



Where energy meets innovation.

EQT PRODUCTION

Doddridge County, WV

WEU8

Well #514119 - Slot 514119

Main Wellbore

Design: 514119 As Drilled Surveys

API 47-017-06774

Standard Survey Report

03 October, 2016



RECEIVED
West Virginia Department of Oil and Gas
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DIRECTIONAL
FEB 16 2017

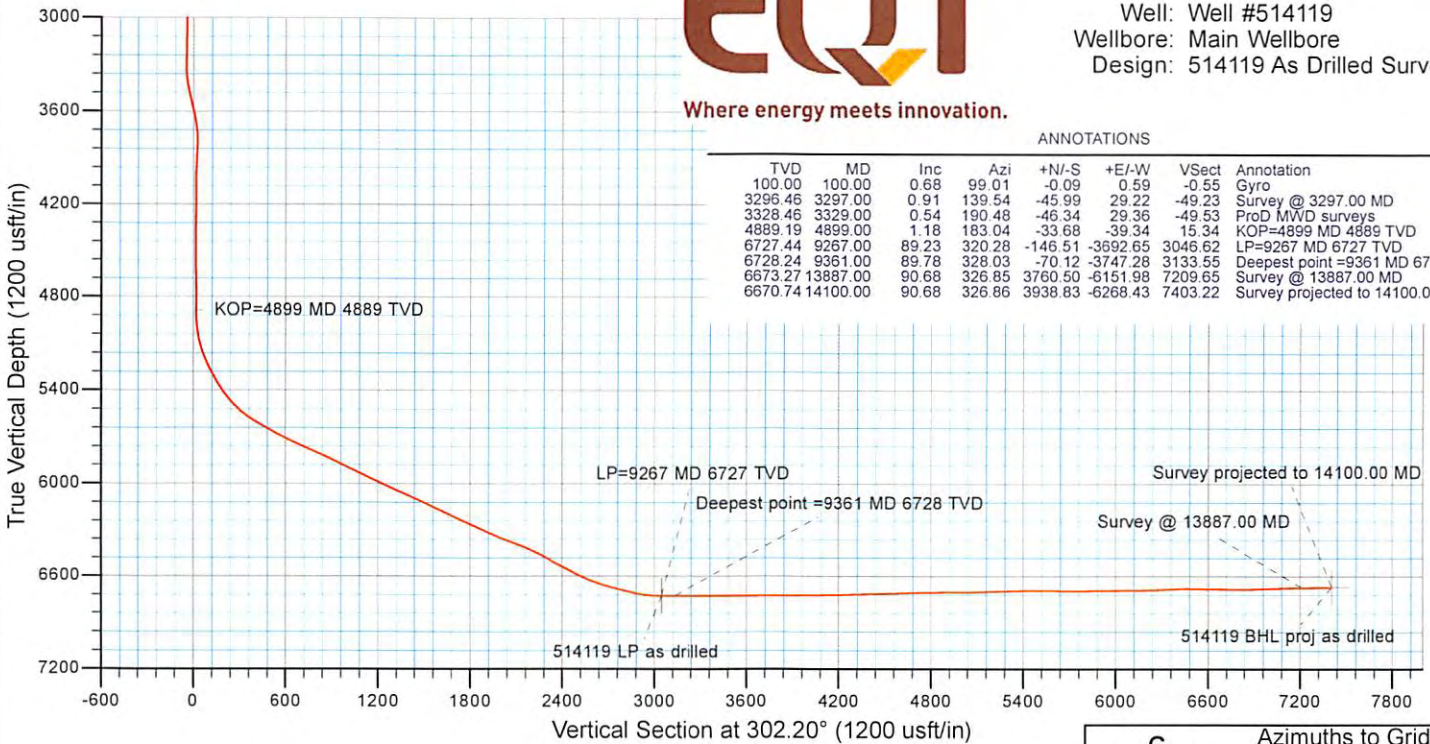
WV Department of
Environmental Protection

04/14/2017



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Project: Doddridge County, WV
 Site: WEU8
 Well: Well #514119
 Wellbore: Main Wellbore
 Design: 514119 As Drilled Surveys

