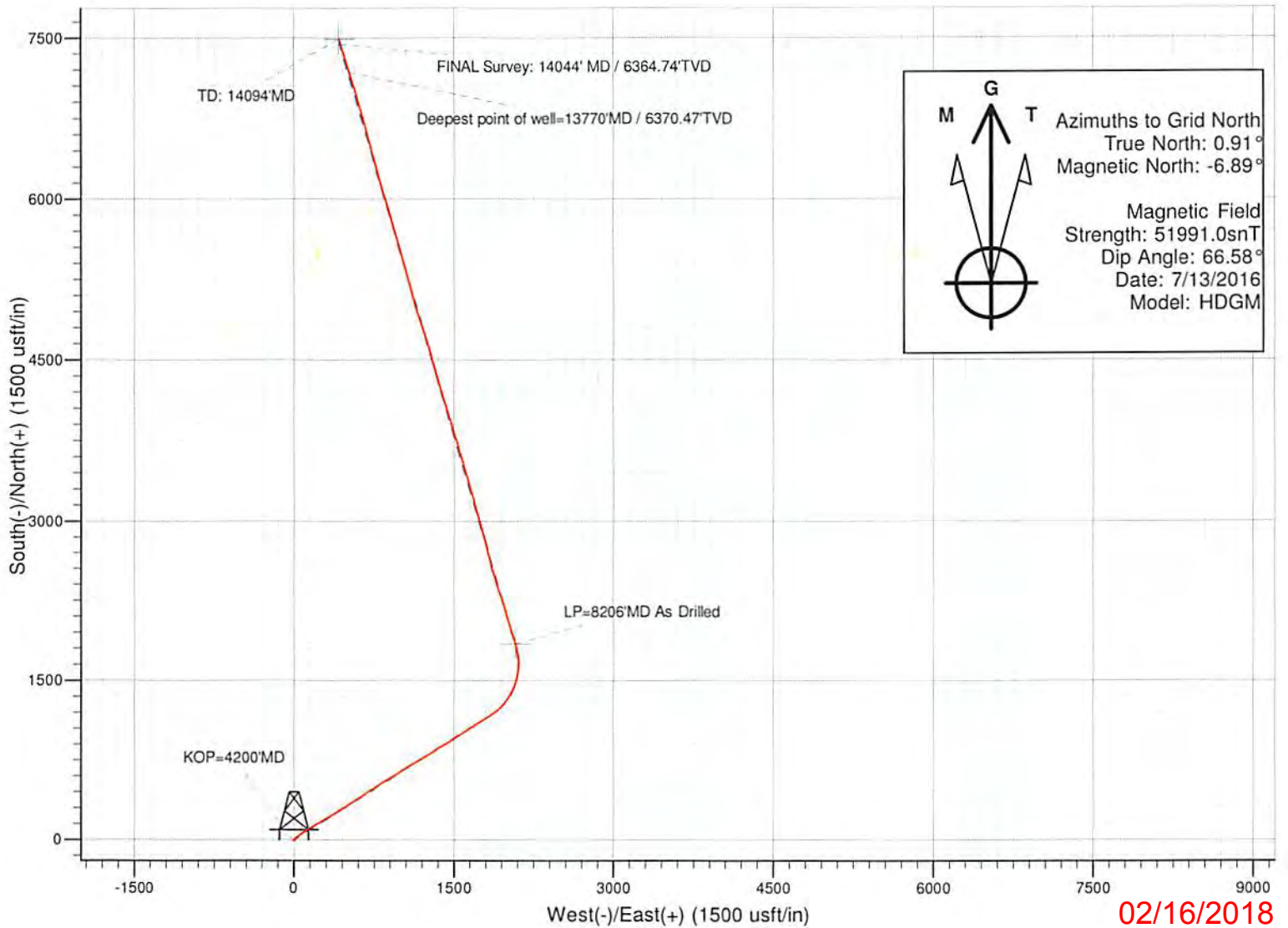
