



EQT PRODUCTION

PUL96 Pad
Well #515883- Marcellus - Slot 515883
Main Wellbore
Well License:
API #47-08510219
Design: 515883 As Drilled Surveys

Survey Report

08 February, 2016

Received
Office of Oil & Gas
NOV 17 2016



Phoenix Technology Services

Survey Report



Database: EDM 5000 1 Single User Db Company: EQT PRODUCTION Project: Ritchie County, WV Site: PUL96 Pad Well: Well #515883- Marcellus Wellbore: Main Wellbore Design: 515883 As Drilled Surveys	Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method: Well License	Well Well #515883- Marcellus - Slot 515883 KB 23' @ 1206 Ousft KB 23' @ 1206 Ousft Grid Minimum Curvature
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Project: Ritchie 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: PUL96 Pad

Site Position:	From: Map	Northing: 262,406.23 usft	Latitude: 39.21
		Easting: 1,578,892.62 usft	Longitude: -80.99
Position Uncertainty: 0.0 usft		Slot Radius: 13-3/16 "	Grid Convergence: -0.95 °

Well: Well #515883- Marcellus - Slot 515883

Well Position	+N/-S 0.0 usft	Northing: 262,458.95 usft	Latitude: 39° 12' 39.752 N
	+E/-W 0.0 usft	Easting: 1,578,921.47 usft	Longitude: 80° 59' 9.944 W
Position Uncertainty 0.0 usft		Wellhead Elevation: 0.0 usft	Ground Level: 1,183.0 usft

Wellbore: Main Wellbore

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	1/22/2016	-7.66	66.53	51,970

Design: 515883 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	180.62

Survey Program Date: 2/8/2016

From (')	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	2,942.0	515883 VES Gyros (Main Wellbore)	VES Spec AVG 04-08-15	Tnaxial Continuous Gyro Model
0.00	15,151.0	515883 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	-1,206.0	0.0	0.0	0.0	0.00	0.00	0.00
110.0	0.06	29.78	110.0	-1,096.0	0.0	0.0	-0.1	0.05	0.05	0.00
210.0	0.25	118.74	210.0	-996.0	0.0	0.2	0.0	0.26	0.19	0.00
310.0	0.21	137.94	310.0	-896.0	-0.3	0.6	0.2	0.09	-0.04	19.20
410.0	0.32	125.48	410.0	-796.0	-0.5	0.9	0.5	0.12	0.11	-12.46
510.0	0.28	217.03	510.0	-696.0	-0.9	1.0	0.9	0.43	-0.04	91.55
610.0	0.27	294.87	610.0	-596.0	-1.0	0.8	1.0	0.35	-0.01	77.84
710.0	0.89	305.46	710.0	-496.0	-0.5	-0.2	0.5	0.63	0.62	10.59