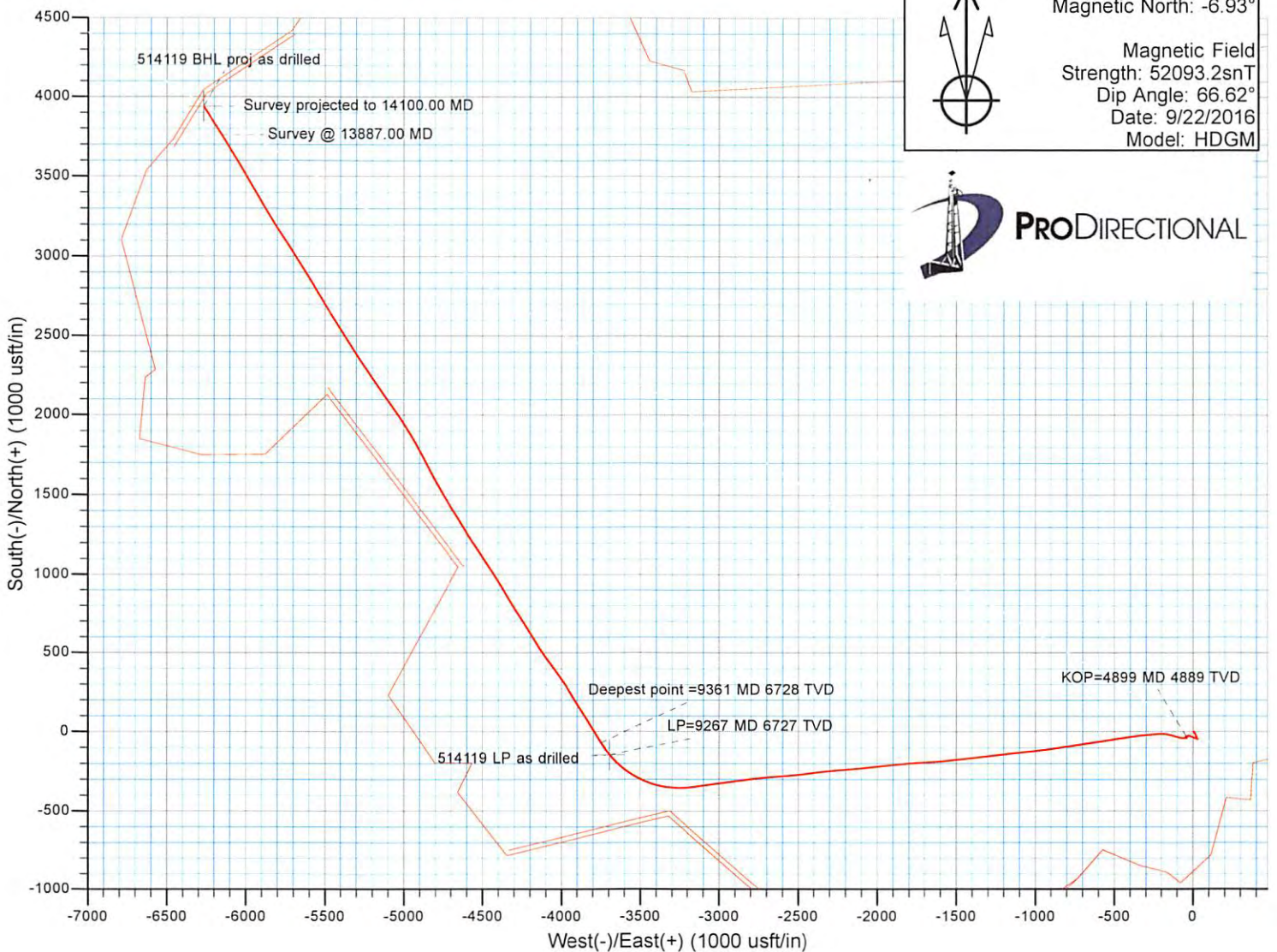


ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Annotation
100.00	100.00	0.68	99.01	-0.09	0.59	-0.55	Gyro
3296.46	3297.00	0.91	139.54	-45.99	29.22	-49.23	Survey @ 3297.00 MD
3328.46	3329.00	0.54	190.48	-46.34	29.36	-49.53	ProD MWD surveys
4889.19	4899.00	1.18	183.04	-33.68	-39.34	15.34	KOP=4899 MD 4889 TVD
6727.44	9267.00	89.23	320.28	-146.51	-3692.65	3046.62	LP=9267 MD 6727 TVD
6728.24	9361.00	89.78	328.03	-70.12	-3747.28	3133.55	Deepest point =9361 MD 6728 TVD
6673.27	13887.00	90.68	326.85	3760.50	-6151.98	7209.65	Survey @ 13887.00 MD
6670.74	14100.00	90.68	326.86	3938.83	-6268.43	7403.22	Survey projected to 14100.00 MD

Azimuths to Grid North
 True North: 0.84°
 Magnetic North: -6.93°

 Magnetic Field
 Strength: 52093.2snT
 Dip Angle: 66.62°
 Date: 9/22/2016
 Model: HDGM



04/14/2017

Company:	EQT PRODUCTION	Local Co-ordinate Reference:	Well Well #514119 - Slot 514119
Project:	Doddridge County, WV	TVD Reference:	KB@23 @ 1094.00usft
Site:	WEU8	MD Reference:	KB@23 @ 1094.00usft
Well:	Well #514119	North Reference:	Grid
Wellbore:	Main Wellbore	Survey Calculation Method:	Minimum Curvature
Design:	514119 As Drilled Surveys	Database:	DB Jul2216dt

