



Where energy meets innovation.

## **EQT PRODUCTION**

**Tyler County, WV**

**WEU4**

**Well #512892 -Marcellus - Slot 512892**

**Main Wellbore**

API#: 47-095-02280

**Design: 512892 As Drilled Surveys**

## **Standard Survey Report**

**16 March, 2016**

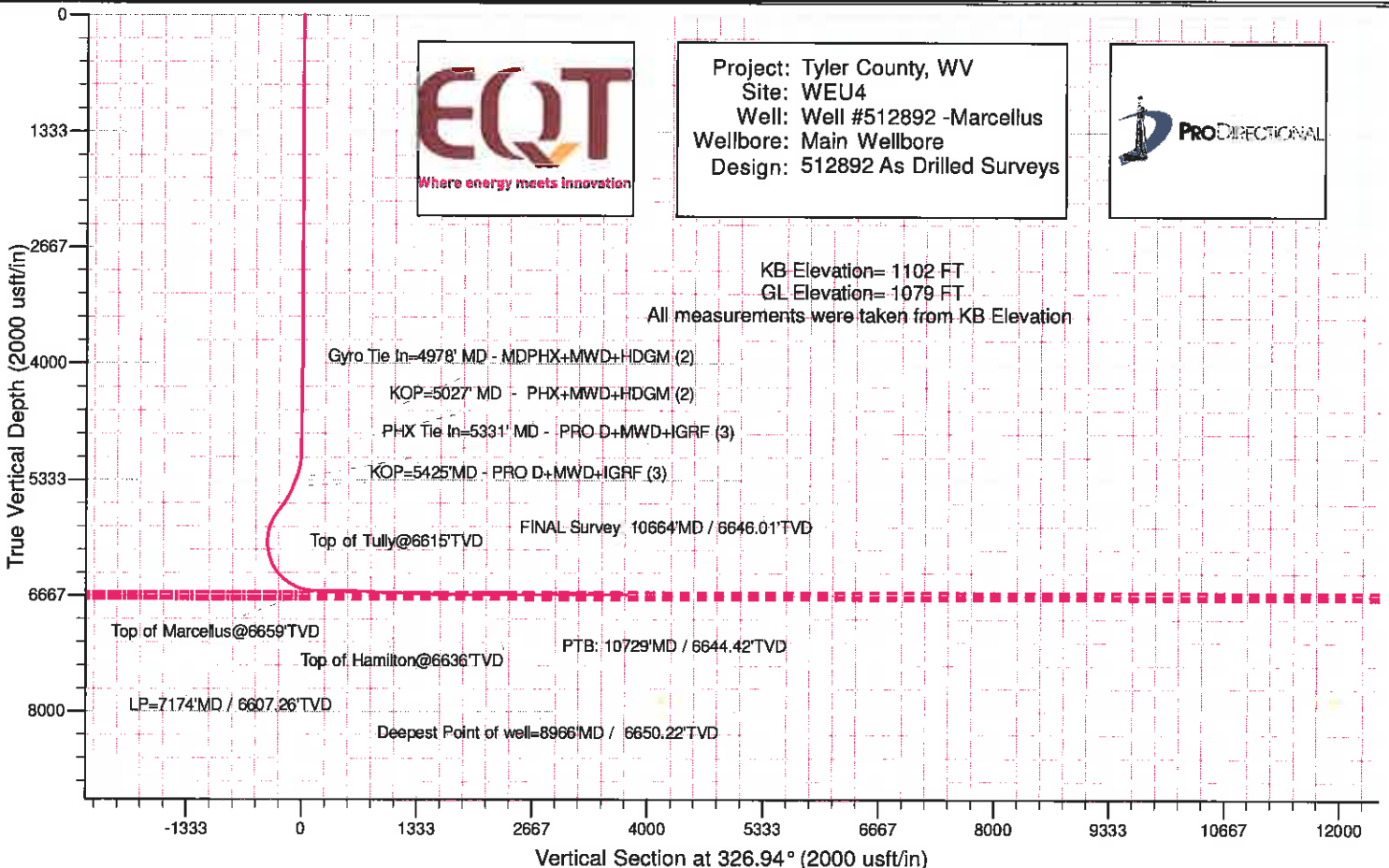
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JUL 14 2016