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Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Well #515883- Marcellus - Slot 515883
Company:	EQT PRODUCTION	TVD Reference:	KB 23' @ 1206 Ousft
Project:	Ritchie County, WV	MD Reference:	KB 23' @ 1206 Ousft
Site:	PUL96 Pad	North Reference:	Gnd
Well:	Well #515883- Marcellus	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore	Well License:	
Design:	515883 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)
810.0	1.03	298.62	810.0	-396.0	0.4	-1.6	-0.4	0.18	0.14	-6.84
910.0	1.06	303.00	910.0	-296.0	1.4	-3.2	-1.3	0.09	0.03	4.38
1,010.0	0.91	300.89	1,009.9	-196.1	2.3	-4.7	-2.2	0.15	-0.15	-2.11
1,110.0	0.66	285.76	1,109.9	-96.1	2.8	-5.9	-2.8	0.32	-0.25	-15.13
1,210.0	0.77	278.08	1,209.9	3.9	3.1	-7.1	-3.0	0.15	0.11	-7.68
1,310.0	0.71	284.81	1,309.9	103.9	3.3	-8.4	-3.3	0.11	-0.06	6.73
1,410.0	0.60	290.59	1,409.9	203.9	3.7	-9.5	-3.6	0.13	-0.11	5.78
1,510.0	0.56	302.14	1,509.9	303.9	4.1	-10.4	-4.0	0.12	-0.04	11.55
1,610.0	0.42	4.07	1,609.9	403.9	4.8	-10.8	-4.6	0.52	-0.14	61.93
1,710.0	0.35	45.70	1,709.9	503.9	5.3	-10.5	-5.2	0.28	-0.07	41.63
1,810.0	0.38	84.61	1,809.9	603.9	5.6	-10.0	-5.5	0.24	0.03	38.91
1,910.0	0.54	128.54	1,909.9	703.9	5.3	-9.3	-5.2	0.37	0.16	43.93
2,010.0	0.54	117.22	2,009.9	803.9	4.8	-8.5	-4.7	0.11	0.00	-11.32
2,110.0	0.66	122.66	2,109.9	903.9	4.3	-7.6	-4.2	0.13	0.12	5.44
2,210.0	0.68	147.16	2,209.9	1,003.9	3.5	-6.8	-3.4	0.28	0.00	24.50
2,310.0	0.48	135.62	2,309.9	1,103.9	2.7	-6.2	-2.6	0.21	-0.18	-11.54
2,410.0	0.38	131.75	2,409.9	1,203.9	2.2	-5.6	-2.1	0.10	-0.10	-3.87
2,510.0	0.49	132.33	2,509.9	1,303.9	1.7	-5.1	-1.6	0.11	0.11	0.58
2,610.0	0.39	113.75	2,609.9	1,403.9	1.2	-4.4	-1.2	0.17	-0.10	-18.58
2,710.0	0.40	111.80	2,709.9	1,503.9	1.0	-3.6	-0.9	0.02	0.01	-1.95
2,810.0	0.46	138.99	2,809.9	1,603.9	0.5	-3.2	-0.5	0.21	0.06	27.19
2,910.0	0.28	137.78	2,909.9	1,703.9	0.1	-2.8	0.0	0.18	-0.18	-1.21
Gyro Tie On=2942' MD										
2,942.0	0.39	151.47	2,941.9	1,735.9	-0.1	-2.7	0.1	0.42	0.34	42.78
2,971.0	1.00	277.70	2,970.9	1,764.9	-0.1	-2.9	0.2	4.38	2.10	435.28
3,002.0	2.90	301.40	3,001.8	1,795.8	0.3	-3.8	-0.3	6.53	6.13	76.45
3,034.0	5.50	305.90	3,033.8	1,827.8	1.6	-5.8	-1.6	8.18	8.13	14.06
3,065.0	7.70	305.70	3,064.5	1,858.5	3.7	-8.7	-3.6	7.10	7.10	-0.65
3,097.0	10.30	305.50	3,096.1	1,890.1	6.6	-12.7	-6.5	8.13	8.13	-0.63
3,128.0	12.80	304.70	3,126.5	1,920.5	10.2	-17.8	-10.0	8.08	8.06	-2.58
3,159.0	15.40	303.80	3,156.6	1,950.6	14.4	-24.0	-14.2	8.42	8.39	-2.90
3,191.0	17.40	303.90	3,187.3	1,981.3	19.5	-31.6	-19.1	8.25	8.25	
3,222.0	20.00	301.80	3,216.6	2,010.6	24.8	-39.9	-24.4	8.66	8.39	
3,254.0	22.60	300.20	3,246.5	2,040.5	30.8	-49.9	-30.3	8.32	8.13	
3,285.0	25.10	299.50	3,274.8	2,068.8	37.1	-60.7	-36.4	8.12	8.06	
3,316.0	28.10	298.80	3,302.5	2,096.5	43.8	-72.9	-43.0	9.73	9.68	
3,348.0	31.10	299.50	3,330.3	2,124.3	51.5	-86.7	-50.6	9.44	9.38	2.19
3,379.0	34.50	300.60	3,356.4	2,150.4	59.9	-101.2	-58.8	11.13	10.97	3.55
3,411.0	38.40	301.10	3,382.1	2,176.1	69.7	-117.5	-68.4	12.22	12.19	1.56
3,473.0	45.60	303.30	3,428.2	2,222.2	91.8	-152.6	-90.1	11.85	11.61	3.55
3,568.0	45.50	301.50	3,494.7	2,288.7	128.2	-209.8	-125.9	1.36	-0.11	-1.89
3,662.0	44.70	299.40	3,561.1	2,355.1	161.9	-267.2	-159.0	1.80	-0.65	-2.23
3,756.0	43.40	296.40	3,628.6	2,422.6	192.5	-324.9	-188.9	2.61	-1.38	-3.19

