

17-06186

PHOENIX  
TECHNOLOGY SERVICES



## EQT Production - Geneseo Shale

Doddridge County, WV  
Doddridge County 514654  
Well #514654

Main Wellbore

Design: AS Drilled

## Standard Survey Report

21 November, 2013

RECEIVED  
Office of Oil and Gas  
MAY 21 2014  
WV Department of  
Environmental Protection

**EQT**

Where energy meets innovation.

06/13/2014

<b>Database:</b>	EQT DB	<b>Local Co-ordinate Reference:</b>	Well Well #514654
<b>Company:</b>	EQT Production - Genseop Shale	<b>TVD Reference:</b>	KB @ 1277.0usft
<b>Project:</b>	Doddridge County, WV	<b>MD Reference:</b>	KB @ 1277.0usft
<b>Site:</b>	Doddridge County 514654	<b>North Reference:</b>	Grid
<b>Well:</b>	Well #514654	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Main Wellbore		
<b>Design:</b>	AS Drilled		

<b>Project</b>	Doddridge 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>	Doddridge County 514654		
<b>Site Position:</b>		<b>Northing:</b>	280,252.20 usft
<b>From:</b>	Map	<b>Easting:</b>	1,649,384.10 usft
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16 "
		<b>Latitude:</b>	39.26
		<b>Longitude:</b>	-80.74
		<b>Grid Convergence:</b>	-0.79 °

<b>Well</b>	Well #514654		
<b>Well Position</b>	<b>+N-S</b>	0.0 usft	<b>Northing:</b> 280,252.20 usft
	<b>+E-W</b>	0.0 usft	<b>Easting:</b> 1,649,384.10 usft
<b>Position Uncertainty</b>	0.0 usft	<b>Wellhead Elevation:</b>	usft
		<b>Latitude:</b>	39° 15' 46.164 N
		<b>Longitude:</b>	80° 44' 17.933 W
		<b>Ground Level:</b>	1,254.0 usft

<b>Wellbore</b>	Main Wellbore		
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>
	IGRF2010_14	10/31/2013	-8.47
			<b>Dip Angle (°)</b> 66.84
			<b>Field Strength (nT)</b> 52,351

<b>Design</b>	AS Drilled		
<b>Audit Notes:</b>			
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL
		<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>
	0.0	0.0	0.0
			<b>Direction (°)</b> 149.04

<b>Survey Program</b>	<b>Date</b>	11/18/2013		
<b>From ()</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.00	5,362.0	514654 Gyrodata CORRECTED GYROS!!!	GYD_DP_MS	Gyrodata gyro-compassing and drop
0.00	12,056.0	514654 MWD (Main Wellbore)	MWD	MWD - Standard

<b>Survey</b>	RECEIVED Office of Oil and Gas WV Department of Environmental Protection										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>Subsea Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Vertical Section (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	
0.0	0.00	0.00	0.0	-1,277.0	0.0	0.0	0.0	0.00	0.00	0.00	
146.0	0.18	128.38	146.0	-1,131.0	-0.1	0.2	0.2	0.12	0.02	0.00	
246.0	0.22	131.22	246.0	-1,031.0	-0.4	0.4	0.5	0.04	0.04	2.84	
346.0	0.38	125.79	346.0	-931.0	-0.7	0.9	1.0	0.16	0.16	5.04	
446.0	0.09	158.22	446.0	-831.0	-1.0	1.2	1.4	0.31	-0.29	32.43	
546.0	0.11	155.51	546.0	-731.0	-1.1	1.2	1.6	0.02	0.02	-2.71	
646.0	0.11	157.15	646.0	-631.0	-1.3	1.3	1.8	0.00	0.00	1.64	
746.0	0.15	172.53	746.0	-531.0	-1.5	1.4	2.0	0.05	0.04	15.38	