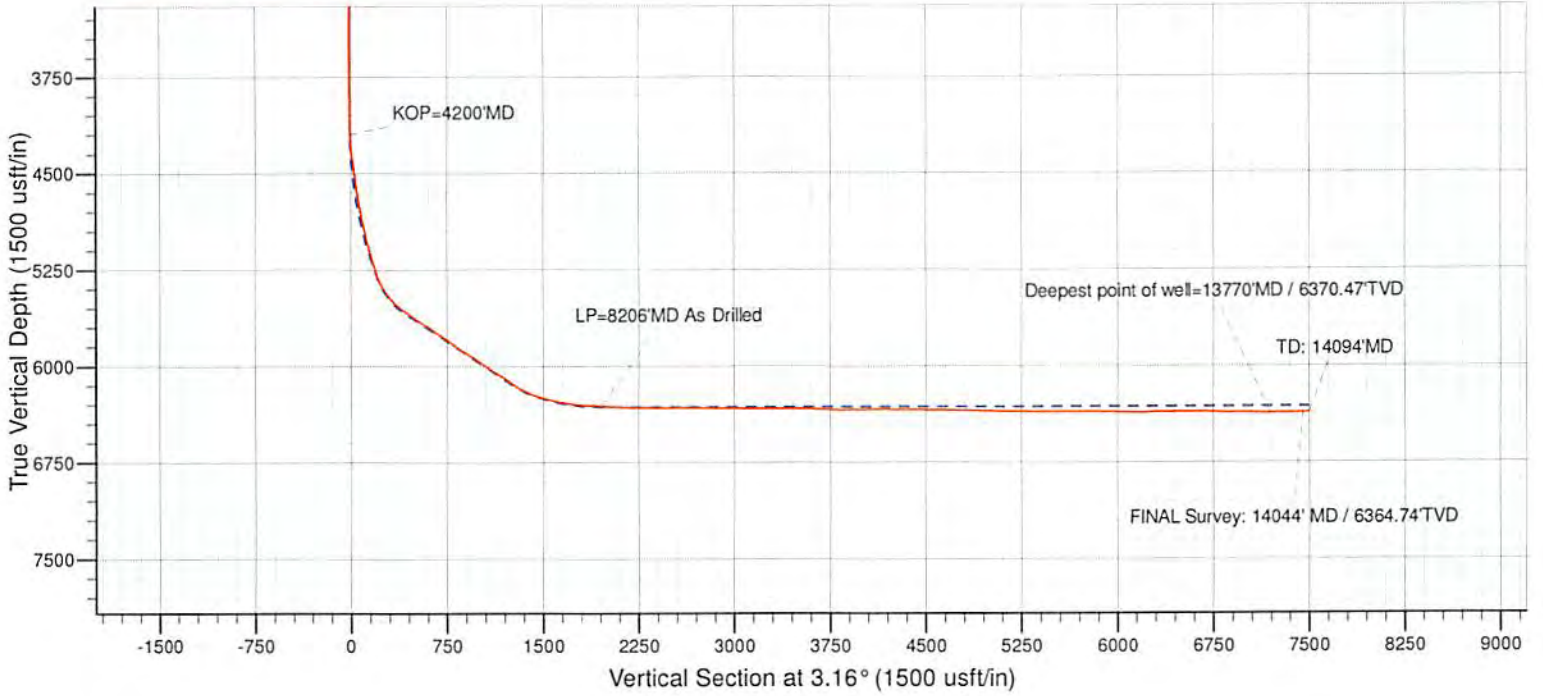