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Wellbore:	Main Wellbore	Well License:	
Design:	515883 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)
3,851.0	41.30	299.70	3,698.8	2,492.8	222.5	-381.4	-218.4	3.22	-2.21	3.47
3,945.0	40.20	295.50	3,770.1	2,564.1	251.0	-435.8	-246.2	3.14	-1.17	-4.47
4,039.0	39.70	303.00	3,842.2	2,636.2	280.4	-488.3	-275.1	5.15	-0.53	7.98
4,133.0	40.60	304.10	3,914.0	2,708.0	313.9	-538.9	-308.0	1.22	0.96	1.17
4,227.0	40.80	303.40	3,985.3	2,779.3	348.0	-589.8	-341.5	0.53	0.21	-0.74
4,321.0	40.60	304.00	4,056.5	2,850.5	382.0	-640.8	-375.0	0.47	-0.21	0.64
4,415.0	38.30	304.40	4,129.1	2,923.1	415.5	-690.2	-408.0	2.46	-2.45	0.43
4,509.0	39.80	306.90	4,202.1	2,996.1	450.1	-738.3	-442.0	2.31	1.60	2.66
4,604.0	41.10	306.70	4,274.4	3,068.4	487.0	-787.7	-478.4	1.38	1.37	-0.21
4,698.0	39.70	301.70	4,346.0	3,140.0	521.2	-838.0	-512.1	3.75	-1.49	-5.32
4,793.0	39.00	305.30	4,419.5	3,213.5	554.5	-888.2	-544.7	2.51	-0.74	3.79
4,887.0	40.30	305.30	4,491.9	3,285.9	589.1	-937.2	-578.9	1.38	1.38	0.00
4,981.0	41.80	304.80	4,562.8	3,358.8	624.6	-987.7	-613.8	1.63	1.60	-0.53
5,076.0	42.50	304.90	4,633.2	3,427.2	661.0	-1,040.0	-649.6	0.74	0.74	0.11
5,170.0	40.80	301.90	4,703.4	3,497.4	695.4	-1,092.2	-683.4	2.79	-1.81	-3.19
5,264.0	42.00	302.80	4,773.9	3,567.9	728.7	-1,144.7	-716.1	1.42	1.28	0.96
5,359.0	39.80	299.20	4,845.8	3,639.8	760.7	-1,197.9	-747.6	3.39	-2.32	-3.79
5,453.0	41.20	301.00	4,917.2	3,711.2	791.3	-1,250.7	-777.7	1.94	1.49	1.91
5,548.0	44.00	302.10	4,987.2	3,781.2	825.0	-1,305.5	-810.7	3.05	2.95	1.16
5,642.0	42.20	298.00	5,055.8	3,849.8	857.2	-1,361.1	-842.3	3.54	-1.91	-4.36
5,736.0	41.50	300.50	5,125.8	3,919.8	887.8	-1,415.8	-872.3	1.92	-0.74	2.66
5,831.0	40.70	304.20	5,197.4	3,991.4	921.2	-1,468.5	-905.1	2.69	-0.84	3.89
5,925.0	39.10	301.60	5,269.5	4,063.5	954.0	-1,519.1	-937.3	2.46	-1.70	-2.77
6,019.0	39.70	304.70	5,342.2	4,136.2	986.6	-1,569.1	-969.4	2.19	0.64	3.30
6,113.0	40.60	303.90	5,414.0	4,208.0	1,020.7	-1,619.1	-1,003.0	1.10	0.96	-0.85
6,208.0	41.40	302.60	5,485.7	4,279.7	1,054.9	-1,671.3	-1,036.6	1.23	0.84	-1.37
6,302.0	38.80	299.30	5,557.6	4,351.6	1,086.1	-1,723.1	-1,067.2	3.57	-2.77	-3.51
6,333.0	37.60	297.80	5,582.0	4,376.0	1,095.2	-1,740.0	-1,076.2	4.89	-3.87	-4.84
6,365.0	36.80	296.30	5,607.5	4,401.5	1,104.0	-1,757.2	-1,084.8	3.78	-2.50	-4.69
6,396.0	37.00	294.50	5,632.3	4,426.3	1,112.0	-1,774.0	-1,092.6	3.55	0.65	-5.81
6,428.0	38.30	292.90	5,657.6	4,451.6	1,119.9	-1,791.9	-1,100.3	5.08	4.06	-5.00
6,459.0	38.30	290.80	5,681.9	4,475.9	1,127.0	-1,809.7	-1,107.2	4.20	0.00	-6.77
6,491.0	37.40	287.10	5,707.2	4,501.2	1,133.4	-1,828.3	-1,113.4	7.63	-2.81	-11.58
6,522.0	36.10	281.00	5,732.1	4,526.1	1,137.9	-1,846.3	-1,117.7	12.49	-4.19	-19.66
6,553.0	35.10	275.40	5,757.3	4,551.3	1,140.5	-1,864.1	-1,120.1	11.00	-3.23	-18.06
6,585.0	33.30	270.80	5,783.7	4,577.7	1,141.5	-1,882.1	-1,120.9	9.84	-5.63	-14.38
6,616.0	31.30	265.00	5,810.0	4,604.0	1,140.9	-1,898.6	-1,120.1	11.89	-6.45	-18.71
6,648.0	29.60	258.80	5,837.5	4,631.5	1,138.6	-1,914.6	-1,117.7	11.16	-5.31	-19.38
6,679.0	29.80	254.10	5,864.5	4,658.5	1,135.0	-1,929.6	-1,113.9	7.54	0.65	-15.16
6,711.0	30.40	249.80	5,892.2	4,686.2	1,130.1	-1,944.8	-1,108.8	6.99	1.88	-13.44
6,742.0	30.40	244.00	5,918.9	4,712.9	1,123.9	-1,959.2	-1,102.5	9.46	0.00	-18.71
6,773.0	30.60	237.80	5,945.6	4,739.6	1,116.3	-1,973.0	-1,094.7	10.17	0.65	-20.00

