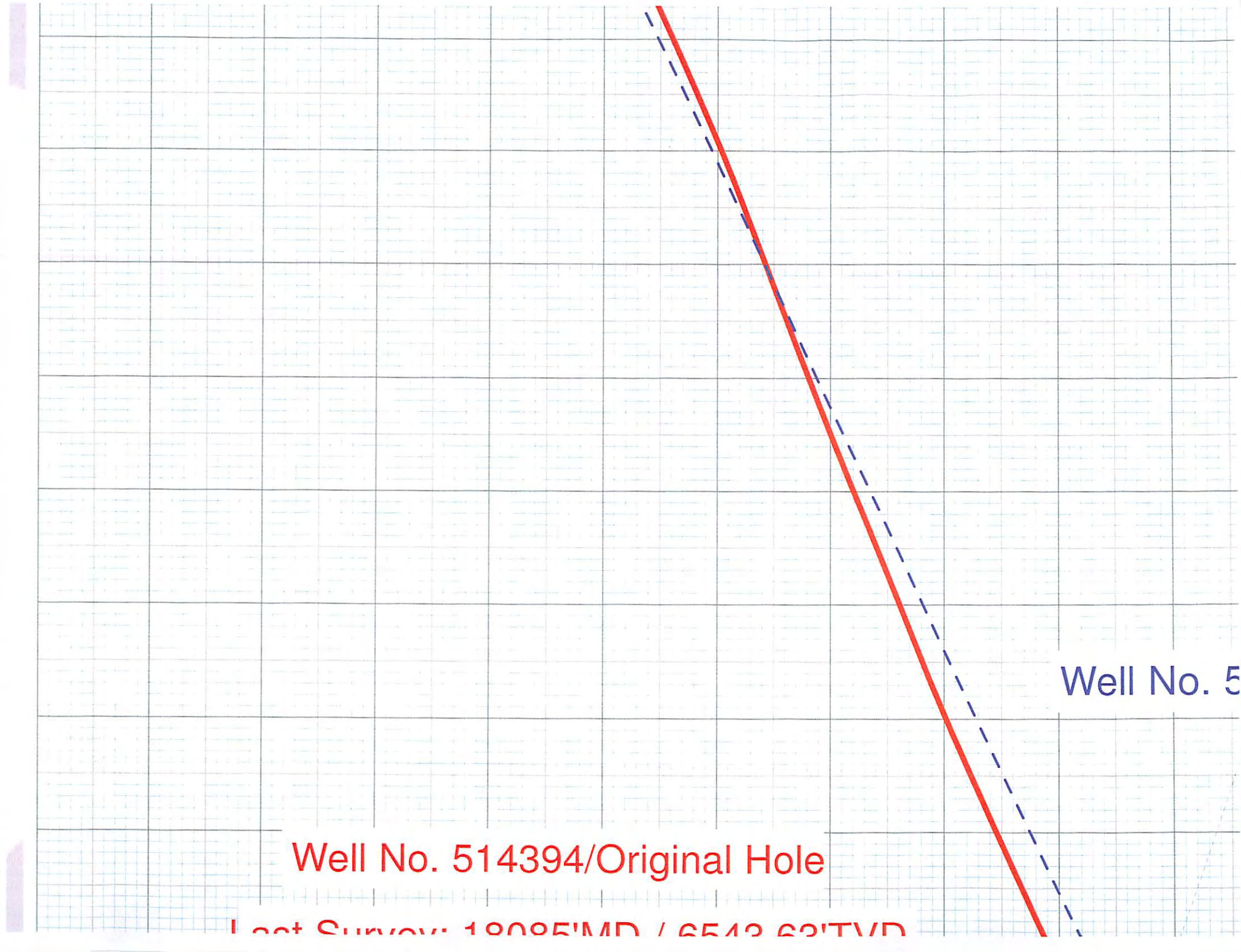


Well No. 514394/Original Hole

Last Survey: 10095' MD / 6542.63' TVD

Well No. 5



EQT Production

Doddridge County, WV
Orion WEU49 Pad
Well No. 514394
North Reference: Grid

Original Hole

Survey: ProDirectional

API-47-170-6447

Standard Survey Report

06 March, 2015

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Environmental Protection
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Professional Directional Survey Report



Company:	EQT Production	Local Co-ordinate Reference:	Well Well #514394
Project:	Doddridge County, WV	TVD Reference:	GL 1130' + 22.5' KB @ 1152.50usft (Orion Rig)
Site:	Orion WEU49 Pad	MD Reference:	GL 1130' + 22.5' KB @ 1152.50usft (Orion Rig)
Well:	Well #514394	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Well_Planner1

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		Using geodetic scale factor

Site	Orion WEU49 Pad				
Site Position:		Northing:	277,569.80 usft	Latitude:	39.254930
From:	Map	Easting:	1,635,662.00 usft	Longitude:	-80.786637
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.82 °