Where energy meets innovation.

Project: Ritchie County, WV  
Site: PEN54  
Well: Well #515874  
Wellbore: Main Wellbore  
Design: Main Wellbore  
Elevation: KB@23 @ 1039.00usft



02/16/2018

<b>Company:</b>	EQT PRODUCTION	<b>Local Co-ordinate Reference:</b>	Well Well #515874 - Slot 515874
<b>Project:</b>	Ritchie County, WV	<b>TVD Reference:</b>	KB@23 @ 1039.00usft
<b>Site:</b>	PEN54	<b>MD Reference:</b>	KB@23 @ 1039.00usft
<b>Well:</b>	Well #515874	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Main Wellbore	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Main Wellbore	<b>Database:</b>	Well_Planner1

<b>Project</b>	Ritchie 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>	PEN54				
<b>Site Position:</b>		<b>Northing:</b>	279,215.27 usft	<b>Latitude:</b>	39° 15' 28.054 N
<b>From:</b>	Map	<b>Easting:</b>	1,595,775.03 usft	<b>Longitude:</b>	80° 55' 39.233 W
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	-0.91 °

<b>Well</b>	Well #515874 - Slot 515874					
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	279,120.12 usft	<b>Latitude:</b>	39° 15' 27.121 N
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	1,595,819.44 usft	<b>Longitude:</b>	80° 55' 38.649 W
<b>Position Uncertainty</b>		0.00 usft	<b>Wellhead Elevation:</b>	0.00 usft	<b>Ground Level:</b>	1,016.00 usft

<b>Wellbore</b>	Main Wellbore				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	HDGM	7/13/2016	-7.80	66.58	51,991

<b>Design</b>	Main Wellbore				
<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	3.16	