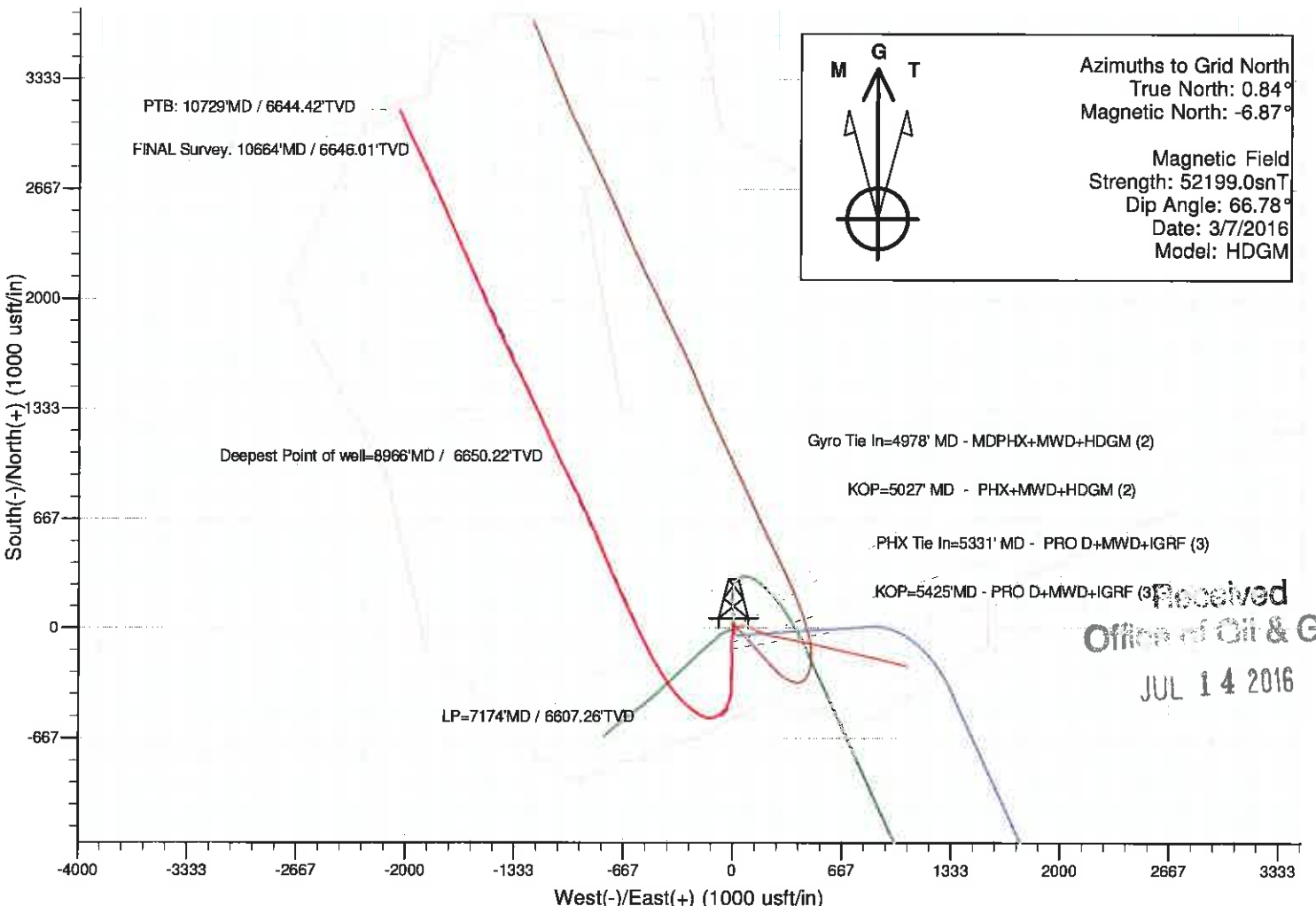
10/28/2016



Project: Tyler County, WV  
 Site: WEU4  
 Well: Well #512892 -Marcellus  
 Wellbore: Main Wellbore  
 Design: 512892 As Drilled Surveys