Well	Well #514394					
Well Position	+N/-S	0.00 usft	Northing:	277,554.70 usft	Latitude:	39.254889
	+E/-W	0.00 usft	Easting:	1,635,663.70 usft	Longitude:	-80.786630
Position Uncertainty		0.00 usft	Wellhead Elevation:	1,152.50 usft	Ground Level:	1,130.00 usft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/16/2015	-8.49	66.72	52,195

Design	Original Hole				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00		155.00

Survey Program	Date	3/6/2015			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
109.50	5,409.50	#1 Gyrodata Gyro (Original Hole)	Gyrodata_DP_MS	Gyrodata gyro-compassing and drop	
5,444.00	18,145.00	ProDirectional (Original Hole)	ProMWD	MWD - Standard	

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)	
5,409.50	4.00	350.21	5,408.06	8.19	-32.93	-21.34	0.00	0.00	0.00	
Tie into Gyro at: 5409'MD										
5,444.00	4.20	353.43	5,442.48	10.63	-33.27	-23.70	0.88	0.58	9.33	
First ProMWD: 5444'MD										
5,476.00	4.02	355.24	5,474.39	12.91	-33.50	-25.86	0.69	-0.56	5.66	
5,508.00	4.51	313.71	5,506.31	14.90	-34.50	-28.09	9.55	1.53	-129.78	
5,539.00	6.50	275.73	5,537.18	15.92	-37.13	-30.12	13.04	6.42	-122.52	
5,571.00	9.19	267.13	5,568.88	15.97	-41.49	-32.01	9.15	8.41	-26.88	
5,602.00	11.89	269.43	5,599.35	15.82	-47.15	-34.26	8.81	8.71	7.42	



Professional Directional Survey Report



Company:	EQT Production	Local Co-ordinate Reference:	Well Well #514394
Project:	Doddridge County, WV	TVD Reference:	GL 1130' + 22.5' KB @ 1152.50usft (Orion Rig)
Site:	Orion WEU49 Pad	MD Reference:	GL 1130' + 22.5' KB @ 1152.50usft (Orion Rig)
Well:	Well #514394	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	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)
5,634.00	13.52	264.23	5,630.57	15.41	-54.17	-36.86	6.22	5.09	-16.25
5,666.00	16.08	259.64	5,661.50	14.23	-62.26	-39.21	8.79	8.00	-14.34
5,697.00	18.69	253.83	5,691.09	12.08	-71.25	-41.06	10.10	8.42	-18.74
5,729.00	21.21	249.42	5,721.17	8.62	-81.60	-42.29	9.17	7.88	-13.78
5,761.00	25.10	243.65	5,750.59	3.57	-93.10	-42.58	14.06	12.16	-18.03
5,792.00	28.02	240.21	5,778.31	-2.97	-105.32	-41.82	10.64	9.42	-11.10
5,824.00	31.99	240.43	5,806.02	-10.89	-119.22	-40.51	12.41	12.41	0.69
5,856.00	33.58	239.15	5,832.92	-19.61	-134.19	-38.93	5.42	4.97	-4.00
5,887.00	35.31	239.94	5,858.49	-28.50	-149.31	-37.27	5.76	5.58	2.55