<b>Survey Program</b>	Date 8/10/2016			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
100.00	4,179.00	#1 Gyrodata Gyro (Main Wellbore)	Gyrodata_DP_MS	Gyrodata gyro-compassing and drop
4,187.00	14,094.00	#2 Pro 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
100.00	0.63	70.63	100.00	0.18	0.52	0.21	0.63	0.63	0.00
200.00	0.63	74.75	199.99	0.51	1.57	0.59	0.05	0.00	4.12
300.00	0.66	81.86	299.99	0.74	2.67	0.88	0.09	0.03	7.11
400.00	0.41	84.35	399.98	0.85	3.59	1.05	0.25	-0.25	2.49
500.00	0.18	88.00	499.98	0.89	4.11	1.12	0.23	-0.23	3.65
600.00	0.20	100.73	599.98	0.87	4.44	1.11	0.05	0.02	12.73
700.00	0.13	133.69	699.98	0.76	4.69	1.01	0.12	-0.07	32.96
800.00	0.27	204.35	799.98	0.46	4.67	0.72	0.26	0.14	70.66
900.00	0.41	203.46	899.98	-0.08	4.43	0.16	0.14	0.14	-0.89

<b>Company:</b>	EQT PRODUCTION	<b>Local Co-ordinate Reference:</b>	Well Well #515874 - Slot 515874
<b>Project:</b>	Ritchie County, WV	<b>TVD Reference:</b>	KB@23 @ 1039.00usft
<b>Site:</b>	PEN54	<b>MD Reference:</b>	KB@23 @ 1039.00usft
<b>Well:</b>	Well #515874	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Main Wellbore	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Main Wellbore	<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)
1,000.00	0.53	210.85	999.97	-0.81	4.06	-0.58	0.13	0.12	7.39
1,100.00	0.92	204.62	1,099.97	-1.93	3.48	-1.74	0.40	0.39	-6.23
1,200.00	0.99	206.65	1,199.95	-3.43	2.76	-3.28	0.08	0.07	2.03
1,300.00	1.01	208.79	1,299.94	-4.98	1.95	-4.86	0.04	0.02	2.14
1,400.00	0.92	211.20	1,399.92	-6.44	1.11	-6.37	0.10	-0.09	2.41
1,500.00	0.95	214.83	1,499.91	-7.81	0.22	-7.78	0.07	0.03	3.63
1,600.00	0.92	215.02	1,599.90	-9.14	-0.71	-9.17	0.03	-0.03	0.19
1,700.00	0.68	225.39	1,699.89	-10.22	-1.60	-10.29	0.28	-0.24	10.37
1,800.00	0.61	238.29	1,799.88	-10.91	-2.47	-11.03	0.16	-0.07	12.90
1,900.00	0.59	241.45	1,899.87	-11.44	-3.38	-11.61	0.04	-0.02	3.16
2,000.00	0.55	239.66	1,999.87	-11.93	-4.24	-12.14	0.04	-0.04	-1.79
2,100.00	0.15	240.02	2,099.87	-12.24	-4.77	-12.48	0.40	-0.40	0.36
2,200.00	0.08	242.16	2,199.87	-12.33	-4.95	-12.59	0.07	-0.07	2.14
2,300.00	0.17	260.12	2,299.87	-12.39	-5.15	-12.66	0.10	0.09	17.96
2,400.00	0.23	246.65	2,399.87	-12.50	-5.49	-12.78	0.08	0.06	-13.47
2,500.00	0.21	225.95	2,499.86	-12.70	-5.80	-13.01	0.08	-0.02	-20.70
2,600.00	0.25	227.63	2,599.86	-12.98	-6.09	-13.30	0.04	0.04	1.68
2,700.00	0.21	230.50	2,699.86	-13.24	-6.40	-13.58	0.04	-0.04	2.87
2,800.00	0.19	245.13	2,799.86	-13.43	-6.69	-13.78	0.05	-0.02	14.63
2,900.00	0.13	251.06	2,899.86	-13.54	-6.95	-13.90	0.06	-0.06	5.93
3,000.00	0.10	249.16	2,999.86	-13.60	-7.14	-13.98	0.03	-0.03	-1.90
3,100.00	0.05	216.51	3,099.86	-13.67	-7.24	-14.05	0.06	-0.05	-32.65
3,200.00	0.03	159.65	3,199.86	-13.73	-7.26	-14.11	0.04	-0.02	-56.86
3,300.00	0.05	143.35	3,299.86	-13.79	-7.22	-14.17	0.02	0.02	-16.30
3,400.00	0.06	129.32	3,399.86	-13.86	-7.16	-14.23	0.02	0.01	-14.03
3,500.00	0.04	288.23	3,499.86	-13.88	-7.15	-14.25	0.10	-0.02	158.91
3,600.00	0.04	320.70	3,599.86	-13.84	-7.21	-14.22	0.02	0.00	32.47
3,700.00	0.09	307.94	3,699.86	-13.77	-7.29	-14.15	0.05	0.05	-12.76
3,800.00	0.06	258.70	3,799.86	-13.73	-7.40	-14.12	0.07	-0.03	-49.24
3,900.00	0.14	332.74	3,899.86	-13.63	-7.51	-14.02	0.14	0.08	74.04
4,000.00	0.30	339.81	3,999.86	-13.28	-7.66	-13.68	0.16	0.16	7.07
4,100.00	0.56	346.39	4,099.86	-12.55	-7.86	-12.97	0.26	0.26	6.58
4,179.00	0.99	341.26	4,178.85	-11.53	-8.17	-11.97	0.55	0.54	-6.49
4,187.00	1.45	14.05	4,186.85	-11.37	-8.17	-11.80	10.22	5.75	409.88
4,200.00	1.90	21.00	4,199.84	-11.01	-8.05	-11.44	3.82	3.50	53.48
<b>KOP=4200'MD</b>									
4,218.00	2.56	26.45	4,217.83	-10.37	-7.77	-10.78	3.82	3.64	30.27
4,249.00	3.91	31.60	4,248.78	-8.85	-6.90	-9.22	4.45	4.35	16.61
4,281.00	5.50	33.70	4,280.67	-6.64	-5.48	-6.94	5.00	4.97	6.56
4,312.00	6.77	36.00	4,311.49	-3.93	-3.58	-4.12	4.17	4.10	7.42
4,344.00	8.60	37.67	4,343.20	-0.51	-1.01	-0.56	5.76	5.72	5.22
4,375.00	9.82	39.28	4,373.80	3.37	2.08	3.48	4.02	3.94	5.19
4,407.00	11.08	41.80	4,405.27	7.78	5.86	8.09	4.19	3.94	7.88