KB Elevation= 1102 FT  
 GL Elevation= 1079 FT  
 All measurements were taken from KB Elevation



Azimuths to Grid North  
 True North: 0.84°  
 Magnetic North: -6.87°  
 Magnetic Field  
 Strength: 52199.0snT  
 Dip Angle: 66.78°  
 Date: 3/7/2016  
 Model: HDGM

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Professional Directional  
Survey Report



<b>Company:</b>	EQT PRODUCTION	<b>Local Co-ordinate Reference:</b>	Well Well #512892 -Marcellus - Slot 512892
<b>Project:</b>	Tyler County, WV	<b>TVD Reference:</b>	GL 1079 + 23' KB @ 1102 00usft
<b>Site:</b>	WEU4	<b>MD Reference:</b>	GL 1079 + 23' KB @ 1102 00usft
<b>Well:</b>	Well #512892 -Marcellus	<b>North Reference:</b>	Gnd
<b>Wellbore:</b>	Main Wellbore	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	512892 As Drilled Surveys	<b>Database:</b>	Well_Planner1

<b>Project:</b>	Tyler County, WV		
<b>Map System:</b>	US State Plane 1927 (Exact solution)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	West Virginia North 4701		

<b>Site:</b>	WEU4				
<b>Site Position:</b>		<b>Northing:</b>	318,364.31 usft	<b>Latitude:</b>	39° 21' 59.62 N
<b>From:</b>	Map	<b>Easting:</b>	1,626,574.86 usft	<b>Longitude:</b>	80° 49' 15.03 W
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	-0.84 °

<b>Well:</b>	Well #512892 -Marcellus - Slot 512892					
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	318,336.31 usft	<b>Latitude:</b>	39° 21' 59.35 N
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	1,626,585.65 usft	<b>Longitude:</b>	80° 49' 14.88 W
<b>Position Uncertainty</b>		0.00 usft	<b>Wellhead Elevation:</b>	1,102.00 usft	<b>Ground Level:</b>	1,079.00 usft

<b>Wellbore:</b>	Main Wellbore				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	3/7/2016	-7.72	66.78	52,199

<b>Design:</b>	512892 As Drilled Surveys				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00		326.94

Survey Program		Date			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
110.00	4,978.00	512892 Gyrodata Gyro (Main Wellbore)	GYD_DP_MS	Gyrodata gyro-compassing and drop	
5,027.00	5,331.00	512892 PHX MWD (Main Wellbore)	PHX+MWD+HDGM	PHX+OWSG MWD + HDGM	
5,425.00	10,729.00	512892 PRO D MWD (Main Wellbore)	MWD - OWSG	MWD - OWSG	

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110.00	0.52	9.56	110.00	0.49	0.08	0.37	0.47	0.47	0.00
210.00	0.42	15.80	210.00	1.29	0.26	0.94	0.11	-0.10	6.24
310.00	0.31	17.61	309.99	1.90	0.44	1.35	0.11	-0.11	1.81
410.00	0.25	9.35	409.99	2.38	0.56	1.69	0.07	-0.06	-8.26
510.00	0.21	19.28	509.99	2.76	0.65	1.96	0.06	-0.04	9.93
610.00	0.30	119.05	609.99	2.81	0.94	1.84	0.39	0.09	99.77
710.00	0.24	98.00	709.99	2.65	1.38	1.47	0.11	-0.06	-21.05
810.00	0.27	81.22	809.99	2.66	1.82	1.24	0.08	0.03	-16.78

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# Professional Directional Survey Report



**Company:** EQT PRODUCTION  
**Project:** Tyler County, WV  
**Site:** WEU4  
**Well:** Well #512892 -Marcellus  
**Wellbore:** Main Wellbore  
**Design:** 512892 As Drilled Surveys

**Local Co-ordinate Reference:** Well Well #512892 -Marcellus - Slot 512892  
**TVD Reference:** GL 1079 + 23' KB @ 1102 00usft  
**MD Reference:** GL 1079 + 23' KB @ 1102 00usft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Database:** Well\_Planner1

## Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
910.00	0.42	70.32	909.99	2.82	2.40	1.06	0.16	0.15	-10.90
1,010.00	0.40	71.96	1,009.98	3.05	3.07	0.88	0.02	-0.02	1.64
1,110.00	0.32	39.64	1,109.98	3.37	3.58	0.87	0.21	-0.08	-32.32
1,210.00	0.36	18.55	1,209.98	3.89	3.86	1.15	0.13	0.04	-21.09
1,310.00	0.33	2.89	1,309.98	4.47	3.98	1.58	0.10	-0.03	-15.66
1,410.00	0.23	3.43	1,409.98	4.96	4.00	1.97	0.10	-0.10	0.54
1,510.00	0.14	5.15	1,509.98	5.28	4.03	2.23	0.09	-0.09	1.72
1,610.00	0.07	103.08	1,609.98	5.39	4.10	2.28	0.16	-0.07	97.93
1,710.00	0.12	86.69	1,709.98	5.38	4.26	2.19	0.06	0.05	-16.39
1,810.00	0.09	85.61	1,809.98	5.40	4.44	2.10	0.03	-0.03	-1.08
1,910.00	0.05	142.82	1,909.98	5.37	4.55	2.02	0.08	-0.04	57.21
2,010.00	0.05	128.42	2,009.98	5.30	4.61	1.93	0.01	0.00	-14.40
2,110.00	0.13	176.56	2,109.98	5.16	4.65	1.79	0.10	0.08	48.14
2,210.00	0.09	198.87	2,209.98	4.98	4.63	1.64	0.06	-0.04	22.31
2,310.00	0.12	203.35	2,309.98	4.81	4.56	1.54	0.03	0.03	4.48
2,410.00	0.09	187.14	2,409.98	4.63	4.51	1.42	0.04	-0.03	-18.21
2,510.00	0.12	193.79	2,509.98	4.45	4.48	1.29	0.03	0.03	6.65
2,610.00	0.10	181.01	2,609.98	4.26	4.45	1.14	0.03	-0.02	-12.78
2,710.00	0.13	192.02	2,709.98	4.07	4.43	0.99	0.04	0.03	11.01
2,810.00	0.14	195.38	2,809.97	3.84	4.37	0.83	0.01	0.01	3.36
2,910.00	0.20	195.34	2,909.97	3.55	4.29	0.63	0.06	0.06	-0.04
3,010.00	0.18	207.52	3,009.97	3.24	4.17	0.44	0.04	-0.02	12.18
3,110.00	0.20	207.47	3,109.97	2.95	4.02	0.28	0.02	0.02	-0.05
3,210.00	0.20	198.83	3,209.97	2.63	3.88	0.08	0.03	0.00	-8.64
3,310.00	0.20	186.76	3,309.97	2.29	3.81	-0.16	0.04	0.00	-12.07
3,410.00	0.17	202.14	3,409.97	1.98	3.73	-0.38	0.06	-0.03	15.38
3,510.00	0.13	232.22	3,509.97	1.77	3.58	-0.47	0.09	-0.04	30.08
3,610.00	0.18	196.66	3,609.97	1.55	3.45	-0.58	0.11	0.05	-35.56
3,710.00	0.18	192.47	3,709.97	1.25	3.37	-0.79	0.01	0.00	-4.19
3,810.00	0.22	194.92	3,809.97	0.91	3.29	-1.03	0.04	0.04	2.45
3,910.00	0.17	213.28	3,909.97	0.60	3.16	-1.22	0.08	-0.05	18.36
4,010.00	0.57	122.43	4,009.97	0.21	3.49	-1.73	0.60	0.40	-90.85
4,110.00	0.58	127.10	4,109.96	-0.36	4.32	-2.66	0.05	0.01	4.67
4,210.00	0.45	148.38	4,209.96	-1.00	4.93	-3.53	0.23	-0.13	21.28
4,310.00	0.51	171.67	4,309.96	-1.78	5.20	-4.33	0.20	0.08	23.29
4,410.00	0.63	191.56	4,409.95	-2.76	5.15	-5.12	0.23	0.12	19.89
4,510.00	0.57	190.24	4,509.94	-3.78	4.95	-5.87	0.06	-0.06	-1.32
4,610.00	0.59	192.91	4,609.94	-4.78	4.75	-6.59	0.03	0.02	2.67
4,710.00	0.60	200.41	4,709.93	-5.77	4.45	-7.26	0.08	0.01	7.50
4,810.00	0.54	203.45	4,809.93	-6.69	4.08	-7.84	0.07	-0.06	3.04
4,910.00	0.39	213.35	4,909.93	-7.41	3.71	-8.23	0.17	-0.15	9.90
4,978.00	0.44	214.23	4,977.92	-7.82	3.43	-8.42	0.07	0.07	1.29