5,919.00	37.12	240.12	5,884.30	-37.94	-165.68	-35.63	5.67	5.66	0.56
5,951.00	40.21	241.05	5,909.29	-47.76	-183.10	-34.10	9.83	9.66	2.91
5,982.00	43.88	242.41	5,932.30	-57.58	-201.38	-32.92	12.20	11.84	4.39
6,014.00	47.90	243.91	5,954.57	-67.94	-221.88	-32.20	13.00	12.56	4.69
6,046.00	51.39	243.73	5,975.29	-78.70	-243.76	-31.69	10.91	10.91	-0.56
6,077.00	54.22	243.34	5,994.03	-89.70	-265.87	-31.06	9.18	9.13	-1.26
6,109.00	58.68	244.13	6,011.71	-101.50	-289.78	-30.48	14.09	13.94	2.47
6,141.00	62.22	245.01	6,027.49	-113.45	-314.92	-30.27	11.32	11.06	2.75
6,172.00	66.11	246.42	6,041.00	-124.91	-340.35	-30.63	13.20	12.55	4.55
6,204.00	67.61	246.33	6,053.57	-136.71	-367.30	-31.33	4.69	4.69	-0.28
6,235.00	67.92	246.95	6,065.30	-148.08	-393.65	-32.15	2.10	1.00	2.00
6,267.00	68.89	245.72	6,077.08	-160.03	-420.90	-32.85	4.69	3.03	-3.84
6,299.00	70.00	244.62	6,088.32	-172.61	-448.09	-32.93	4.73	3.47	-3.44
6,330.00	70.08	244.35	6,098.90	-185.16	-474.39	-32.67	0.86	0.26	-0.87
6,362.00	70.39	244.84	6,109.72	-198.08	-501.59	-32.46	1.74	0.97	1.53
6,394.00	68.98	244.92	6,120.83	-210.82	-528.76	-32.40	4.41	-4.41	0.25
6,425.00	68.10	244.62	6,132.17	-223.12	-554.86	-32.28	2.98	-2.84	-0.97
6,457.00	68.41	244.92	6,144.02	-235.79	-581.74	-32.16	1.30	0.97	0.94
6,489.00	67.61	243.34	6,156.01	-248.73	-608.44	-31.71	5.22	-2.50	-4.94
6,520.00	67.21	242.24	6,167.92	-261.82	-633.90	-30.61	3.52	-1.29	-3.55
6,552.00	67.61	242.81	6,180.21	-275.45	-660.11	-29.33	2.07	1.25	1.78
6,583.00	67.70	242.94	6,191.99	-288.52	-685.63	-28.27	0.48	0.29	0.42
6,615.00	68.18	243.34	6,204.01	-301.92	-712.08	-27.31	1.90	1.50	1.25
6,647.00	68.41	242.94	6,215.85	-315.35	-738.61	-26.34	1.37	0.72	-1.25
6,678.00	68.98	243.51	6,227.11	-328.36	-764.39	-25.45	2.51	1.84	1.84
6,710.00	68.89	242.81	6,238.61	-341.85	-791.04	-24.49	2.06	-0.28	-2.19
6,742.00	69.51	244.04	6,249.98	-355.23	-817.79	-23.67	4.08	1.94	3.84
6,773.00	69.60	243.73	6,260.80	-368.01	-843.87	-23.10	0.98	0.29	-1.00
6,805.00	69.91	243.82	6,271.88	-381.28	-870.81	-22.46	1.00	0.97	0.28
6,837.00	70.70	244.35	6,282.66	-394.45	-897.90	-21.98	2.92	2.47	1.66
6,868.00	68.98	243.03	6,293.35	-407.34	-923.99	-21.32	6.84	-5.55	-4.26
6,900.00	68.58	243.73	6,304.93	-420.71	-950.66	-20.47	2.39	-1.25	2.19
6,932.00	69.11	243.65	6,316.48	-433.94	-977.41	-19.79	1.67	1.66	-0.25
6,963.00	69.51	243.73	6,327.43	-446.79	-1,003.41	-19.13	1.31	1.29	0.26