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	WEU8				
Site Position:		Northing:	283,088.23 usft	Latitude:	39° 16' 11.3510 N
From:	Map	Easting:	1,629,108.55 usft	Longitude:	80° 48' 36.2181 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.84 °

Well	Well #514119 - Slot 514119					
Well Position	+N/-S	0.00 usft	Northing:	283,088.23 usft	Latitude:	39° 16' 11.3510 N
	+E/-W	0.00 usft	Easting:	1,629,108.55 usft	Longitude:	80° 48' 36.2181 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	1,071.00 usft

Wellbore	Main Wellbore				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	9/22/2016	-7.77	66.62	52,093

Design	514119 As Drilled Surveys				
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	302.20

Survey Program	Date	10/3/2016			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.00	3,297.00	514119 updated gyro (Main Wellbore)	GYD_DP_MS	Gyrodata gyro-compassing and drop	
3,329.00	14,100.00	514119 MWD TIP=3297 MD (Main Wellbo	MWD - OWSG	MWD - OWSG	

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)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.68	99.01	100.00	-0.09	0.59	-0.55	0.68	0.68	0.00	
Gyro										
200.00	0.57	107.69	199.99	-0.34	1.65	-1.57	0.14	-0.11	8.68	
300.00	0.64	111.40	299.99	-0.69	2.64	-2.60	0.08	0.07	3.71	
400.00	0.73	129.15	399.98	-1.30	3.65	-3.78	0.23	0.09	17.75	
500.00	0.62	132.19	499.97	-2.06	4.55	-4.95	0.12	-0.11	3.04	
600.00	0.60	133.30	599.97	-2.79	5.33	-6.00	0.02	-0.02	1.11	
700.00	0.46	129.58	699.96	-3.40	6.02	-6.91	0.14	-0.14	-3.72	
800.00	0.49	129.46	799.96	-3.93	6.66	-7.73	0.03	0.03	-0.12	

Company:	EQT PRODUCTION	Local Co-ordinate Reference:	Well Well #514119 - Slot 514119
Project:	Doddridge County, WV	TVD Reference:	KB@23 @ 1094.00usft
Site:	WEU8	MD Reference:	KB@23 @ 1094.00usft
Well:	Well #514119	North Reference:	Grid
Wellbore:	Main Wellbore	Survey Calculation Method:	Minimum Curvature
Design:	514119 As Drilled Surveys	Database:	DB Jul2216dt