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Wellbore:	Main Wellbore	Well License:	
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6,805.0	31.12	231.90	5,973.1	4,767.1	1,106.8	-1,986.4	-1,085.1	9.59	1.63	-18.44
6,836.0	31.70	226.20	5,999.6	4,793.6	1,096.2	-1,998.5	-1,074.4	9.76	1.87	-18.39
6,868.0	33.00	221.10	6,026.6	4,820.6	1,083.9	-2,010.3	-1,061.9	9.44	4.06	-15.94
6,899.0	34.90	217.10	6,052.3	4,846.3	1,070.4	-2,021.2	-1,048.3	9.46	6.13	-12.90
6,931.0	34.90	213.60	6,078.6	4,872.6	1,055.5	-2,031.8	-1,033.3	6.26	0.00	-10.94
6,962.0	34.50	209.90	6,104.1	4,898.1	1,040.5	-2,041.1	-1,018.2	6.92	-1.29	-11.94
6,973.0	34.50	208.60	6,113.1	4,907.1	1,035.1	-2,044.2	-1,012.7	6.69	0.00	-11.62
7,004.0	34.80	203.60	6,138.6	4,932.6	1,019.2	-2,051.9	-996.8	9.22	0.97	-16.13
7,036.0	37.30	201.20	6,164.5	4,958.5	1,001.8	-2,059.1	-979.3	8.97	7.81	-7.50
7,067.0	40.40	199.50	6,188.6	4,982.6	983.6	-2,065.8	-961.0	10.57	10.00	-5.48
7,099.0	44.10	196.90	6,212.3	5,006.3	963.2	-2,072.5	-940.5	12.79	11.56	-8.13
7,130.0	47.70	196.10	6,233.9	5,027.9	941.8	-2,078.8	-919.1	11.76	11.61	-2.58
7,161.0	50.70	194.50	6,254.1	5,048.1	919.2	-2,085.0	-896.4	10.44	9.68	-5.16
7,193.0	55.00	192.50	6,273.5	5,067.5	894.4	-2,091.0	-871.5	14.33	13.44	-6.25
7,224.0	58.70	191.90	6,290.4	5,084.4	869.0	-2,096.4	-846.1	12.04	11.94	-1.94
7,256.0	62.50	192.10	6,306.1	5,100.1	841.8	-2,102.2	-818.8	11.89	11.88	0.63
7,287.0	66.50	191.00	6,319.5	5,113.5	814.4	-2,107.8	-791.3	13.29	12.90	-3.55
7,318.0	69.50	189.90	6,331.1	5,125.1	786.1	-2,113.0	-763.0	10.22	9.68	-3.55
7,350.0	72.90	188.70	6,341.4	5,135.4	756.2	-2,117.9	-733.1	11.20	10.63	-3.75
7,381.0	76.10	187.30	6,349.7	5,143.7	726.6	-2,122.1	-703.4	11.20	10.32	-4.52
7,413.0	79.20	185.60	6,356.5	5,150.5	695.6	-2,125.6	-672.3	10.99	9.69	-5.31
7,444.0	82.10	183.50	6,361.6	5,155.6	665.1	-2,128.0	-641.8	11.50	9.35	-6.77
7,476.0	84.70	180.60	6,365.2	5,159.2	633.3	-2,129.2	-610.1	12.13	8.13	-9.06
7,507.0	87.20	177.60	6,367.4	5,161.4	602.4	-2,128.7	-579.2	12.58	8.06	-9.68
7,539.0	89.00	173.70	6,368.5	5,162.5	570.5	-2,126.2	-547.3	13.42	5.63	-12.19
LP/Deepest Point=7670' MD/6368' TVD										
7,570.0	90.50	169.50	6,368.6	5,162.6	539.9	-2,121.7	-516.7	14.39	4.84	-13.55
7,590.0	90.90	166.10	6,368.4	5,162.4	520.3	-2,117.5	-497.2	17.12	2.00	-17.00
515883 LP -498 VS										
7,605.0	91.11	164.91	6,368.1	5,162.1	505.8	-2,113.7	-482.7	8.07	1.37	-7.95
515883 LP -498' VS p6										
7,606.7	91.13	164.77	6,368.1	5,162.1	504.2	-2,113.3	-481.1	8.07	1.37	-7.95
7,634.0	91.50	162.60	6,367.5	5,161.5	478.0	-2,105.6	-455.0	8.07	1.36	-7.96
7,728.0	92.20	160.80	6,364.4	5,158.4	388.8	-2,076.1	-366.1	2.05	0.74	-1.91
7,822.0	90.70	160.90	6,362.0	5,156.0	300.0	-2,045.3	-277.7	1.60	-1.60	0.11
7,917.0	90.60	161.20	6,361.0	5,155.0	210.2	-2,014.5	-188.2	0.33	-0.11	0.32
8,011.0	90.60	160.40	6,360.0	5,154.0	121.4	-1,983.5	-99.8	0.85	0.00	-0.85
8,105.0	90.80	160.60	6,358.8	5,152.8	32.8	-1,952.2	-11.5	0.30	0.21	0.21
8,200.0	89.30	161.80	6,358.7	5,152.7	-57.1	-1,921.6	78.1	2.02	-1.58	1.26
8,294.0	89.60	162.60	6,359.6	5,153.6	-146.6	-1,892.8	167.3	0.91	0.32	0.85
8,388.0	89.30	162.00	6,360.6	5,154.6	-236.2	-1,864.2	256.5	0.71	-0.32	-0.64
8,483.0	90.00	162.60	6,361.1	5,155.1	-326.7	-1,835.4	346.7	0.97	0.74	0.63
8,577.0	90.10	163.60	6,361.0	5,155.0	-416.6	-1,808.0	436.3	1.07	0.11	1.06