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Professional Directional Survey Report



Company:	EQT Production	Local Co-ordinate Reference:	Well Well #514394
Project:	Doddridge County, WV	TVD Reference:	GL 1130' + 22.5' KB @ 1152.50usft (Orion Rig)
Site:	Orion WEU49 Pad	MD Reference:	GL 1130' + 22.5' KB @ 1152.50usft (Orion Rig)
Well:	Well #514394	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	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)	
5,634.00	13.52	264.23	5,630.57	15.41	-54.17	-36.86	6.22	5.09	-16.25	
5,666.00	16.08	259.64	5,661.50	14.23	-62.26	-39.21	8.79	8.00	-14.34	
5,697.00	18.69	253.83	5,691.09	12.08	-71.25	-41.06	10.10	8.42	-18.74	
5,729.00	21.21	249.42	5,721.17	8.62	-81.60	-42.29	9.17	7.88	-13.78	
5,761.00	25.10	243.65	5,750.59	3.57	-93.10	-42.58	14.06	12.16	-18.03	
5,792.00	28.02	240.21	5,778.31	-2.97	-105.32	-41.82	10.64	9.42	-11.10	
5,824.00	31.99	240.43	5,806.02	-10.89	-119.22	-40.51	12.41	12.41	0.69	
5,856.00	33.58	239.15	5,832.92	-19.61	-134.19	-38.93	5.42	4.97	-4.00	
5,887.00	35.31	239.94	5,858.49	-28.50	-149.31	-37.27	5.76	5.58	2.55	
5,919.00	37.12	240.12	5,884.30	-37.94	-165.68	-35.63	5.67	5.66	0.56	
5,951.00	40.21	241.05	5,909.29	-47.76	-183.10	-34.10	9.83	9.66	2.91	
5,982.00	43.88	242.41	5,932.30	-57.58	-201.38	-32.92	12.20	11.84	4.39	
6,014.00	47.90	243.91	5,954.57	-67.94	-221.88	-32.20	13.00	12.56	4.69	
6,046.00	51.39	243.73	5,975.29	-78.70	-243.76	-31.69	10.91	10.91	-0.56	
6,077.00	54.22	243.34	5,994.03	-89.70	-265.87	-31.06	9.18	9.13	-1.26	
6,109.00	58.68	244.13	6,011.71	-101.50	-289.78	-30.48	14.09	13.94	2.47	
6,141.00	62.22	245.01	6,027.49	-113.45	-314.92	-30.27	11.32	11.06	2.75	
6,172.00	66.11	246.42	6,041.00	-124.91	-340.35	-30.63	13.20	12.55	4.55	
6,204.00	67.61	246.33	6,053.57	-136.71	-367.30	-31.33	4.69	4.69	-0.28	
6,235.00	67.92	246.95	6,065.30	-148.08	-393.65	-32.15	2.10	1.00	2.00	
6,267.00	68.89	245.72	6,077.08	-160.03	-420.90	-32.85	4.69	3.03	-3.84	
6,299.00	70.00	244.62	6,088.32	-172.61	-448.09	-32.93	4.73	3.47	-3.44	
6,330.00	70.08	244.35	6,098.90	-185.16	-474.39	-32.67	0.86	0.26	-0.87	
6,362.00	70.39	244.84	6,109.72	-198.08	-501.59	-32.46	1.74	0.97	1.53	
6,394.00	68.98	244.92	6,120.83	-210.82	-528.76	-32.40	4.41	-4.41	0.25	
6,425.00	68.10	244.62	6,132.17	-223.12	-554.86	-32.28	2.98	-2.84	-0.97	
6,457.00	68.41	244.92	6,144.02	-235.79	-581.74	-32.16	1.30	0.97	0.94	
6,489.00	67.61	243.34	6,156.01	-248.73	-608.44	-31.71	5.22	-2.50	-4.94	
6,520.00	67.21	242.24	6,167.92	-261.82	-633.90	-30.61	3.52	-1.29	-3.55	
6,552.00	67.61	242.81	6,180.21	-275.45	-660.11	-29.33	2.07	1.25	1.78	
6,583.00	67.70	242.94	6,191.99	-288.52	-685.63	-28.27	0.48	0.29	0.42	
6,615.00	68.18	243.34	6,204.01	-301.92	-712.08	-27.31	1.90	1.50	1.25	
6,647.00	68.41	242.94	6,215.85	-315.35	-738.61	-26.34	1.37	0.72	-1.25	
6,678.00	68.98	243.51	6,227.11	-328.36	-764.39	-25.45	2.51	1.84	1.84	
6,710.00	68.89	242.81	6,238.61	-341.85	-791.04	-24.49	2.06	-0.28	-2.19	
6,742.00	69.51	244.04	6,249.98	-355.23	-817.79	-23.67	4.08	1.94	3.84	
6,773.00	69.60	243.73	6,260.80	-368.01	-843.87	-23.10	0.98	0.29	-1.00	
6,805.00	69.91	243.82	6,271.88	-381.28	-870.81	-22.46	1.00	0.97	0.28	
6,837.00	70.70	244.35	6,282.66	-394.45	-897.90	-21.98	2.92	2.47	1.66	
6,868.00	68.98	243.03	6,293.35	-407.34	-923.99	-21.32	6.84	-5.55	-4.26	
6,900.00	68.58	243.73	6,304.93	-420.71	-950.66	-20.47	2.39	-1.25	2.19	
6,932.00	69.11	243.65	6,316.48	-433.94	-977.41	-19.79	1.67	1.66	-0.25	
6,963.00	69.51	243.73	6,327.43	-446.79	-1,003.41	-19.13	1.31	1.29	0.26	