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)
900.00	0.51	131.42	899.95	-4.49	7.32	-8.59	0.03	0.02	1.96
1,000.00	0.53	136.56	999.95	-5.12	7.98	-9.48	0.05	0.02	5.14
1,100.00	0.78	156.12	1,099.94	-6.08	8.57	-10.49	0.33	0.25	19.56
1,200.00	0.94	153.79	1,199.93	-7.44	9.21	-11.76	0.16	0.16	-2.33
1,300.00	1.15	152.81	1,299.92	-9.07	10.03	-13.32	0.21	0.21	-0.98
1,400.00	1.17	150.74	1,399.90	-10.85	10.99	-15.08	0.05	0.02	-2.07
1,500.00	1.24	148.09	1,499.87	-12.66	12.06	-16.95	0.09	0.07	-2.65
1,600.00	1.31	153.10	1,599.85	-14.60	13.15	-18.90	0.13	0.07	5.01
1,700.00	1.59	156.33	1,699.82	-16.89	14.22	-21.03	0.29	0.28	3.23
1,800.00	1.63	156.05	1,799.78	-19.46	15.35	-23.36	0.04	0.04	-0.28
1,900.00	1.74	155.27	1,899.73	-22.14	16.57	-25.82	0.11	0.11	-0.78
2,000.00	1.65	156.03	1,999.69	-24.83	17.79	-28.28	0.09	-0.09	0.76
2,100.00	1.37	156.26	2,099.66	-27.24	18.85	-30.47	0.28	-0.28	0.23
2,200.00	1.16	151.64	2,199.63	-29.23	19.82	-32.34	0.23	-0.21	-4.62
2,300.00	1.16	153.50	2,299.61	-31.03	20.75	-34.09	0.04	0.00	1.86
2,400.00	1.08	151.63	2,399.59	-32.76	21.65	-35.78	0.09	-0.08	-1.87
2,500.00	1.15	158.92	2,499.57	-34.53	22.46	-37.40	0.16	0.07	7.29
2,600.00	0.98	154.92	2,599.56	-36.24	23.18	-38.92	0.19	-0.17	-4.00
2,700.00	1.12	154.24	2,699.54	-37.89	23.97	-40.47	0.14	0.14	-0.68
2,800.00	0.87	154.53	2,799.52	-39.46	24.72	-41.94	0.25	-0.25	0.29
2,900.00	0.89	159.94	2,899.51	-40.87	25.31	-43.20	0.09	0.02	5.41
3,000.00	0.96	153.16	2,999.50	-42.35	25.96	-44.53	0.13	0.07	-6.78
3,100.00	0.96	137.04	3,099.48	-43.71	26.90	-46.06	0.27	0.00	-16.12
3,200.00	0.96	131.12	3,199.47	-44.87	28.11	-47.70	0.10	0.00	-5.92
3,297.00	0.91	139.54	3,296.46	-45.99	29.22	-49.23	0.15	-0.05	8.68
Survey @ 3297.00 MD									
3,329.00	0.54	190.48	3,328.46	-46.34	29.36	-49.53	2.21	-1.16	159.19
ProD MWD surveys									
3,360.00	3.40	277.84	3,359.44	-46.35	28.42	-48.75	11.03	9.23	281.81
3,392.00	7.35	286.40	3,391.29	-45.65	25.51	-45.91	12.56	12.34	26.75
3,423.00	11.03	290.74	3,421.89	-44.04	20.84	-41.10	12.07	11.87	14.00
3,455.00	13.11	293.69	3,453.18	-41.49	14.65	-34.51	6.78	6.50	9.22
3,486.00	13.40	294.78	3,483.35	-38.58	8.17	-27.47	1.23	0.94	3.52
3,549.00	13.07	294.21	3,544.68	-32.59	-4.96	-13.17	0.56	-0.52	-0.90
3,580.00	12.91	293.64	3,574.89	-29.77	-11.33	-6.28	0.66	-0.52	-1.84
3,612.00	12.50	290.79	3,606.10	-27.11	-17.84	0.65	2.34	-1.28	-8.91
3,643.00	12.05	279.97	3,636.40	-25.35	-24.16	6.94	7.55	-1.45	-34.90
3,675.00	12.30	266.94	3,667.68	-24.96	-30.86	12.81	8.60	0.78	-40.72
3,706.00	12.44	254.46	3,697.97	-26.03	-37.37	17.75	8.62	0.45	-40.26
3,738.00	10.66	240.45	3,729.33	-28.41	-43.27	21.47	10.34	-5.56	-43.78
3,769.00	7.93	220.64	3,759.92	-31.45	-47.16	23.15	13.45	-8.81	-63.90
3,801.00	5.20	203.65	3,791.71	-34.45	-49.18	23.25	10.38	-8.53	-53.09
3,832.00	3.22	169.36	3,822.63	-36.60	-49.58	22.45	10.06	-6.39	-110.61

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Wellbore:	Main Wellbore	Survey Calculation Method:	Minimum Curvature
Design:	514119 As Drilled Surveys	Database:	DB Jul2216dt