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Phoenix Technology Services
Survey Report



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Database:	EDM 5000 1 Single User Db	Local Co-ordinate Reference:	Well Well #515883- Marcellus - Slot 515883
Company:	EQT PRODUCTION	TVD Reference:	KB 23' @ 1206 0usft
Project:	Ritchie County, WV	MD Reference:	KB 23' @ 1206 0usft
Site:	PUL86 Pad	North Reference:	Gnd
Well:	Well #515883- Marcellus	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore	Well License:	
Design:	515883 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)
515883 Plat LP										
8,646.4	90.25	163.23	6,360.8	5,154.8	-483.1	-1,788.2	502.6	0.57	0.21	-0.53
8,672.0	90.30	163.10	6,360.7	5,154.7	-507.6	-1,780.8	527.0	0.57	0.21	-0.53
8,766.0	90.70	163.40	6,359.9	5,153.9	-597.6	-1,753.7	616.7	0.53	0.43	0.32
8,860.0	90.70	162.30	6,358.7	5,152.7	-687.5	-1,726.0	706.2	1.17	0.00	-1.17
8,955.0	89.30	164.50	6,358.7	5,152.7	-778.5	-1,698.9	797.0	2.74	-1.47	2.32
9,049.0	88.90	164.10	6,360.2	5,154.2	-869.0	-1,673.4	887.2	0.60	-0.43	-0.43
9,143.0	91.50	166.60	6,359.9	5,153.9	-959.9	-1,649.7	977.8	3.84	2.77	2.66
9,238.0	91.80	166.20	6,357.2	5,151.2	-1,052.2	-1,627.3	1,069.9	0.53	0.32	-0.42
9,333.0	91.80	166.60	6,354.2	5,148.2	-1,144.5	-1,605.0	1,161.9	0.42	0.00	0.42
9,426.0	92.80	166.20	6,350.4	5,144.4	-1,234.8	-1,583.2	1,252.0	1.16	1.08	-0.43
9,521.0	89.50	164.20	6,348.5	5,142.5	-1,326.6	-1,558.9	1,343.5	4.06	-3.47	-2.11
9,615.0	89.40	163.70	6,349.4	5,143.4	-1,416.9	-1,532.9	1,433.6	0.54	-0.11	-0.53
9,710.0	89.30	163.40	6,350.5	5,144.5	-1,508.1	-1,506.0	1,524.4	0.33	-0.11	-0.32
9,804.0	89.30	163.20	6,351.7	5,145.7	-1,598.1	-1,479.0	1,614.1	0.21	0.00	-0.21
9,899.0	89.30	163.30	6,352.8	5,146.8	-1,689.0	-1,451.6	1,704.8	0.11	0.00	0.11
9,993.0	89.40	163.80	6,353.9	5,147.9	-1,779.2	-1,425.0	1,794.6	0.54	0.11	0.53
10,087.0	90.10	165.20	6,354.3	5,148.3	-1,869.8	-1,399.9	1,884.9	1.67	0.74	1.49
10,182.0	90.00	166.00	6,354.2	5,148.2	-1,961.8	-1,376.3	1,976.7	0.85	-0.11	0.84
10,276.0	90.30	165.70	6,354.0	5,148.0	-2,052.9	-1,353.3	2,067.6	0.45	0.32	-0.32
10,371.0	90.40	165.50	6,353.4	5,147.4	-2,144.9	-1,329.7	2,159.3	0.24	0.11	-0.21
10,465.0	90.60	165.80	6,352.6	5,146.6	-2,236.0	-1,306.4	2,250.1	0.38	0.21	0.32
10,560.0	90.50	164.70	6,351.7	5,145.7	-2,327.9	-1,282.2	2,341.7	1.16	-0.11	-1.16
10,654.0	88.40	164.60	6,352.6	5,146.6	-2,418.5	-1,257.3	2,432.1	2.24	-2.23	-0.11
10,748.0	88.50	164.60	6,355.1	5,149.1	-2,509.1	-1,232.4	2,522.4	0.11	0.11	0.00
10,843.0	88.40	164.80	6,357.7	5,151.7	-2,600.7	-1,207.3	2,613.7	0.24	-0.11	0.21
10,937.0	88.30	164.30	6,360.4	5,154.4	-2,691.3	-1,182.3	2,704.0	0.54	-0.11	-0.53
11,031.0	88.20	164.80	6,363.3	5,157.3	-2,781.8	-1,157.2	2,794.3	0.54	-0.11	0.53
11,126.0	88.50	164.80	6,366.0	5,160.0	-2,873.5	-1,132.3	2,885.6	0.32	0.32	0.00
11,220.0	92.20	166.20	6,365.4	5,159.4	-2,964.4	-1,108.8	2,976.4	4.21	3.94	1.49
11,314.0	92.40	166.00	6,361.6	5,155.6	-3,055.6	-1,086.2	3,067.3	0.30	0.21	-0.21
11,408.0	92.70	165.20	6,357.5	5,151.5	-3,146.6	-1,062.9	3,158.0	0.91	0.32	-0.85
11,503.0	90.20	164.30	6,355.1	5,149.1	-3,238.2	-1,037.9	3,249.3	2.80	-2.63	-0.95
11,597.0	89.80	164.60	6,355.1	5,149.1	-3,328.8	-1,012.7	3,339.6	0.53	-0.43	0.32
11,692.0	89.00	164.90	6,356.1	5,150.1	-3,420.4	-987.7	3,431.0	0.90	-0.84	0.32
11,786.0	88.90	164.80	6,357.8	5,151.8	-3,511.1	-963.2	3,521.4	0.15	-0.11	-0.11
11,880.0	89.30	165.80	6,359.3	5,153.3	-3,602.0	-939.3	3,612.1	1.15	0.43	1.06
11,975.0	89.40	165.40	6,360.3	5,154.3	-3,694.0	-915.7	3,703.8	0.43	0.11	-0.42
12,069.0	89.80	165.40	6,361.0	5,155.0	-3,785.0	-892.0	3,794.5	0.43	0.43	0.00
12,164.0	90.00	165.80	6,361.2	5,155.2	-3,877.0	-868.4	3,886.3	0.47	0.21	0.42
12,258.0	89.50	165.20	6,361.6	5,155.6	-3,968.0	-844.8	3,977.0	0.83	-0.53	-0.64
12,352.0	90.10	166.40	6,361.9	5,155.9	-4,059.1	-821.8	4,067.9	1.43	0.64	1.28
12,447.0	90.30	166.10	6,361.6	5,155.6	-4,151.4	-799.2	4,159.9	0.58	0.21	-0.32