<b>Company:</b>	EQT PRODUCTION	<b>Local Co-ordinate Reference:</b>	Well Well #515874 - Slot 515874
<b>Project:</b>	Ritchie County, WV	<b>TVD Reference:</b>	KB@23 @ 1039.00usft
<b>Site:</b>	PEN54	<b>MD Reference:</b>	KB@23 @ 1039.00usft
<b>Well:</b>	Well #515874	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Main Wellbore	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Main Wellbore	<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)	
4,438.00	11.44	45.45	4,435.68	12.15	10.03	12.69	2.58	1.16	11.77	
4,470.00	11.74	50.52	4,467.02	16.45	14.81	17.24	3.32	0.94	15.84	
4,501.00	11.93	52.47	4,497.37	20.41	19.78	21.47	1.43	0.61	6.29	
4,533.00	11.70	53.32	4,528.69	24.36	25.01	25.70	0.90	-0.72	2.66	
4,564.00	12.13	54.69	4,559.02	28.12	30.19	29.74	1.66	1.39	4.42	
4,596.00	12.76	56.10	4,590.27	32.03	35.86	33.96	2.19	1.97	4.41	
4,627.00	13.10	55.12	4,620.48	35.95	41.59	38.19	1.31	1.10	-3.16	
4,659.00	13.76	52.72	4,651.61	40.33	47.59	42.89	2.70	2.06	-7.50	
4,690.00	14.50	51.07	4,681.67	45.00	53.54	47.89	2.72	2.39	-5.32	
4,722.00	15.27	50.95	4,712.59	50.18	59.93	53.40	2.41	2.41	-0.38	
4,753.00	16.37	53.04	4,742.42	55.37	66.59	58.96	4.00	3.55	6.74	
4,785.00	17.24	56.29	4,773.05	60.72	74.14	64.71	4.00	2.72	10.16	
4,816.00	18.27	59.38	4,802.58	65.74	82.14	70.17	4.50	3.32	9.97	
4,848.00	19.41	59.47	4,832.86	71.00	91.04	75.91	3.56	3.56	0.28	
4,879.00	20.16	58.11	4,862.03	76.44	100.01	81.83	2.84	2.42	-4.39	
4,911.00	20.97	56.69	4,891.99	82.50	109.48	88.40	2.97	2.53	-4.44	
4,942.00	21.61	57.27	4,920.88	88.63	118.92	95.05	2.17	2.06	1.87	
4,974.00	22.13	59.40	4,950.57	94.88	129.06	101.85	2.96	1.63	6.66	
5,005.00	22.99	61.34	4,979.20	100.76	139.40	108.29	3.67	2.77	6.26	
5,036.00	24.19	61.48	5,007.61	106.70	150.30	114.82	3.88	3.87	0.45	
5,068.00	25.51	60.25	5,036.65	113.24	162.04	122.00	4.43	4.13	-3.84	
5,099.00	27.04	58.36	5,064.45	120.25	173.83	129.65	5.62	4.94	-6.10	
5,131.00	27.53	58.31	5,092.88	127.96	186.32	138.03	1.53	1.53	-0.16	
5,162.00	27.37	58.00	5,120.39	135.49	198.46	146.23	0.69	-0.52	-1.00	
5,203.00	26.92	58.40	5,156.88	145.35	214.36	156.94	1.18	-1.10	0.98	
5,261.00	26.50	58.40	5,208.69	159.01	236.56	171.81	0.72	-0.72	0.00	
5,280.00	26.30	58.70	5,225.71	163.42	243.77	176.61	1.27	-1.05	1.58	
5,311.00	27.10	59.20	5,253.40	170.60	255.70	184.44	2.68	2.58	1.61	
5,343.00	30.80	58.20	5,281.40	178.66	268.93	193.20	11.66	11.56	-3.13	
5,374.00	34.40	57.90	5,307.51	187.49	283.10	202.81	11.62	11.61	-0.97	
5,406.00	37.90	57.80	5,333.35	197.54	299.08	213.72	10.94	10.94	-0.31	
5,437.00	40.90	57.60	5,357.30	208.05	315.71	225.13	9.69	9.68	-0.65	
5,468.00	43.90	57.20	5,380.19	219.32	333.31	237.35	9.72	9.68	-1.29	
5,500.00	47.00	58.00	5,402.63	231.53	352.57	250.61	9.85	9.69	2.50	
5,531.00	49.30	58.20	5,423.32	243.73	372.17	263.87	7.43	7.42	0.65	
5,563.00	51.60	58.00	5,443.69	256.77	393.12	278.04	7.20	7.19	-0.63	
5,594.00	53.90	57.90	5,462.45	269.86	414.03	292.27	7.42	7.42	-0.32	
5,626.00	56.30	57.70	5,480.76	283.85	436.24	307.46	7.52	7.50	-0.63	
5,657.00	57.70	57.60	5,497.64	297.76	458.20	322.56	4.52	4.52	-0.32	
5,688.00	60.00	57.40	5,513.68	312.01	480.57	338.02	7.44	7.42	-0.65	
5,720.00	63.00	57.50	5,528.95	327.14	504.28	354.43	9.38	9.38	0.31	
5,751.00	65.70	57.60	5,542.36	342.13	527.86	370.70	8.71	8.71	0.32	
5,798.00	66.80	57.50	5,561.29	365.22	564.16	395.75	2.35	2.34	-0.21	