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)
3,895.00	2.08	113.13	3,885.58	-38.79	-48.20	20.12	4.27	-1.81	-89.25
3,926.00	2.19	99.09	3,916.55	-39.10	-47.10	19.02	1.72	0.35	-45.29
4,021.00	2.92	98.94	4,011.46	-39.76	-42.92	15.13	0.77	0.77	-0.16
4,115.00	0.78	343.84	4,105.42	-39.52	-40.73	13.41	3.54	-2.28	-122.45
4,209.00	1.46	303.33	4,199.40	-38.25	-41.91	15.08	1.07	0.72	-43.10
4,304.00	0.90	136.08	4,294.39	-38.12	-42.40	15.57	2.47	-0.59	-176.05
4,398.00	2.19	81.66	4,388.36	-38.39	-40.11	13.48	1.94	1.37	-57.89
4,492.00	1.91	41.83	4,482.31	-36.96	-37.29	11.86	1.51	-0.30	-42.37
4,587.00	1.96	343.74	4,577.26	-34.23	-36.69	12.81	1.98	0.05	-61.15
4,681.00	1.41	312.36	4,671.22	-31.90	-37.99	15.15	1.12	-0.59	-33.38
4,775.00	0.74	202.43	4,765.21	-31.68	-39.08	16.19	1.92	-0.71	-116.95
4,868.00	1.04	180.56	4,858.20	-33.08	-39.32	15.64	0.48	0.32	-23.52
4,899.00	1.18	183.04	4,889.19	-33.68	-39.34	15.34	0.48	0.45	8.00
KOP=4899 MD 4889 TVD									
4,930.00	2.76	233.60	4,920.18	-34.45	-39.96	15.46	7.12	5.10	163.10
4,962.00	5.65	246.54	4,952.09	-35.53	-42.02	16.63	9.45	9.03	40.44
4,993.00	8.27	252.24	4,982.86	-36.82	-45.55	18.92	8.73	8.45	18.39
5,025.00	11.00	258.32	5,014.40	-38.14	-50.73	22.60	9.09	8.53	19.00
5,056.00	12.98	263.18	5,044.73	-39.15	-57.08	27.44	7.16	6.39	15.68
5,088.00	14.99	270.49	5,075.78	-39.54	-64.79	33.75	8.35	6.28	22.84
5,119.00	17.04	277.44	5,105.58	-38.92	-73.30	41.29	9.04	6.61	22.42
5,150.00	19.61	280.82	5,135.00	-37.35	-82.92	50.26	8.97	8.29	10.90
5,182.00	21.98	283.59	5,164.92	-34.94	-94.02	60.94	8.02	7.41	8.66
5,213.00	23.95	286.66	5,193.46	-31.77	-105.68	72.50	7.44	6.35	9.90
5,245.00	25.29	288.02	5,222.55	-27.79	-118.41	85.39	4.55	4.19	4.25
5,276.00	26.90	287.46	5,250.39	-23.64	-131.40	98.59	5.25	5.19	-1.81
5,308.00	29.46	285.97	5,278.60	-19.30	-145.87	113.15	8.30	8.00	-4.66
5,340.00	30.36	279.57	5,306.34	-15.79	-161.41	128.17	10.36	2.81	-20.00
5,371.00	32.94	275.48	5,332.73	-13.69	-177.53	142.93	10.82	8.32	-13.19
5,403.00	35.19	270.61	5,359.24	-12.76	-195.42	158.56	11.05	7.03	-15.22
5,434.00	37.79	267.50	5,384.17	-13.08	-213.84	173.99	10.29	8.39	-10.03
5,466.00	40.91	266.48	5,408.91	-14.15	-234.10	190.56	9.96	9.75	-3.19
5,497.00	44.20	265.94	5,431.74	-15.54	-255.02	207.52	10.68	10.61	-1.74
5,529.00	47.76	265.58	5,453.97	-17.24	-277.96	226.02	11.15	11.13	-1.13
5,560.00	51.21	264.19	5,474.11	-19.35	-301.43	244.76	11.64	11.13	-4.48
5,591.00	53.40	262.91	5,493.06	-22.11	-325.80	263.91	7.78	7.06	-4.13
5,623.00	54.20	260.73	5,511.97	-25.78	-351.36	283.58	6.04	2.50	-6.81
5,654.00	55.80	260.66	5,529.75	-29.89	-376.42	302.60	5.16	5.16	-0.23
5,686.00	58.45	261.79	5,547.11	-33.98	-402.98	322.89	8.80	8.28	3.53
5,717.00	61.38	261.97	5,562.65	-37.77	-429.53	343.34	9.46	9.45	0.58
5,749.00	64.47	262.65	5,577.22	-41.58	-457.76	365.20	9.84	9.66	2.13
5,780.00	66.22	262.09	5,590.15	-45.32	-485.69	386.83	5.88	5.65	-1.81
5,811.00	65.76	261.34	5,602.76	-49.40	-513.71	408.37	2.66	-1.48	-2.42
5,843.00	65.30	260.60	5,616.02	-53.97	-542.47	430.27	2.55	-1.44	-2.31

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Well:	Well #514119	North Reference:	Grid
Wellbore:	Main Wellbore	Survey Calculation Method:	Minimum Curvature
Design:	514119 As Drilled Surveys	Database:	DB Jul2216dt