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Phoenix Technology Services
Survey Report



Database:	EDM 5000 1 Single User Db	Local Co-ordinate Reference:	Well Well #515883- Marcellus - Slot 515883
Company:	EQT PRODUCTION	TVD Reference:	KB 23' @ 1206 0usft
Project:	Ritchie County, WV	MD Reference:	KB 23' @ 1206 0usft
Site:	PUL98 Pad	North Reference:	Gnd
Well:	Well #515883- Marcellus	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore	Well License:	
Design:	515883 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)
12,541.0	90.60	166.30	6,360.8	5,154.8	-4,242.7	-776.8	4,250.9	0.38	0.32	0.21
12,636.0	90.60	166.50	6,359.8	5,153.8	-4,335.0	-754.4	4,343.0	0.21	0.00	0.21
12,730.0	89.00	165.00	6,360.2	5,154.2	-4,426.1	-731.3	4,433.9	2.33	-1.70	-1.60
12,824.0	89.00	165.20	6,361.8	5,155.8	-4,517.0	-707.1	4,524.4	0.21	0.00	0.21
12,919.0	89.00	165.50	6,363.5	5,157.5	-4,608.9	-683.1	4,616.0	0.32	0.00	0.32
13,013.0	89.00	164.90	6,365.1	5,159.1	-4,699.7	-659.1	4,706.6	0.64	0.00	-0.84
13,107.0	91.00	163.80	6,365.1	5,159.1	-4,790.2	-633.7	4,796.9	2.43	2.13	-1.17
13,202.0	91.10	163.80	6,363.4	5,157.4	-4,881.5	-607.2	4,887.8	0.11	0.11	0.00
13,296.0	91.10	164.30	6,361.5	5,155.5	-4,971.8	-581.4	4,977.9	0.53	0.00	0.53
13,390.0	91.10	164.50	6,359.7	5,153.7	-5,062.3	-556.1	5,068.1	0.21	0.00	0.21
13,485.0	91.10	164.10	6,357.9	5,151.9	-5,153.8	-530.4	5,159.3	0.42	0.00	-0.42
13,579.0	90.70	164.30	6,356.4	5,150.4	-5,244.2	-504.9	5,249.4	0.48	-0.43	0.21
13,674.0	89.30	163.40	6,356.4	5,150.4	-5,335.5	-478.4	5,340.4	1.75	-1.47	-0.95
13,768.0	89.30	162.90	6,357.6	5,151.6	-5,425.4	-451.2	5,430.0	0.53	0.00	-0.53
13,862.0	89.70	164.10	6,358.4	5,152.4	-5,515.5	-424.5	5,519.8	1.35	0.43	1.28
13,956.0	89.70	163.70	6,358.9	5,152.9	-5,605.9	-398.4	5,609.9	0.43	0.00	-0.43
14,051.0	89.80	163.70	6,359.3	5,153.3	-5,697.0	-371.8	5,700.7	0.11	0.11	0.00
14,145.0	90.00	163.80	6,359.5	5,153.5	-5,787.3	-345.5	5,790.7	0.24	0.21	0.11
14,239.0	90.40	164.30	6,359.2	5,153.2	-5,877.7	-319.6	5,880.8	0.68	0.43	0.53
14,333.0	90.40	164.20	6,358.5	5,152.5	-5,968.1	-294.1	5,971.0	0.11	0.00	-0.11
14,427.0	90.40	163.90	6,357.8	5,151.8	-6,058.5	-268.3	6,061.1	0.32	0.00	-0.32
14,522.0	90.40	164.40	6,357.2	5,151.2	-6,149.9	-242.3	6,152.2	0.53	0.00	0.53
14,616.0	90.40	164.30	6,356.5	5,150.5	-6,240.4	-217.0	6,242.4	0.11	0.00	-0.11
14,710.0	90.70	165.60	6,355.6	5,149.6	-6,331.2	-192.6	6,332.9	1.42	0.32	1.38
14,805.0	90.90	166.30	6,354.3	5,148.3	-6,423.3	-169.5	6,424.8	0.77	0.21	0.74
14,899.0	89.80	164.60	6,353.7	5,147.7	-6,514.3	-145.9	6,515.5	2.15	-1.17	-1.81
14,994.0	90.00	164.40	6,353.9	5,147.9	-6,605.8	-120.5	6,606.8	0.30	0.21	-0.21
15,088.0	90.10	164.60	6,353.8	5,147.8	-6,696.4	-95.4	6,697.1	0.24	0.11	0.21
Final Survey=15098' MD/6354' MD										
15,098.0	90.00	164.70	6,353.8	5,147.8	-6,706.1	-92.7	6,706.7	1.41	-1.00	1.00
PROJ to TD=15151' MD/6354' TVD - 515883 Plat TD p6 - 515883 Plat TD										
15,151.0	90.00	164.70	6,353.8	5,147.8	-6,757.2	-78.8	6,757.6	0.00	0.00	0.00