<b>Company:</b>	EQT PRODUCTION	<b>Local Co-ordinate Reference:</b>	Well Well #515874 - Slot 515874
<b>Project:</b>	Ritchie County, WV	<b>TVD Reference:</b>	KB@23 @ 1039.00usft
<b>Site:</b>	PEN54	<b>MD Reference:</b>	KB@23 @ 1039.00usft
<b>Well:</b>	Well #515874	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Main Wellbore	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Main Wellbore	<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)	
5,846.00	67.30	56.60	5,580.01	389.26	601.25	421.80	2.02	1.04	-1.88	
5,940.00	67.40	55.50	5,616.21	437.70	673.21	474.14	1.09	0.11	-1.17	
6,034.00	69.50	58.80	5,650.74	485.10	746.65	525.51	3.96	2.23	3.51	
6,129.00	70.70	57.80	5,683.08	532.04	822.64	576.57	1.60	1.26	-1.05	
6,223.00	68.30	58.70	5,716.00	578.38	897.51	626.96	2.71	-2.55	0.96	
6,317.00	68.80	57.50	5,750.37	624.61	971.78	677.21	1.30	0.53	-1.28	
6,412.00	69.80	56.30	5,783.95	673.14	1,046.22	729.77	1.58	1.05	-1.26	
6,506.00	68.10	60.40	5,817.73	719.17	1,120.87	779.85	4.45	-1.81	4.36	
6,600.00	69.10	60.20	5,852.03	762.54	1,196.89	827.33	1.08	1.06	-0.21	
6,694.00	69.10	57.50	5,885.56	807.96	1,272.03	876.83	2.68	0.00	-2.87	
6,789.00	70.60	57.00	5,918.29	856.20	1,347.04	929.13	1.65	1.58	-0.53	
6,883.00	67.90	58.20	5,951.59	903.31	1,421.24	980.25	3.11	-2.87	1.28	
6,977.00	68.30	57.50	5,986.65	949.72	1,495.09	1,030.66	0.81	0.43	-0.74	
7,072.00	68.90	57.10	6,021.32	997.50	1,569.52	1,082.48	0.74	0.63	-0.42	
7,166.00	70.60	57.10	6,053.85	1,045.40	1,643.56	1,134.38	1.81	1.81	0.00	
7,261.00	69.20	57.70	6,086.50	1,093.47	1,718.72	1,186.52	1.59	-1.47	0.63	
7,355.00	67.70	57.70	6,121.02	1,140.19	1,792.61	1,237.24	1.60	-1.60	0.00	
7,418.00	68.90	57.80	6,144.32	1,171.42	1,842.12	1,271.15	1.91	1.90	0.16	
7,450.00	68.70	56.00	6,155.89	1,187.71	1,867.11	1,288.80	5.28	-0.63	-5.63	
7,481.00	68.60	52.30	6,167.18	1,204.62	1,890.51	1,306.96	11.12	-0.32	-11.94	
7,512.00	68.60	48.70	6,178.49	1,222.97	1,912.77	1,326.52	10.81	0.00	-11.61	
7,544.00	70.30	45.90	6,189.73	1,243.29	1,934.79	1,348.02	9.76	5.31	-8.75	
7,575.00	71.20	42.90	6,199.95	1,264.20	1,955.26	1,370.03	9.59	2.90	-9.68	
7,607.00	70.80	39.40	6,210.37	1,286.98	1,975.17	1,393.87	10.42	-1.25	-10.94	
7,639.00	71.10	35.70	6,220.82	1,310.95	1,993.60	1,418.82	10.97	0.94	-11.56	
7,670.00	72.60	33.30	6,230.48	1,335.23	2,010.28	1,443.98	8.81	4.84	-7.74	
7,702.00	74.40	29.90	6,239.57	1,361.36	2,026.35	1,470.96	11.64	5.63	-10.63	
7,733.00	75.50	27.00	6,247.62	1,387.68	2,040.61	1,498.02	9.71	3.55	-9.35	
7,764.00	75.40	23.60	6,255.41	1,414.80	2,053.43	1,525.81	10.62	-0.32	-10.97	
7,797.00	76.40	20.90	6,263.45	1,444.42	2,065.54	1,556.05	8.49	3.03	-8.18	
7,828.00	77.50	18.30	6,270.45	1,472.87	2,075.67	1,585.01	8.91	3.55	-8.39	
7,860.00	78.90	15.70	6,276.99	1,502.82	2,084.83	1,615.42	9.08	4.38	-8.13	
7,891.00	80.90	13.00	6,282.43	1,532.38	2,092.39	1,645.36	10.73	6.45	-8.71	
7,923.00	81.70	9.70	6,287.27	1,563.39	2,098.61	1,676.66	10.50	2.50	-10.31	
7,954.00	82.50	6.40	6,291.53	1,593.79	2,102.91	1,707.25	10.86	2.58	-10.65	
7,986.00	83.00	3.40	6,295.57	1,625.42	2,105.62	1,738.98	9.43	1.56	-9.38	
8,017.00	83.70	0.00	6,299.16	1,656.19	2,106.53	1,769.75	11.13	2.26	-10.97	
8,049.00	85.10	356.80	6,302.29	1,688.02	2,105.64	1,801.49	10.87	4.38	-10.00	
8,080.00	86.10	353.30	6,304.67	1,718.81	2,102.98	1,832.08	11.71	3.23	-11.29	
8,112.00	86.20	350.10	6,306.82	1,750.40	2,098.37	1,863.37	9.98	0.31	-10.00	
8,206.00	87.50	343.70	6,311.99	1,841.76	2,077.10	1,953.42	6.94	1.38	-6.81	
<b>LP=8206' MD As Drilled</b>										
8,300.00	88.10	343.20	6,315.60	1,931.80	2,050.35	2,041.85	0.83	0.64	-0.53	
8,395.00	88.20	343.10	6,318.66	2,022.67	2,022.82	2,131.07	0.15	0.11	-0.11	