Gyro Tie In=4978' MD - MDPHX+MWD+HDGM (2)



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**MD Reference:** GL 1079 + 23' KB @ 1102 00usft  
**North Reference:** Grd  
**Survey Calculation Method:** Minimum Curvature  
**Database:** Well\_Planner1

## Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
5,027.00	2.10	200.40	5,026.91	-8.81	3.02	-9.03	3.42	3.39	-28.22	
<b>KOP=5027' MD - PHX+MWD+HDGM (2)</b>										
5,071.00	6.20	192.50	5,070.79	-11.89	2.22	-11.18	9.39	9.32	-17.95	
5,115.00	10.30	189.90	5,114.32	-18.09	1.03	-15.72	9.35	9.32	-5.91	
5,158.00	14.40	187.10	5,156.32	-27.18	-0.29	-22.62	9.63	9.53	-6.51	
5,201.00	18.40	188.70	5,197.56	-39.20	-1.98	-31.77	9.36	9.30	3.72	
5,245.00	21.20	189.20	5,238.95	-53.92	-4.30	-42.84	6.38	6.36	1.14	
5,288.00	23.40	189.00	5,278.74	-70.04	-6.88	-54.94	5.12	5.12	-0.47	
5,331.00	24.90	184.30	5,317.98	-87.50	-8.90	-68.47	5.67	3.49	-10.93	
<b>PHX Tie In=5331' MD - PRO D+MWD+IGRF (3)</b>										
5,425.00	25.80	175.50	5,402.95	-127.64	-8.78	-102.18	4.12	0.96	-9.36	
<b>KOP=5425' MD - PRO D+MWD+IGRF (3)</b>										
5,476.00	25.30	174.50	5,448.97	-149.55	-6.86	-121.59	1.29	-0.98	-1.96	
5,507.00	27.70	177.40	5,476.71	-163.34	-5.90	-133.68	8.79	7.74	9.35	
5,539.00	29.60	178.20	5,504.79	-178.68	-5.31	-146.84	6.06	5.94	2.50	
5,570.00	32.50	180.20	5,531.35	-194.66	-5.10	-160.35	9.93	9.35	6.45	
5,602.00	36.40	182.50	5,557.73	-212.75	-5.55	-175.27	12.85	12.19	7.19	
5,664.00	43.20	183.60	5,605.34	-252.35	-7.68	-207.30	11.03	10.97	1.77	
5,759.00	42.70	178.80	5,674.89	-317.03	-9.05	-260.75	3.48	-0.53	-5.05	
5,790.00	41.80	178.80	5,697.84	-337.87	-8.62	-278.46	2.90	-2.90	0.00	
5,821.00	38.20	181.10	5,721.58	-357.79	-8.58	-295.17	12.55	-11.61	7.42	
5,853.00	37.30	183.70	5,746.88	-377.36	-9.40	-311.12	5.71	-2.81	8.13	
5,884.00	35.90	187.90	5,771.78	-395.74	-11.25	-325.52	9.25	-4.52	13.55	
5,915.00	35.30	192.50	5,796.99	-413.49	-14.44	-338.65	8.85	-1.94	14.84	
5,947.00	34.70	195.80	5,823.20	-431.28	-18.92	-351.12	6.20	-1.88	10.31	
5,978.00	33.10	199.70	5,848.93	-447.74	-24.18	-362.05	8.71	-5.16	12.58	
6,010.00	30.10	204.30	5,876.19	-463.29	-30.43	-371.67	12.02	-9.38	14.38	
6,041.00	27.00	209.80	5,903.42	-476.49	-37.13	-379.07	13.10	-10.00	17.74	
6,073.00	23.80	214.80	5,932.33	-488.10	-44.43	-384.82	12.03	-10.00	15.63	
6,104.00	22.50	219.50	5,960.83	-497.81	-51.77	-388.95	7.28	-4.19	15.16	
6,136.00	22.10	224.60	5,990.44	-506.82	-59.89	-392.08	6.17	-1.25	15.94	
6,167.00	22.40	231.70	6,019.14	-514.64	-68.63	-393.86	8.72	0.97	22.90	
6,198.00	23.50	237.80	6,047.69	-521.59	-78.49	-394.31	8.45	3.55	19.68	
6,230.00	24.00	241.50	6,076.98	-528.10	-89.81	-393.69	4.91	1.56	11.56	
6,261.00	24.00	247.60	6,105.31	-533.51	-100.98	-392.02	8.00	0.00	18.68	
6,293.00	23.90	256.00	6,134.56	-537.56	-113.29	-388.70	10.65	-0.31	26.25	
6,324.00	24.20	262.80	6,162.87	-539.87	-125.69	-383.88	8.99	0.97	21.94	
6,356.00	23.80	269.00	6,192.11	-540.81	-136.66	-377.59	7.98	-1.25	19.38	
6,387.00	24.40	275.10	6,220.41	-540.35	-151.29	-370.31	8.26	1.94	19.68	
6,419.00	26.50	284.10	6,249.32	-538.02	-164.80	-360.99	13.74	6.56	28.13	
6,450.00	28.40	291.30	6,276.83	-533.66	-178.39	-349.92	12.33	6.13	23.23	
6,482.00	30.60	297.40	6,304.69	-527.14	-192.71	-336.64	11.63	6.88	19.06	
6,513.00	32.80	300.10	6,331.07	-519.30	-206.98	-322.28	8.44	7.10	8.71	
6,545.00	35.30	302.40	6,357.58	-509.99	-222.29	-306.14	8.79	7.81	7.19	