Professional Directional Survey Report



Company:	EQT Production	Local Co-ordinate Reference:	Well Well #514394
Project:	Doddridge County, WV	TVD Reference:	GL 1130' + 22.5' KB @ 1152.50usft (Orion Rig)
Site:	Orion WEU49 Pad	MD Reference:	GL 1130' + 22.5' KB @ 1152.50usft (Orion Rig)
Well:	Well #514394	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	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)	
6,995.00	70.22	244.44	6,338.45	-459.92	-1,030.43	-18.65	3.04	2.22	2.22	
7,026.00	68.41	243.73	6,349.39	-472.59	-1,056.51	-18.19	6.22	-5.84	-2.29	
7,058.00	67.92	242.63	6,361.30	-486.00	-1,083.02	-17.24	3.54	-1.53	-3.44	
7,090.00	68.49	243.34	6,373.18	-499.49	-1,109.49	-16.20	2.72	1.78	2.22	
7,121.00	69.20	242.81	6,384.37	-512.58	-1,135.27	-15.23	2.79	2.29	-1.71	
7,153.00	67.92	243.25	6,396.06	-526.09	-1,161.81	-14.20	4.20	-4.00	1.38	
7,185.00	67.30	243.12	6,408.25	-539.44	-1,188.22	-13.27	1.97	-1.94	-0.41	
7,217.00	67.79	243.34	6,420.47	-552.76	-1,214.62	-12.35	1.66	1.53	0.69	
7,248.00	68.18	243.65	6,432.09	-565.58	-1,240.34	-11.60	1.56	1.26	1.00	
7,280.00	68.49	243.65	6,443.91	-578.78	-1,266.99	-10.90	0.97	0.97	0.00	
7,311.00	68.80	243.34	6,455.20	-591.67	-1,292.83	-10.14	1.37	1.00	-1.00	
7,343.00	68.89	243.12	6,466.75	-605.11	-1,319.47	-9.22	0.70	0.28	-0.69	
7,375.00	69.20	244.13	6,478.19	-618.39	-1,346.25	-8.50	3.10	0.97	3.16	
7,407.00	68.32	241.13	6,489.79	-632.09	-1,372.73	-7.27	9.16	-2.75	-9.38	
7,438.00	67.30	237.43	6,501.50	-646.75	-1,397.40	-4.41	11.53	-3.29	-11.94	
7,470.00	66.81	234.04	6,513.97	-663.34	-1,421.75	0.33	9.87	-1.53	-10.59	
7,502.00	66.68	230.73	6,526.61	-681.28	-1,445.04	6.75	9.51	-0.41	-10.34	
7,533.00	66.90	227.03	6,538.83	-700.01	-1,466.49	14.66	10.99	0.71	-11.94	
7,565.00	67.92	223.64	6,551.13	-720.78	-1,487.50	24.60	10.29	3.19	-10.59	
7,596.00	69.69	221.13	6,562.34	-742.13	-1,506.98	35.72	9.46	5.71	-8.10	
7,628.00	71.10	216.41	6,573.08	-765.62	-1,525.85	49.04	14.58	4.41	-14.75	
7,660.00	72.12	213.72	6,583.18	-790.48	-1,543.29	64.19	8.59	3.19	-8.41	
7,691.00	73.80	210.55	6,592.26	-815.57	-1,559.05	80.28	11.18	5.42	-10.23	
7,723.00	74.42	208.13	6,601.02	-842.40	-1,574.12	98.22	7.53	1.94	-7.56	
7,755.00	74.59	205.44	6,609.57	-869.93	-1,588.02	117.29	8.12	0.53	-8.41	
7,787.00	75.61	202.53	6,617.80	-898.18	-1,600.59	137.59	9.35	3.19	-9.09	
7,818.00	75.52	199.71	6,625.53	-926.18	-1,611.40	158.39	8.81	-0.29	-9.10	
7,850.00	74.19	197.64	6,633.89	-955.44	-1,621.29	180.73	7.50	-4.16	-6.47	
7,881.00	72.91	194.82	6,642.67	-983.98	-1,629.60	203.09	9.65	-4.13	-9.10	
7,913.00	72.78	192.13	6,652.12	-1,013.71	-1,636.73	227.02	8.04	-0.41	-8.41	
7,945.00	73.31	188.21	6,661.45	-1,043.83	-1,642.13	252.04	11.83	1.66	-12.25	
7,976.00	73.88	184.11	6,670.21	-1,073.39	-1,645.32	277.48	12.82	1.84	-13.23	
8,008.00	76.49	181.64	6,678.39	-1,104.28	-1,646.87	304.82	11.05	8.16	-7.72	
8,039.00	79.89	180.01	6,684.74	-1,134.62	-1,647.30	332.13	12.11	10.97	-5.26	
8,071.00	84.49	178.12	6,689.08	-1,166.31	-1,646.78	361.07	15.52	14.38	-5.91	
8,103.00	89.70	176.44	6,690.70	-1,198.22	-1,645.26	390.63	17.10	16.28	-5.25	
8,134.00	92.62	174.81	6,690.08	-1,229.12	-1,642.90	419.64	10.79	9.42	-5.26	
8,166.00	93.50	174.42	6,688.37	-1,260.93	-1,639.90	449.74	3.01	2.75	-1.22	
8,197.00	94.61	173.71	6,686.18	-1,291.68	-1,636.70	478.96	4.25	3.58	-2.29	
8,229.00	95.80	174.15	6,683.27	-1,323.37	-1,633.33	509.11	3.96	3.72	1.38	
8,261.00	96.69	174.24	6,679.79	-1,355.02	-1,630.12	539.15	2.80	2.78	0.28	
8,285.00	95.80	173.93	6,677.18	-1,378.75	-1,627.66	561.69	3.92	-3.71	-1.29	
8,317.00	93.99	173.45	6,674.45	-1,410.44	-1,624.15	591.89	5.85	-5.66	-1.50	
8,348.00	93.20	171.24	6,672.51	-1,441.10	-1,620.03	621.42	7.56	-2.55	-7.13	