<b>Company:</b>	EQT PRODUCTION	<b>Local Co-ordinate Reference:</b>	Well Well #515874 - Slot 515874
<b>Project:</b>	Ritchie County, WV	<b>TVD Reference:</b>	KB@23 @ 1039.00usft
<b>Site:</b>	PEN54	<b>MD Reference:</b>	KB@23 @ 1039.00usft
<b>Well:</b>	Well #515874	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Main Wellbore	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Main Wellbore	<b>Database:</b>	Well_Planner1

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)
8,489.00	88.30	343.00	6,321.53	2,112.55	1,995.43	2,219.30	0.15	0.11	-0.11
8,583.00	88.90	343.40	6,323.83	2,202.51	1,968.27	2,307.63	0.77	0.64	0.43
8,678.00	89.40	341.20	6,325.24	2,293.00	1,939.39	2,396.38	2.37	0.53	-2.32
8,772.00	90.80	341.60	6,325.07	2,382.08	1,909.41	2,483.68	1.55	1.49	0.43
8,866.00	90.40	343.50	6,324.09	2,471.75	1,881.23	2,571.66	2.07	-0.43	2.02
8,961.00	89.10	344.30	6,324.51	2,563.02	1,854.88	2,661.34	1.61	-1.37	0.84
9,055.00	89.40	345.60	6,325.74	2,653.78	1,830.48	2,750.62	1.42	0.32	1.38
9,149.00	89.60	346.90	6,326.56	2,745.09	1,808.14	2,840.55	1.40	0.21	1.38
9,244.00	89.30	344.60	6,327.47	2,837.15	1,784.75	2,931.19	2.44	-0.32	-2.42
9,338.00	89.60	344.50	6,328.37	2,927.75	1,759.71	3,020.27	0.34	0.32	-0.11
9,432.00	89.30	343.40	6,329.27	3,018.08	1,733.73	3,109.03	1.21	-0.32	-1.17
9,526.00	89.70	344.30	6,330.09	3,108.37	1,707.58	3,197.74	1.05	0.43	-0.96
9,621.00	89.90	345.90	6,330.42	3,200.17	1,683.15	3,288.06	1.70	0.21	1.68
9,714.00	90.50	343.10	6,330.10	3,289.78	1,658.30	3,376.16	3.08	0.65	-3.01
9,809.00	89.30	343.70	6,330.27	3,380.81	1,631.16	3,465.56	1.41	-1.26	0.63
9,903.00	87.80	343.80	6,332.64	3,471.03	1,604.87	3,554.19	1.60	-1.60	0.11
9,997.00	88.00	343.80	6,336.09	3,561.24	1,578.66	3,642.82	0.21	0.21	0.00
10,091.00	88.10	344.30	6,339.29	3,651.56	1,552.85	3,731.59	0.54	0.11	0.53
10,185.00	89.70	342.20	6,341.09	3,741.55	1,525.76	3,819.94	2.81	1.70	-2.23
10,280.00	90.60	343.10	6,340.84	3,832.23	1,497.43	3,908.92	1.34	0.95	0.95
10,374.00	90.60	342.50	6,339.86	3,922.02	1,469.64	3,997.04	0.64	0.00	-0.64
10,469.00	90.70	342.20	6,338.78	4,012.54	1,440.84	4,085.84	0.33	0.11	-0.32
10,563.00	89.30	344.00	6,338.78	4,102.47	1,413.51	4,174.13	2.43	-1.49	1.91
10,657.00	89.60	343.20	6,339.68	4,192.64	1,386.97	4,262.70	0.91	0.32	-0.85
10,752.00	89.80	342.80	6,340.18	4,283.49	1,359.20	4,351.88	0.47	0.21	-0.42
10,846.00	89.90	342.10	6,340.43	4,373.12	1,330.85	4,439.81	0.75	0.11	-0.74
10,940.00	89.00	346.10	6,341.33	4,463.50	1,305.11	4,528.63	4.36	-0.96	4.26
11,034.00	88.80	343.70	6,343.13	4,554.23	1,280.63	4,617.88	2.56	-0.21	-2.55
11,128.00	89.00	343.30	6,344.94	4,644.34	1,253.94	4,706.38	0.48	0.21	-0.43
11,223.00	89.40	342.50	6,346.27	4,735.13	1,226.00	4,795.49	0.94	0.42	-0.84
11,317.00	89.20	340.40	6,347.41	4,824.23	1,196.10	4,882.82	2.24	-0.21	-2.23
11,411.00	88.10	341.60	6,349.63	4,913.09	1,165.51	4,969.85	1.73	-1.17	1.28
11,506.00	88.30	344.60	6,352.61	5,003.93	1,137.91	5,059.03	3.16	0.21	3.16
11,600.00	88.90	344.50	6,354.91	5,094.50	1,112.88	5,148.09	0.65	0.64	-0.11
11,694.00	89.80	345.30	6,355.98	5,185.25	1,088.39	5,237.35	1.28	0.96	0.85
11,789.00	89.00	344.80	6,356.97	5,277.03	1,063.89	5,327.64	0.99	-0.84	-0.53
11,883.00	90.00	345.00	6,357.79	5,367.78	1,039.40	5,416.90	1.08	1.06	0.21
11,977.00	91.00	344.90	6,356.97	5,458.55	1,014.99	5,506.19	1.07	1.06	-0.11
12,071.00	89.30	342.80	6,356.73	5,548.83	988.85	5,594.89	2.87	-1.81	-2.23
12,166.00	89.70	343.30	6,357.55	5,639.70	961.15	5,684.10	0.67	0.42	0.53
12,260.00	90.00	343.80	6,357.80	5,729.85	934.53	5,772.64	0.62	0.32	0.53
12,355.00	88.40	343.80	6,359.13	5,821.07	908.03	5,862.26	1.68	-1.68	0.00
12,449.00	88.80	343.60	6,361.42	5,911.26	881.66	5,950.86	0.48	0.43	-0.21