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**Survey Calculation Method:** Minimum Curvature  
**Database:** Well\_Planner1

## Survey

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6,576.00	37.80	305.30	6,382.48	-499.70	-237.81	-289.15	9.80	8.06	9.35	
6,607.00	40.30	308.80	6,406.56	-487.93	-253.18	-270.79	10.75	8.06	11.29	
6,639.00	44.40	311.10	6,430.20	-474.08	-269.69	-250.18	13.70	12.81	7.19	
6,670.00	48.00	312.40	6,451.66	-459.18	-286.38	-228.59	12.00	11.61	4.19	
6,702.00	51.20	313.90	6,472.39	-442.51	-304.15	-204.92	10.62	10.00	4.69	
6,733.00	53.90	316.70	6,491.24	-425.01	-321.44	-180.82	11.28	8.71	9.03	
6,765.00	56.90	318.60	6,509.41	-405.54	-339.18	-154.83	10.57	9.38	5.94	
6,796.00	59.20	320.60	6,525.82	-385.51	-356.22	-128.74	9.22	7.42	6.45	
6,828.00	61.50	322.10	6,541.65	-363.79	-373.58	-101.07	8.26	7.19	4.69	
6,859.00	65.40	324.80	6,555.50	-341.52	-390.08	-73.40	14.80	12.58	8.71	
6,891.00	68.50	326.00	6,568.03	-317.28	-406.80	-43.97	10.28	9.69	3.75	
6,922.00	71.50	327.10	6,578.63	-292.98	-422.85	-14.84	10.24	9.68	3.55	
6,953.00	74.70	328.10	6,587.65	-267.93	-438.74	14.81	10.77	10.32	3.23	
6,985.00	78.50	329.00	6,595.06	-241.38	-454.98	45.92	12.19	11.88	2.81	
7,016.00	81.70	329.60	6,600.39	-215.13	-470.57	76.43	10.50	10.32	1.94	
7,048.00	84.70	330.60	6,604.18	-187.59	-486.40	108.15	9.88	9.38	3.13	
7,079.00	87.40	331.90	6,606.31	-160.47	-501.28	138.99	9.66	8.71	4.19	
7,111.00	89.00	332.50	6,607.32	-132.18	-516.19	170.84	5.34	5.00	1.88	
7,174.00	91.10	332.80	6,607.26	-76.23	-545.13	233.52	3.37	3.33	0.48	
<b>LP=7174'MD / 6607.26'TVD</b>										
7,268.00	91.70	333.70	6,604.97	7.69	-587.43	326.92	1.15	0.64	0.96	
7,362.00	90.20	334.70	6,603.41	92.30	-628.33	420.15	1.92	-1.60	1.06	
7,457.00	87.70	335.70	6,605.15	178.52	-668.17	514.14	2.83	-2.63	1.05	
7,551.00	87.50	334.90	6,609.09	263.84	-707.42	607.06	0.88	-0.21	-0.85	
7,645.00	87.40	336.50	6,613.27	349.43	-746.06	699.87	1.70	-0.11	1.70	