Professional Directional Survey Report



Company:	EQT Production	Local Co-ordinate Reference:	Well Well #514394
Project:	Doddridge County, WV	TVD Reference:	GL 1130' + 22.5' KB @ 1152.50usft (Orion Rig)
Site:	Orion WEU49 Pad	MD Reference:	GL 1130' + 22.5' KB @ 1152.50usft (Orion Rig)
Well:	Well #514394	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	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)	
8,380.00	91.52	168.03	6,671.19	-1,472.55	-1,614.28	652.36	11.31	-5.25	-10.03	
8,411.00	90.28	166.13	6,670.70	-1,502.76	-1,607.35	682.66	7.32	-4.00	-6.13	
8,443.00	89.79	163.93	6,670.68	-1,533.67	-1,599.09	714.17	7.04	-1.53	-6.88	
8,538.00	90.10	156.04	6,670.77	-1,622.86	-1,566.60	808.74	8.31	0.33	-8.31	
8,633.00	90.72	153.44	6,670.09	-1,708.77	-1,526.06	903.73	2.81	0.65	-2.74	
8,728.00	89.88	151.94	6,669.60	-1,793.17	-1,482.48	998.64	1.81	-0.88	-1.58	
8,823.00	88.38	153.93	6,671.04	-1,877.75	-1,439.26	1,093.56	2.62	-1.58	2.09	
8,918.00	87.98	155.82	6,674.06	-1,963.72	-1,398.95	1,188.51	2.03	-0.42	1.99	
9,012.00	87.10	154.15	6,678.09	-2,048.82	-1,359.24	1,282.42	2.01	-0.94	-1.78	
9,107.00	87.01	153.93	6,682.97	-2,134.12	-1,317.71	1,377.28	0.25	-0.09	-0.23	
9,202.00	88.51	153.93	6,686.69	-2,219.38	-1,275.99	1,472.19	1.58	1.58	0.00	
9,297.00	89.22	155.42	6,688.57	-2,305.24	-1,235.36	1,567.17	1.74	0.75	1.57	
9,393.00	89.70	156.35	6,689.47	-2,392.85	-1,196.14	1,663.15	1.09	0.50	0.97	
9,488.00	88.29	150.71	6,691.14	-2,477.84	-1,153.82	1,758.06	6.12	-1.48	-5.94	
9,583.00	87.89	149.52	6,694.31	-2,560.16	-1,106.52	1,852.66	1.32	-0.42	-1.25	
9,677.00	90.28	151.55	6,695.81	-2,641.99	-1,060.29	1,946.35	3.34	2.54	2.16	
9,772.00	89.88	149.91	6,695.68	-2,724.85	-1,013.84	2,041.09	1.78	-0.42	-1.73	
9,867.00	89.62	150.05	6,696.09	-2,807.11	-966.32	2,135.72	0.31	-0.27	0.15	
9,962.00	89.00	148.95	6,697.23	-2,888.96	-918.10	2,230.28	1.33	-0.65	-1.16	
10,057.00	88.20	151.15	6,699.56	-2,971.24	-870.69	2,324.89	2.46	-0.84	2.32	
10,152.00	87.41	151.02	6,703.19	-3,054.33	-824.79	2,419.59	0.84	-0.83	-0.14	
10,247.00	88.20	153.04	6,706.83	-3,138.17	-780.27	2,514.39	2.28	0.83	2.13	
10,342.00	87.50	152.34	6,710.40	-3,222.52	-736.72	2,609.25	1.04	-0.74	-0.74	
10,436.00	89.70	152.82	6,712.69	-3,305.93	-693.45	2,703.13	2.40	2.34	0.51	
10,531.00	91.38	153.93	6,711.80	-3,390.85	-650.88	2,798.08	2.12	1.77	1.17	
10,626.00	92.62	154.41	6,708.48	-3,476.30	-609.51	2,893.01	1.40	1.31	0.51	
10,721.00	92.62	153.22	6,704.14	-3,561.46	-567.63	2,987.89	1.25	0.00	-1.25	
10,816.00	92.71	153.31	6,699.72	-3,646.22	-524.94	3,082.74	0.13	0.09	0.09	
10,911.00	92.89	154.32	6,695.08	-3,731.36	-483.07	3,177.61	1.08	0.19	1.06	
11,006.00	92.31	153.13	6,690.77	-3,816.46	-441.06	3,272.48	1.39	-0.61	-1.25	
11,101.00	90.50	151.81	6,688.44	-3,900.67	-397.17	3,367.36	2.36	-1.91	-1.39	
11,196.00	90.81	154.41	6,687.36	-3,985.39	-354.21	3,462.29	2.76	0.33	2.74	
11,291.00	90.99	155.11	6,685.86	-4,071.30	-313.70	3,557.28	0.76	0.19	0.74	
11,386.00	90.59	154.01	6,684.55	-4,157.08	-272.90	3,652.26	1.23	-0.42	-1.16	
11,481.00	90.99	153.13	6,683.24	-4,242.14	-230.62	3,747.22	1.02	0.42	-0.93	
11,576.00	93.68	156.22	6,679.37	-4,327.92	-190.02	3,842.12	4.31	2.83	3.25	
11,671.00	94.30	158.33	6,672.76	-4,415.33	-153.41	3,936.81	2.31	0.65	2.22	
11,766.00	92.89	157.85	6,666.81	-4,503.29	-118.04	4,031.49	1.57	-1.48	-0.51	
11,861.00	91.60	159.43	6,663.08	-4,591.70	-83.46	4,126.22	2.15	-1.36	1.66	
11,956.00	90.01	156.75	6,661.75	-4,679.81	-48.02	4,221.06	3.28	-1.67	-2.82	
12,052.00	89.09	156.13	6,662.50	-4,767.81	-9.65	4,317.02	1.16	-0.96	-0.65	
12,147.00	91.60	155.34	6,661.93	-4,854.41	29.39	4,412.00	2.77	2.64	-0.83	
12,242.00	97.08	154.72	6,654.74	-4,940.25	69.36	4,506.70	5.80	5.77	-0.65	