<b>Company:</b>	EQT PRODUCTION	<b>Local Co-ordinate Reference:</b>	Well Well #515874 - Slot 515874
<b>Project:</b>	Ritchie County, WV	<b>TVD Reference:</b>	KB@23 @ 1039.00usft
<b>Site:</b>	PEN54	<b>MD Reference:</b>	KB@23 @ 1039.00usft
<b>Well:</b>	Well #515874	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Main Wellbore	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Main Wellbore	<b>Database:</b>	Well_Planner1

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)	
12,544.00	89.20	342.50	6,363.08	6,002.12	853.97	6,040.06	1.23	0.42	-1.16	
12,638.00	89.50	343.40	6,364.15	6,091.98	826.41	6,128.27	1.01	0.32	0.96	
12,732.00	91.00	345.20	6,363.74	6,182.47	800.97	6,217.21	2.49	1.60	1.91	
12,827.00	92.00	344.00	6,361.25	6,274.02	775.76	6,307.24	1.64	1.05	-1.26	
12,921.00	90.60	344.50	6,359.12	6,364.47	750.25	6,396.14	1.58	-1.49	0.53	
13,015.00	90.90	343.80	6,357.89	6,454.89	724.58	6,485.01	0.81	0.32	-0.74	
13,109.00	89.70	344.30	6,357.40	6,545.26	698.75	6,573.82	1.38	-1.28	0.53	
13,204.00	88.40	344.90	6,358.97	6,636.84	673.52	6,663.87	1.51	-1.37	0.63	
13,298.00	88.80	344.70	6,361.27	6,727.52	648.88	6,753.06	0.48	0.43	-0.21	
13,393.00	87.50	344.10	6,364.33	6,818.97	623.35	6,842.96	1.51	-1.37	-0.63	
13,459.00	90.00	343.70	6,365.77	6,882.36	605.05	6,905.25	3.84	3.79	-0.61	
13,487.00	90.60	343.60	6,365.63	6,909.23	597.17	6,931.64	2.17	2.14	-0.36	
13,582.00	88.40	343.20	6,366.46	7,000.26	570.03	7,021.04	2.35	-2.32	-0.42	
13,676.00	88.20	342.40	6,369.24	7,090.02	542.25	7,109.13	0.88	-0.21	-0.85	
13,770.00	90.30	343.20	6,370.48	7,179.80	514.46	7,197.24	2.39	2.23	0.85	
<b>Deepest point of well=13770'MD / 6370.47'TVD</b>										
13,864.00	90.90	342.80	6,369.49	7,269.69	486.98	7,285.48	0.77	0.64	-0.43	
13,958.00	91.60	342.30	6,367.44	7,359.34	458.80	7,373.44	0.92	0.74	-0.53	
14,044.00	92.00	342.10	6,364.74	7,441.18	432.52	7,453.71	0.52	0.47	-0.23	
<b>FINAL Survey: 14044' MD / 6364.74'TVD</b>										
14,094.00	92.00	342.10	6,362.99	7,488.73	417.16	7,500.34	0.00	0.00	0.00	
<b>TD: 14094'MD</b>										

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
LP=8206'MD As Drilled	0.00	0.00	0.00	1,841.76	2,077.10	280,961.88	1,597,896.54	39° 15' 45.648 N	80° 55' 12.616 W
- actual wellpath misses target center by 2776.07usft at 14.13usft MD (14.13 TVD, 0.00 N, 0.01 E)									
- Point									
TD: 14094'MD	0.00	0.00	0.00	7,488.73	417.16	286,608.85	1,596,236.60	39° 16' 41.197 N	80° 55' 34.858 W
- actual wellpath misses target center by 6362.99usft at 14094.00usft MD (6362.99 TVD, 7488.73 N, 417.16 E)									
- Point									

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
4,200.00	4,199.84	-11.01	-8.05	KOP=4200'MD
8,206.00	6,311.99	1,841.76	2,077.10	LP=8206'MD As Drilled
13,770.00	6,370.48	7,179.80	514.46	Deepest point of well=13770'MD / 6370.47'TVD
14,044.00	6,364.74	7,441.18	432.52	FINAL Survey: 14044' MD / 6364.74'TVD
14,094.00	6,362.99	7,488.73	417.16	TD: 14094'MD