7,681.82	87.21	336.85	6,615.00	383.20	-760.62	736.11	1.08	-0.53	0.95	
<b>Top of Tully@6615'TVD</b>										
7,740.00	86.90	337.40	6,617.99	436.73	-783.21	793.30	1.08	-0.53	0.95	
7,834.00	86.70	337.20	6,623.24	523.31	-819.43	885.62	0.30	-0.21	-0.21	
7,928.00	87.50	334.80	6,627.99	608.07	-857.61	978.32	2.69	0.85	-2.55	
8,023.00	88.40	335.60	6,631.39	695.25	-897.43	1,072.28	1.27	0.95	0.84	
8,117.00	88.60	335.40	6,633.85	780.76	-936.40	1,165.20	0.30	0.21	0.21	
8,178.13	87.38	333.41	6,636.00	835.86	-962.79	1,225.77	3.82	-2.06	2.79	
<b>Top of Hamilton@6636'TVD</b>										
8,212.00	86.70	332.30	6,637.75	865.95	-978.22	1,259.41	3.82	-2.00	-3.17	
8,306.00	86.80	332.30	6,643.08	949.04	-1,021.85	1,352.85	0.11	0.11	0.00	
8,400.00	88.60	334.10	6,646.85	1,032.87	-1,064.19	1,446.20	2.71	1.91	1.91	
8,494.00	90.20	335.60	6,647.84	1,117.95	-1,104.14	1,539.30	2.33	1.70	1.60	
8,589.00	91.00	335.50	6,646.84	1,204.43	-1,143.46	1,633.22	0.85	0.84	-0.11	
8,683.00	89.10	334.90	6,646.76	1,289.75	-1,182.88	1,726.24	2.12	-2.02	-0.64	
8,777.00	89.00	334.20	6,648.32	1,374.62	-1,223.27	1,819.40	0.75	-0.11	-0.74	
8,872.00	89.20	333.90	6,649.81	1,460.03	-1,264.84	1,913.66	0.38	0.21	-0.32	
8,966.00	90.30	333.30	6,650.22	1,544.23	-1,306.63	2,007.02	1.33	1.17	-0.64	
<b>Deepest Point of well=8966'MD / 6650.22'TVD</b>										

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# Professional Directional Survey Report



<b>Company:</b>	EQT PRODUCTION	<b>Local Co-ordinate Reference:</b>	Well Well #512892 -Marcellus - Slot 512892
<b>Project:</b>	Tyler County, WV	<b>TVD Reference:</b>	GL 1079 + 23' KB @ 1102 00usft
<b>Site:</b>	WEU4	<b>MD Reference:</b>	GL 1079 + 23' KB @ 1102 00usft
<b>Well:</b>	Well #512892 -Marcellus	<b>North Reference:</b>	Gnd
<b>Wellbore:</b>	Main Wellbore	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	512892 As Drilled Surveys	<b>Database:</b>	Well_Planner1

## Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
9,060.00	90.20	334.30	6,649.81	1,628.57	-1,348.13	2,100.34	1.07	-0.11	1.06	
9,155.00	90.20	334.40	6,649.48	1,714.20	-1,389.25	2,194.55	0.11	0.00	0.11	
9,249.00	90.40	334.30	6,648.99	1,798.94	-1,429.94	2,287.76	0.24	0.21	-0.11	
9,344.00	89.90	336.00	6,648.74	1,885.14	-1,469.86	2,381.78	1.87	-0.53	1.79	
9,438.00	90.10	336.00	6,648.74	1,971.01	-1,508.10	2,474.61	0.21	0.21	0.00	
9,532.00	89.80	335.60	6,648.82	2,056.75	-1,546.63	2,567.49	0.53	-0.32	-0.43	
9,627.00	90.20	335.60	6,648.82	2,143.27	-1,585.87	2,661.40	0.42	0.42	0.00	
9,721.00	90.40	335.80	6,648.33	2,228.94	-1,624.56	2,754.30	0.30	0.21	0.21	
9,815.00	90.90	335.60	6,647.26	2,314.60	-1,663.24	2,847.20	0.57	0.53	-0.21	
9,910.00	90.80	336.40	6,645.85	2,401.38	-1,701.87	2,941.00	0.85	-0.11	0.84	
10,004.00	89.90	335.90	6,645.28	2,487.35	-1,739.88	3,033.79	1.10	-0.96	-0.53	
10,098.00	90.20	336.10	6,645.20	2,573.22	-1,778.11	3,126.61	0.38	0.32	0.21	
10,193.00	90.70	336.60	6,644.45	2,660.24	-1,816.22	3,220.33	0.74	0.53	0.53	
10,287.00	88.30	333.40	6,645.27	2,745.41	-1,855.94	3,313.38	4.26	-2.55	-3.40	
10,381.00	89.40	334.20	6,647.16	2,829.74	-1,897.43	3,406.68	1.45	1.17	0.85	
10,475.00	89.70	333.40	6,647.89	2,914.08	-1,938.93	3,500.01	0.91	0.32	-0.85	
10,570.00	90.60	334.90	6,647.65	2,999.57	-1,980.35	3,594.25	1.84	0.95	1.58	
10,664.00	91.40	335.70	6,646.01	3,084.95	-2,019.62	3,687.24	1.20	0.85	0.85	
<b>FINAL Survey: 10664'MD / 6646.01'TVD</b>										
10,729.00	91.40	335.70	6,644.42	3,144.18	-2,046.36	3,751.46	0.00	0.00	0.00	
<b>PTB: 10729'MD / 6644.42'TVD</b>										

## Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,681.82	6,615.00	Top of Tully@6615'TVD		0.00	
8,178.13	6,636.00	Top of Hamilton@6636'TVD		0.00	

## Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
4,978.00	4,977.92	-7.82	3.43	Gyro Tie In=4978' MD - MDPHX+MWD+HDGM (2)
5,027.00	5,026.91	-8.81	3.02	KOP=5027' MD - PHX+MWD+HDGM (2)
5,331.00	5,317.98	-87.50	-8.90	PHX Tie In=5331' MD - PRO D+MWD+IGRF (3)
5,425.00	5,402.95	-127.64	-8.78	KOP=5425'MD - PRO D+MWD+IGRF (3)
7,174.00	6,607.26	-76.23	-545.13	LP=7174'MD / 6607.26'TVD
8,966.00	6,650.22	1,544.23	-1,306.63	Deepest Point of well=8966'MD / 6650.22'TVD
10,664.00	6,646.01	3,084.95	-2,019.62	FINAL Survey: 10664'MD / 6646.01'TVD
10,729.00	6,644.42	3,144.18	-2,046.36	PTB: 10729'MD / 6644.42'TVD

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# Professional Directional Survey Report



<b>Company:</b>	EQT PRODUCTION	<b>Local Co-ordinate Reference:</b>	Well Well #512892 -Marcellus - Slot 512892
<b>Project:</b>	Tyler County, WV	<b>TVD Reference:</b>	GL 1079 + 23' KB @ 1102 00usft
<b>Site:</b>	WEU4	<b>MD Reference:</b>	GL 1079 + 23' KB @ 1102 00usft
<b>Well:</b>	Well #512892 -Marcellus	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Main Wellbore	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	512892 As Drilled Surveys	<b>Database:</b>	Well_Planner1

Checked By: _____	Approved By: _____	Date: _____
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