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)
5,874.00	67.41	260.73	5,628.45	-58.58	-570.49	451.53	6.82	6.81	0.42
5,906.00	67.09	260.25	5,640.82	-63.46	-599.60	473.56	1.71	-1.00	-1.50
6,000.00	68.42	261.84	5,676.41	-76.99	-685.53	539.07	2.11	1.41	1.69
6,095.00	70.34	261.00	5,709.86	-90.26	-773.45	606.39	2.18	2.02	-0.88
6,189.00	70.93	262.09	5,741.03	-103.30	-861.16	673.67	1.26	0.63	1.16
6,284.00	69.56	262.63	5,773.14	-115.19	-949.78	742.32	1.54	-1.44	0.57
6,378.00	70.81	263.65	5,805.01	-125.74	-1,037.58	810.98	1.68	1.33	1.09
6,472.00	71.58	264.58	5,835.31	-134.87	-1,126.09	881.02	1.24	0.82	0.99
6,567.00	68.23	262.98	5,867.95	-144.52	-1,214.76	950.91	3.86	-3.53	-1.68
6,661.00	69.27	263.54	5,902.02	-154.80	-1,301.77	1,019.06	1.24	1.11	0.60
6,755.00	70.18	263.88	5,934.59	-164.46	-1,389.41	1,088.07	1.03	0.97	0.36
6,850.00	69.13	263.28	5,967.62	-174.42	-1,477.92	1,157.67	1.25	-1.11	-0.63
6,945.00	70.26	264.60	6,000.59	-183.82	-1,566.52	1,227.63	1.76	1.19	1.39
7,038.00	69.71	266.72	6,032.42	-190.43	-1,653.64	1,297.83	2.22	-0.59	2.28
7,133.00	71.42	267.05	6,064.03	-195.30	-1,743.10	1,370.92	1.83	1.80	0.35
7,227.00	70.06	264.38	6,095.04	-201.92	-1,831.58	1,442.27	3.05	-1.45	-2.84
7,321.00	70.66	263.79	6,126.63	-211.04	-1,919.63	1,511.92	0.87	0.64	-0.63
7,416.00	69.47	263.70	6,159.02	-220.77	-2,008.41	1,581.86	1.26	-1.25	-0.09
7,510.00	68.88	264.73	6,192.44	-229.63	-2,095.82	1,651.10	1.20	-0.63	1.10
7,604.00	68.83	265.57	6,226.35	-237.04	-2,183.17	1,721.07	0.84	-0.05	0.89
7,699.00	70.80	265.01	6,259.13	-244.37	-2,272.03	1,792.36	2.15	2.07	-0.59
7,793.00	71.01	263.47	6,289.88	-253.28	-2,360.41	1,862.39	1.56	0.22	-1.64
7,852.00	69.16	262.07	6,309.98	-260.26	-2,415.44	1,905.24	3.85	-3.14	-2.37
7,947.00	71.39	263.70	6,342.04	-271.33	-2,504.17	1,974.42	2.85	2.35	1.72
8,041.00	74.17	265.94	6,369.87	-279.42	-2,593.57	2,045.77	3.73	2.96	2.38
8,135.00	72.95	265.81	6,396.47	-285.90	-2,683.49	2,118.40	1.30	-1.30	-0.14
8,229.00	70.91	262.67	6,425.63	-294.86	-2,772.39	2,188.85	3.85	-2.17	-3.34
8,324.00	67.87	263.07	6,459.07	-305.89	-2,860.61	2,257.62	3.22	-3.20	0.42
8,418.00	66.70	261.66	6,495.37	-317.41	-2,946.55	2,324.21	1.86	-1.24	-1.50
8,512.00	68.43	263.27	6,531.24	-328.79	-3,032.68	2,391.02	2.43	1.84	1.71
8,607.00	67.05	261.82	6,567.23	-340.20	-3,119.85	2,458.71	2.03	-1.45	-1.53
8,638.00	67.51	261.41	6,579.21	-344.37	-3,148.14	2,480.43	1.92	1.48	-1.32
8,669.00	68.82	262.41	6,590.74	-348.41	-3,176.63	2,502.38	5.18	4.23	3.23
8,701.00	70.24	265.88	6,601.93	-351.47	-3,206.44	2,525.98	11.09	4.44	10.84
8,732.00	70.12	268.24	6,612.44	-352.96	-3,235.57	2,549.83	7.17	-0.39	7.61
8,763.00	70.46	270.31	6,622.90	-353.33	-3,264.75	2,574.32	6.38	1.10	6.68
8,795.00	71.58	273.43	6,633.31	-352.34	-3,294.98	2,600.44	9.86	3.50	9.75
8,826.00	72.45	275.97	6,642.88	-349.93	-3,324.37	2,626.59	8.28	2.81	8.19
8,857.00	73.75	280.08	6,651.90	-345.78	-3,353.73	2,653.64	13.36	4.19	13.26
8,889.00	74.34	283.08	6,660.69	-339.61	-3,383.87	2,682.44	9.20	1.84	9.38
8,920.00	74.81	286.05	6,668.94	-332.09	-3,412.78	2,710.91	9.36	1.52	9.58
8,952.00	74.91	289.87	6,677.30	-322.57	-3,442.16	2,740.85	11.53	0.31	11.94
8,983.00	75.88	292.15	6,685.12	-311.81	-3,470.16	2,770.27	7.77	3.13	7.35

Company:	EQT PRODUCTION	Local Co-ordinate Reference:	Well Well #514119 - Slot 514119
Project:	Doddridge County, WV	TVD Reference:	KB@23 @ 1094.00usft
Site:	WEU8	KB Reference:	KB@23 @ 1094.00usft
Well:	Well #514119	North Reference:	Grid
Wellbore:	Main Wellbore	Survey Calculation Method:	Minimum Curvature
Design:	514119 As Drilled Surveys	Database:	DB Jul2216dt