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,942.0	2,941.9	-0.1	-2.7	Gyro Tie On=2942' MD
7,570.0	6,368.6	539.9	-2,121.7	LP/Deepest Point=7570' MD/6369' TVD
15,098.0	6,353.8	-6,706.1	-92.7	Final Survey=15098' MD/6354' MD
15,151.0	6,353.8	-6,757.2	-78.8	PROJ to TD=15151' MD/6354' TVD

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Phoenix Technology Services
Survey Report

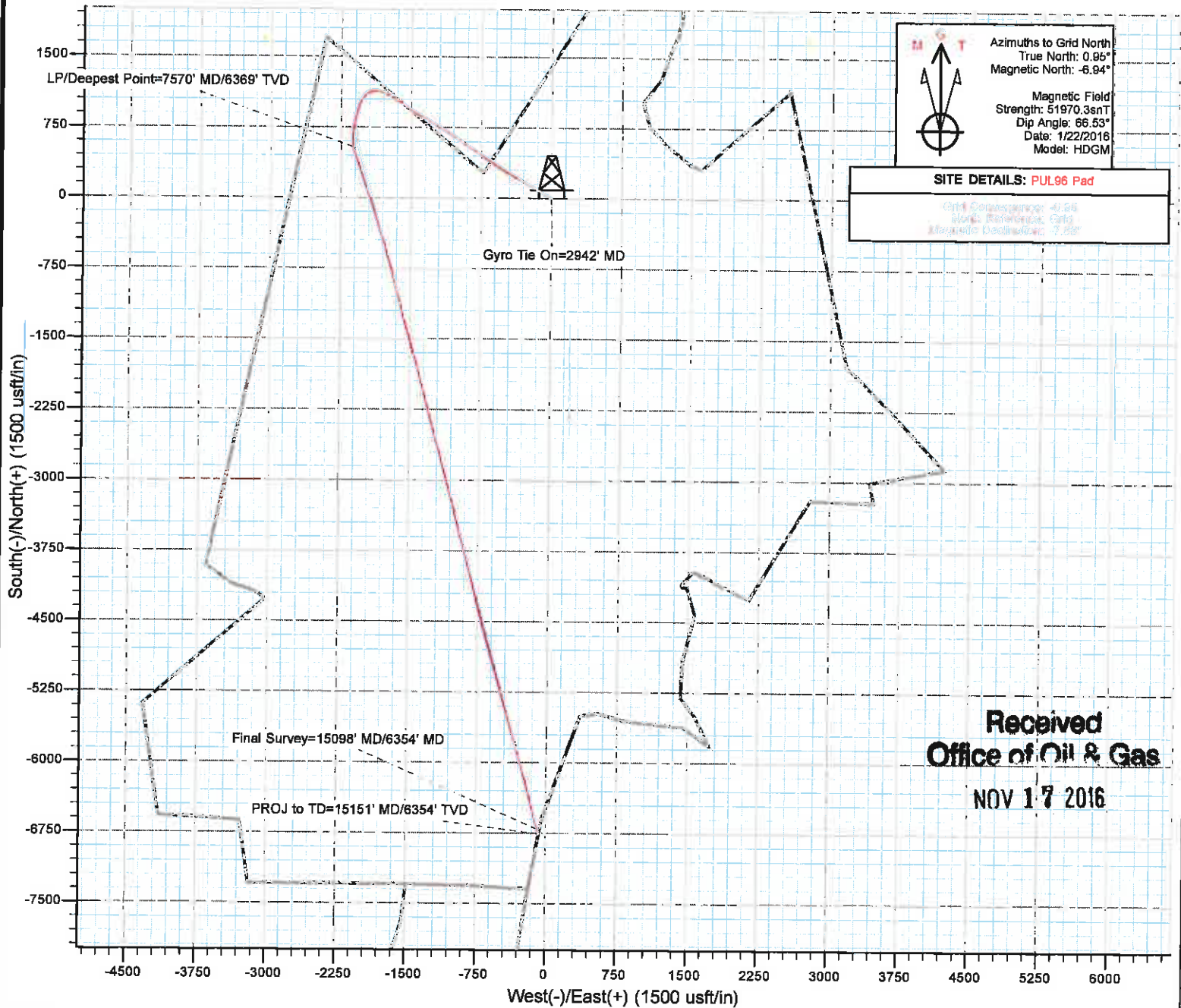
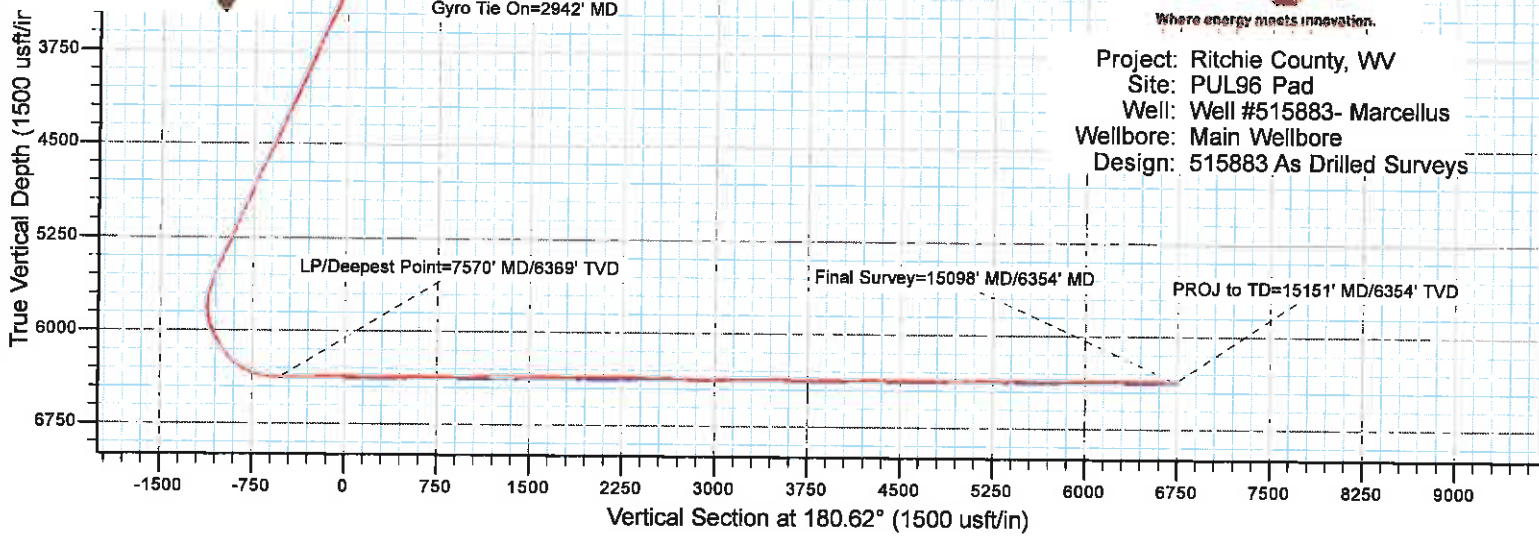


Database:	EDM 5000 1 Single User Db	Local Co-ordinate Reference:	Well Well #515883- Marcellus - Slot 515883
Company:	EQT PRODUCTION	TVD Reference:	KB 23' @ 1206 0usft
Project:	Ritchie County, WV	MD Reference:	KB 23' @ 1206 0usft
Site:	PUL96 Pad	North Reference:	Grid
Well:	Well #515883- Marcellus	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore	Well License:	
Design:	515883 As Drilled Surveys		

Checked By: _____ Approved By: _____ Date: _____

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Project: Ritchie County, WV
 Site: PUL96 Pad
 Well: Well #515883- Marcellus
 Wellbore: Main Wellbore
 Design: 515883 As Drilled Surveys



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