Professional Directional Survey Report



Company:	EQT Production	Local Co-ordinate Reference:	Well Well #514394
Project:	Doddridge County, WV	TVD Reference:	GL 1130' + 22.5' KB @ 1152.50usft (Orion Rig)
Site:	Orion WEU49 Pad	MD Reference:	GL 1130' + 22.5' KB @ 1152.50usft (Orion Rig)
Well:	Well #514394	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	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)
12,337.00	97.00	155.25	6,643.10	-5,025.69	109.23	4,600.98	0.56	-0.08	0.56
12,432.00	95.80	154.23	6,632.51	-5,111.06	149.51	4,695.38	1.65	-1.26	-1.07
12,527.00	95.10	154.41	6,623.49	-5,196.29	190.49	4,789.95	0.76	-0.74	0.19
12,621.00	95.89	154.32	6,614.49	-5,280.65	230.97	4,883.51	0.85	0.84	-0.10
12,716.00	94.30	154.62	6,606.05	-5,366.03	271.75	4,978.13	1.70	-1.67	0.32
12,811.00	93.81	151.72	6,599.33	-5,450.58	314.52	5,072.83	3.09	-0.52	-3.05
12,906.00	94.08	153.75	6,592.80	-5,534.82	357.93	5,167.52	2.15	0.28	2.14
13,001.00	94.08	156.04	6,586.04	-5,620.63	398.14	5,262.28	2.40	0.00	2.41
13,095.00	91.91	156.53	6,581.12	-5,706.57	435.89	5,356.12	2.37	-2.31	0.52
13,190.00	93.50	156.04	6,576.64	-5,793.44	474.05	5,450.99	1.75	1.67	-0.52
13,285.00	90.50	158.82	6,573.33	-5,881.10	510.48	5,545.82	4.30	-3.16	2.93
13,380.00	91.69	157.94	6,571.51	-5,969.40	545.48	5,640.64	1.56	1.25	-0.93
13,475.00	87.58	157.94	6,572.11	-6,057.42	581.15	5,735.49	4.33	-4.33	0.00
13,569.00	88.29	157.01	6,575.50	-6,144.19	617.13	5,829.34	1.24	0.76	-0.99
13,664.00	89.48	157.85	6,577.35	-6,231.90	653.59	5,924.23	1.53	1.25	0.88
13,759.00	90.19	156.83	6,577.62	-6,319.56	690.19	6,019.15	1.31	0.75	-1.07
13,853.00	90.72	157.01	6,576.88	-6,406.03	727.04	6,113.10	0.60	0.56	0.19
13,948.00	91.21	156.61	6,575.28	-6,493.34	764.44	6,208.04	0.67	0.52	-0.42
14,043.00	90.41	154.41	6,573.93	-6,579.78	803.81	6,303.02	2.46	-0.84	-2.32
14,138.00	90.10	153.13	6,573.51	-6,665.00	845.80	6,397.99	1.39	-0.33	-1.35
14,233.00	89.70	153.13	6,573.68	-6,749.74	888.74	6,492.94	0.42	-0.42	0.00
14,328.00	90.72	153.75	6,573.33	-6,834.71	931.21	6,587.90	1.26	1.07	0.65
14,423.00	91.78	153.04	6,571.26	-6,919.63	973.75	6,682.84	1.34	1.12	-0.75
14,517.00	90.72	153.93	6,569.21	-7,003.72	1,015.70	6,776.78	1.47	-1.13	0.95
14,612.00	90.72	153.04	6,568.01	-7,088.72	1,058.11	6,871.74	0.94	0.00	-0.94
14,707.00	89.62	152.34	6,567.73	-7,173.13	1,101.69	6,966.66	1.37	-1.16	-0.74
14,802.00	89.40	155.11	6,568.54	-7,258.31	1,143.74	7,061.62	2.92	-0.23	2.92
14,896.00	90.41	155.25	6,568.70	-7,343.62	1,183.20	7,155.62	1.08	1.07	0.15
14,991.00	87.50	153.84	6,570.43	-7,429.37	1,224.02	7,250.59	3.40	-3.06	-1.48
15,086.00	88.11	153.04	6,574.07	-7,514.28	1,266.46	7,345.49	1.06	0.64	-0.84
15,181.00	89.09	154.01	6,576.39	-7,599.29	1,308.80	7,440.42	1.45	1.03	1.02
15,275.00	91.21	154.15	6,576.15	-7,683.83	1,349.89	7,534.41	2.26	2.26	0.15
15,370.00	89.31	152.34	6,575.71	-7,768.65	1,392.65	7,629.35	2.76	-2.00	-1.91
15,465.00	89.70	152.51	6,576.53	-7,852.86	1,436.63	7,724.25	0.45	0.41	0.18
15,560.00	91.21	152.34	6,575.78	-7,937.06	1,480.60	7,819.15	1.60	1.59	-0.18
15,654.00	91.12	151.63	6,573.87	-8,020.03	1,524.74	7,913.00	0.76	-0.10	-0.76
15,750.00	91.60	151.33	6,571.59	-8,104.36	1,570.57	8,008.79	0.59	0.50	-0.31
15,844.00	91.91	150.71	6,568.71	-8,186.55	1,616.09	8,102.52	0.74	0.33	-0.66
15,939.00	91.30	153.62	6,566.05	-8,270.51	1,660.42	8,197.36	3.13	-0.64	3.06
16,034.00	90.90	155.03	6,564.23	-8,356.12	1,701.57	8,292.33	1.54	-0.42	1.48
16,129.00	89.88	155.64	6,563.58	-8,442.45	1,741.22	8,387.32	1.25	-1.07	0.64
16,224.00	89.88	152.74	6,563.78	-8,527.96	1,782.57	8,482.30	3.05	0.00	-3.05
16,319.00	88.91	154.54	6,564.78	-8,613.07	1,824.75	8,577.27	2.15	-1.02	1.89