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)
9,015.00	76.10	296.22	6,692.87	-299.09	-3,498.48	2,801.01	12.36	0.69	12.72
9,046.00	76.89	298.39	6,700.11	-285.27	-3,525.26	2,831.04	7.27	2.55	7.00
9,077.00	77.78	301.63	6,706.91	-270.14	-3,551.45	2,861.26	10.59	2.87	10.45
9,109.00	79.45	304.76	6,713.23	-252.97	-3,577.69	2,892.62	10.92	5.22	9.78
9,141.00	81.94	308.33	6,718.40	-234.16	-3,603.05	2,924.10	13.48	7.78	11.16
9,172.00	83.93	310.85	6,722.21	-214.56	-3,626.76	2,954.60	10.31	6.42	8.13
9,204.00	86.19	314.68	6,724.97	-192.92	-3,650.16	2,985.94	13.86	7.06	11.97
9,235.00	87.78	317.51	6,726.60	-170.62	-3,671.62	3,015.98	10.46	5.13	9.13
9,267.00	89.23	320.28	6,727.44	-146.51	-3,692.65	3,046.62	9.77	4.53	8.66
LP=9267 MD 6727 TVD									
9,298.00	89.46	322.93	6,727.79	-122.22	-3,711.90	3,075.86	8.58	0.74	8.55
9,329.00	89.56	326.13	6,728.06	-96.98	-3,729.89	3,104.53	10.33	0.32	10.32
9,361.00	89.78	328.03	6,728.24	-70.12	-3,747.28	3,133.55	5.98	0.69	5.94
Deepest point =9361 MD 6728 TVD									
9,455.00	91.55	328.54	6,727.15	9.84	-3,796.69	3,217.97	1.96	1.88	0.54
9,549.00	89.60	328.18	6,726.21	89.86	-3,845.99	3,302.33	2.11	-2.07	-0.38
9,644.00	89.76	327.67	6,726.74	170.35	-3,896.44	3,387.92	0.56	0.17	-0.54
9,738.00	90.76	328.91	6,726.31	250.32	-3,945.84	3,472.33	1.69	1.06	1.32
9,832.00	89.63	325.71	6,725.99	329.42	-3,996.60	3,557.44	3.61	-1.20	-3.40
9,927.00	89.35	322.63	6,726.84	406.42	-4,052.21	3,645.52	3.26	-0.29	-3.24
10,021.00	89.46	325.34	6,727.81	482.45	-4,107.47	3,732.80	2.89	0.12	2.88
10,115.00	91.73	328.55	6,726.84	561.21	-4,158.73	3,818.15	4.18	2.41	3.41
10,209.00	92.02	328.39	6,723.76	641.29	-4,207.86	3,902.39	0.35	0.31	-0.17
10,304.00	89.62	328.04	6,722.40	722.03	-4,257.89	3,987.75	2.55	-2.53	-0.37
10,398.00	89.80	327.35	6,722.88	801.48	-4,308.13	4,072.60	0.76	0.19	-0.73
10,492.00	91.41	330.89	6,721.88	882.13	-4,356.36	4,156.39	4.14	1.71	3.77
10,586.00	91.71	328.65	6,719.32	963.32	-4,403.67	4,239.68	2.40	0.32	-2.38
10,681.00	90.63	327.08	6,717.38	1,043.74	-4,454.18	4,325.29	2.01	-1.14	-1.65
10,775.00	91.65	326.15	6,715.51	1,122.21	-4,505.90	4,410.86	1.47	1.09	-0.99
10,869.00	91.96	326.53	6,712.55	1,200.41	-4,557.97	4,496.60	0.52	0.33	0.40
10,964.00	90.94	328.90	6,710.15	1,280.69	-4,608.69	4,582.30	2.72	-1.07	2.49
11,058.00	91.84	327.86	6,707.87	1,360.71	-4,657.96	4,666.63	1.46	0.96	-1.11
11,152.00	92.09	327.51	6,704.65	1,440.11	-4,708.18	4,751.43	0.46	0.27	-0.37
11,247.00	90.17	329.47	6,702.77	1,521.08	-4,757.82	4,836.58	2.89	-2.02	2.06
11,341.00	89.70	331.14	6,702.88	1,602.73	-4,804.38	4,919.49	1.85	-0.50	1.78
11,436.00	90.50	331.75	6,702.71	1,686.17	-4,849.79	5,002.38	1.06	0.84	0.64
11,530.00	90.41	332.38	6,701.97	1,769.22	-4,893.83	5,083.90	0.68	-0.10	0.67
11,624.00	91.54	329.94	6,700.37	1,851.54	-4,939.16	5,166.12	2.86	1.20	-2.60
11,718.00	92.73	327.44	6,696.86	1,931.79	-4,987.97	5,250.19	2.94	1.27	-2.66
11,813.00	90.87	325.06	6,693.88	2,010.73	-5,040.71	5,336.89	3.18	-1.96	-2.51
11,907.00	91.01	324.38	6,692.34	2,087.45	-5,095.00	5,423.71	0.74	0.15	-0.72
12,001.00	89.26	325.66	6,692.12	2,164.47	-5,148.88	5,510.34	2.31	-1.86	1.36
12,095.00	89.52	325.35	6,693.12	2,241.93	-5,202.12	5,596.67	0.43	0.28	-0.33
12,190.00	89.29	326.46	6,694.10	2,320.60	-5,255.37	5,683.65	1.19	-0.24	1.17

