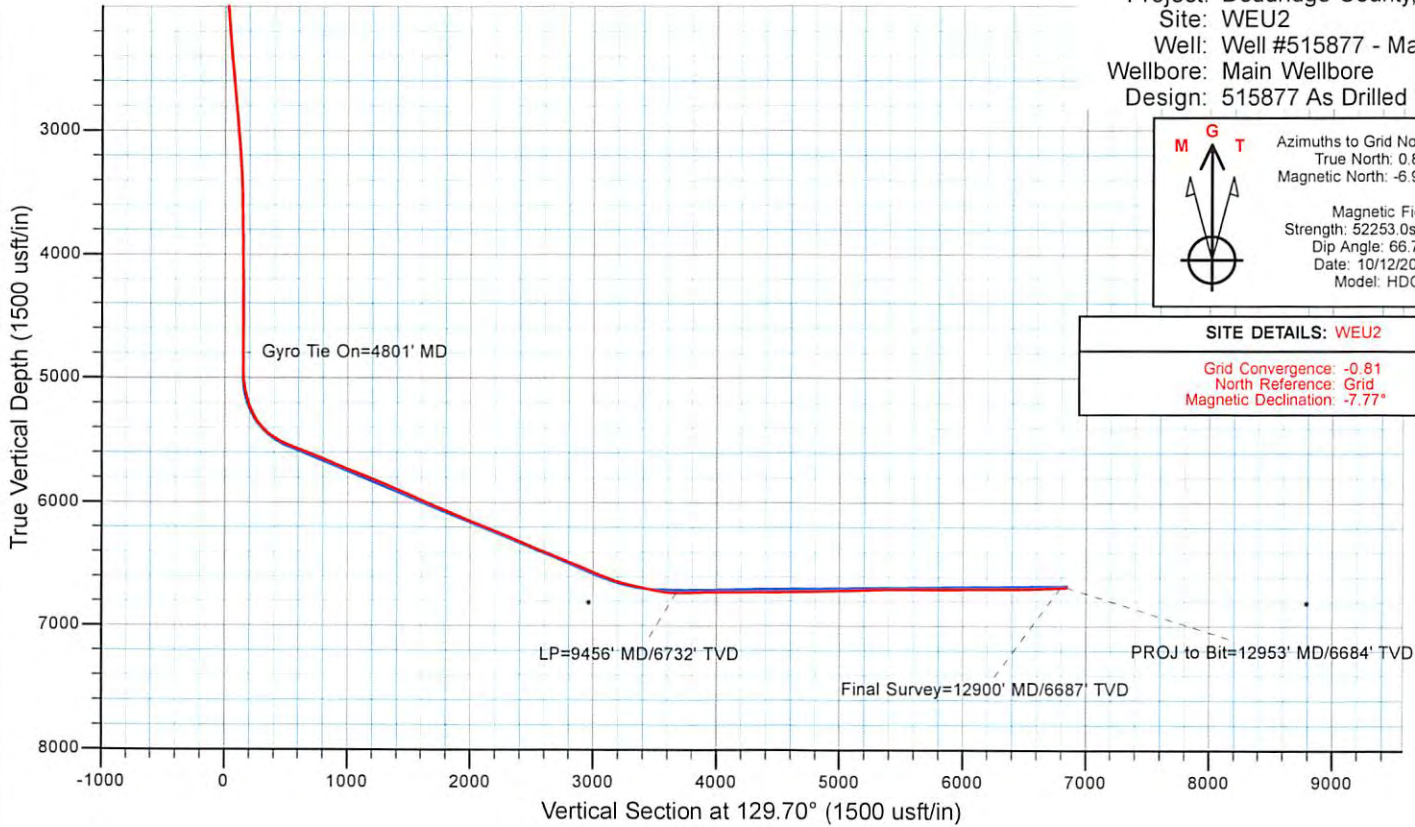
Checked By: _____ Approved By: _____ Date: _____

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Project: Doddridge County, WV
 Site: WEU2
 Well: Well #515877 - Marcellus
 Wellbore: Main Wellbore
 Design: 515877 As Drilled Surveys



SITE DETAILS: WEU2	
Grid Convergence:	-0.81
North Reference:	Grid
Magnetic Declination:	-7.77°



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