Professional Directional Survey Report



Company: EQT Production	Local Co-ordinate Reference: Well Well #514394
Project: Doddridge County, WV	TVD Reference: GL 1130' + 22.5' KB @ 1152.50usft (Orion Rig)
Site: Orion WEU49 Pad	MD Reference: GL 1130' + 22.5' KB @ 1152.50usft (Orion Rig)
Well: Well #514394	North Reference: Grid
Wellbore: Original Hole	Survey Calculation Method: Minimum Curvature
Design: Original Hole	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)	
16,414.00	89.09	156.22	6,566.44	-8,699.42	1,864.32	8,672.25	1.78	0.19	1.77	
16,508.00	88.11	158.24	6,568.74	-8,786.06	1,900.69	8,766.14	2.39	-1.04	2.15	
16,603.00	88.69	157.01	6,571.39	-8,873.87	1,936.84	8,861.00	1.43	0.61	-1.29	
16,698.00	89.00	156.61	6,573.30	-8,961.18	1,974.24	8,955.94	0.53	0.33	-0.42	
16,792.00	89.62	157.23	6,574.44	-9,047.65	2,011.09	9,049.88	0.93	0.66	0.66	
16,886.00	86.61	157.32	6,577.53	-9,134.29	2,047.37	9,143.74	3.20	-3.20	0.10	
16,980.00	87.32	156.92	6,582.51	-9,220.78	2,083.87	9,237.54	0.87	0.76	-0.43	
17,076.00	87.58	156.22	6,586.78	-9,308.77	2,122.00	9,333.41	0.78	0.27	-0.73	
17,170.00	87.72	156.92	6,590.63	-9,394.95	2,159.35	9,427.30	0.76	0.15	0.74	
17,265.00	90.41	157.23	6,592.18	-9,482.43	2,196.35	9,522.21	2.85	2.83	0.33	
17,360.00	93.28	159.43	6,589.12	-9,570.65	2,231.40	9,616.99	3.81	3.02	2.32	
17,454.00	93.90	158.51	6,583.24	-9,658.22	2,265.07	9,710.58	1.18	0.66	-0.98	
17,549.00	93.99	158.95	6,576.70	-9,746.54	2,299.45	9,805.15	0.47	0.09	0.46	
17,644.00	93.42	157.63	6,570.56	-9,834.61	2,334.52	9,899.79	1.51	-0.60	-1.39	
17,739.00	93.50	158.24	6,564.83	-9,922.49	2,370.14	9,994.49	0.65	0.08	0.64	
17,833.00	92.89	156.83	6,559.59	-10,009.22	2,406.00	10,088.25	1.63	-0.65	-1.50	
17,928.00	92.00	155.91	6,555.54	-10,096.17	2,444.05	10,183.14	1.35	-0.94	-0.97	
18,022.00	93.42	156.44	6,551.09	-10,182.06	2,481.97	10,277.01	1.61	1.51	0.56	
18,085.00	93.50	155.25	6,547.29	-10,239.44	2,507.71	10,339.89	1.89	0.13	-1.89	
Last Survey: 18085'MD / 6543.63'TVD										
18,145.00	93.50	155.25	6,543.63	-10,293.83	2,532.78	10,399.78	0.00	0.00	0.00	
PTB: 18145'MD										

Survey Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
5,409.50	5,408.06	8.19	-32.93	Tie into Gyro at: 5409'MD	
5,444.00	5,442.48	10.63	-33.27	First ProMWD: 5444'MD	
18,085.00	6,547.29	-10,239.44	2,507.71	Last Survey: 18085'MD / 6543.63'TVD	
18,145.00	6,543.63	-10,293.83	2,532.78	PTB: 18145'MD	