Company:	EQT PRODUCTION	Local Co-ordinate Reference:	Well Well #514119 - Slot 514119
Project:	Doddridge County, WV	TVD Reference:	KB@23 @ 1094.00usft
Site:	WEU8	MD Reference:	KB@23 @ 1094.00usft
Well:	Well #514119	North Reference:	Grid
Wellbore:	Main Wellbore	Survey Calculation Method:	Minimum Curvature
Design:	514119 As Drilled Surveys	Database:	DB Jul2216dt

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)	
12,285.00	90.35	327.67	6,694.40	2,400.33	-5,307.02	5,769.84	1.69	1.12	1.27	
12,379.00	90.83	327.61	6,693.43	2,479.73	-5,357.33	5,854.72	0.51	0.51	-0.06	
12,473.00	90.99	327.48	6,691.94	2,559.03	-5,407.76	5,939.66	0.22	0.17	-0.14	
12,568.00	90.26	326.48	6,690.91	2,638.68	-5,459.53	6,025.91	1.30	-0.77	-1.05	
12,662.00	90.61	329.08	6,690.19	2,718.20	-5,509.64	6,110.68	2.79	0.37	2.77	
12,756.00	90.83	329.46	6,689.01	2,798.99	-5,557.67	6,194.38	0.47	0.23	0.40	
12,850.00	92.34	327.90	6,686.41	2,879.26	-5,606.51	6,278.48	2.31	1.61	-1.66	
12,945.00	93.15	327.52	6,681.86	2,959.48	-5,657.20	6,364.12	0.94	0.85	-0.40	
13,039.00	90.89	327.50	6,678.55	3,038.71	-5,707.66	6,449.04	2.40	-2.40	-0.02	
13,133.00	88.20	325.18	6,679.29	3,116.94	-5,759.75	6,534.80	3.78	-2.86	-2.47	
13,227.00	88.82	328.07	6,681.74	3,195.40	-5,811.44	6,620.35	3.14	0.66	3.07	
13,322.00	89.22	329.04	6,683.36	3,276.43	-5,860.99	6,705.46	1.10	0.42	1.02	
13,416.00	90.04	328.77	6,683.97	3,356.92	-5,909.53	6,789.43	0.92	0.87	-0.29	
13,510.00	90.71	329.73	6,683.36	3,437.71	-5,957.59	6,873.15	1.25	0.71	1.02	
13,604.00	91.99	329.92	6,681.14	3,518.94	-6,004.83	6,956.41	1.38	1.36	0.20	
13,699.00	92.33	328.78	6,677.56	3,600.61	-6,053.22	7,040.88	1.25	0.36	-1.20	
13,793.00	91.11	328.78	6,674.74	3,680.96	-6,101.92	7,124.90	1.30	-1.30	0.00	
13,887.00	90.68	326.85	6,673.27	3,760.50	-6,151.98	7,209.65	2.10	-0.46	-2.05	
Survey @ 13887.00 MD										
14,100.00	90.68	326.86	6,670.74	3,938.83	-6,268.43	7,403.22	0.00	0.00	0.00	
Survey projected to 14100.00 MD										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
514119 BHL proj as drill - hit/miss target - Shape - Point	0.00	360.00	6,670.74	3,938.83	-6,268.43	287,027.06	1,622,840.12	39° 16' 49.3677 N	80° 49' 56.6581 W	
514119 LP as drilled - actual wellpath hits target center - Point	0.00	360.00	6,727.44	-146.51	-3,692.65	282,941.72	1,625,415.90	39° 16' 9.3682 N	80° 49' 23.1393 W	

Company:	EQT PRODUCTION	Local Co-ordinate Reference:	Well Well #514119 - Slot 514119
Project:	Doddridge County, WV	TVD Reference:	KB@23 @ 1094.00usft
Site:	WEU8	MD Reference:	KB@23 @ 1094.00usft
Well:	Well #514119	North Reference:	Grid
Wellbore:	Main Wellbore	Survey Calculation Method:	Minimum Curvature
Design:	514119 As Drilled Surveys	Database:	DB Jul2216dt

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
100.00	100.00	-0.09	0.59	Gyro
3,297.00	3,296.46	-45.99	29.22	Survey @ 3297.00 MD
3,329.00	3,328.46	-46.34	29.36	ProD MWD surveys
4,899.00	4,889.19	-33.68	-39.34	KOP=4899 MD 4889 TVD
9,267.00	6,727.44	-146.51	-3,692.65	LP=9267 MD 6727 TVD
9,361.00	6,728.24	-70.12	-3,747.28	Deepest point =9361 MD 6728 TVD
13,887.00	6,673.27	3,760.50	-6,151.98	Survey @ 13887.00 MD
14,100.00	6,670.74	3,938.83	-6,268.43	Survey projected to 14100.00 MD

Checked By: _____ Approved By: _____ Date: _____