Phoenix Technologies, Inc.  
Survey Report



<b>Database:</b>	EQT DB	<b>Local Co-ordinate Reference:</b>	Well Well #514854
<b>Company:</b>	EQT Production - Genesis Shale	<b>TVD Reference:</b>	KB @ 1277.0usft
<b>Project:</b>	Doddridge County, WV	<b>MD Reference:</b>	KB @ 1277.0usft
<b>Site:</b>	Doddridge County, 514854	<b>North Reference:</b>	Grid
<b>Well:</b>	Well #514854	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Main Wellbore		
<b>Design:</b>	AS Drilled		

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)
846.0	0.13	162.48	846.0	-431.0	-1.7	1.4	2.2	0.03	-0.02	-10.05
946.0	0.17	171.95	946.0	-331.0	-2.0	1.5	2.5	0.05	0.04	9.47
1,046.0	0.22	160.24	1,046.0	-231.0	-2.3	1.6	2.8	0.06	0.05	-11.71
1,146.0	0.27	141.55	1,146.0	-131.0	-2.7	1.8	3.2	0.09	0.05	-18.69
1,246.0	0.32	136.15	1,246.0	-31.0	-3.1	2.1	3.7	0.06	0.05	-5.40
1,346.0	0.37	138.67	1,346.0	69.0	-3.5	2.5	4.3	0.05	0.05	2.52
1,446.0	0.47	130.10	1,446.0	169.0	-4.0	3.0	5.0	0.12	0.10	-8.57
1,546.0	0.49	128.68	1,546.0	269.0	-4.6	3.7	5.8	0.02	0.02	-1.42
1,646.0	0.55	127.90	1,646.0	369.0	-5.1	4.4	6.7	0.06	0.06	-0.78
1,746.0	0.53	125.79	1,746.0	469.0	-5.7	5.1	7.5	0.03	-0.02	-2.11
1,846.0	0.49	131.07	1,846.0	569.0	-6.2	5.8	8.4	0.06	-0.04	5.28
1,946.0	0.50	140.33	1,946.0	669.0	-6.9	6.4	9.2	0.08	0.01	9.26
2,046.0	0.41	154.44	2,046.0	769.0	-7.5	6.9	10.0	0.14	-0.09	14.11
2,146.0	0.31	159.79	2,146.0	869.0	-8.1	7.1	10.6	0.11	-0.10	5.35
2,246.0	0.35	168.40	2,246.0	969.0	-8.6	7.3	11.2	0.06	0.04	8.61
2,346.0	0.35	187.82	2,346.0	1,069.0	-9.2	7.3	11.7	0.12	0.00	19.42
2,446.0	0.32	191.43	2,446.0	1,169.0	-9.8	7.2	12.1	0.04	-0.03	3.61
2,546.0	0.31	195.98	2,546.0	1,269.0	-10.4	7.1	12.5	0.03	-0.01	4.55
2,646.0	0.34	205.71	2,646.0	1,369.0	-10.9	6.9	12.9	0.06	0.03	9.73
2,746.0	0.34	231.19	2,746.0	1,469.0	-11.3	6.5	13.1	0.15	0.00	25.48
2,846.0	0.38	218.39	2,846.0	1,569.0	-11.8	6.1	13.2	0.09	0.04	-12.80
2,946.0	0.32	220.69	2,945.9	1,668.9	-12.3	5.7	13.4	0.06	-0.06	2.30
3,046.0	0.45	230.28	3,045.9	1,768.9	-12.7	5.2	13.6	0.14	0.13	9.59
3,146.0	0.46	240.58	3,145.9	1,868.9	-13.2	4.6	13.6	0.08	0.01	10.30
3,246.0	0.49	233.60	3,245.9	1,968.9	-13.6	3.9	13.7	0.07	0.03	-6.98
3,346.0	0.45	232.53	3,345.9	2,068.9	-14.1	3.2	13.7	0.04	-0.04	-1.07
3,446.0	0.44	233.84	3,445.9	2,168.9	-14.6	2.6	13.8	0.01	-0.01	1.31
3,546.0	0.48	252.44	3,545.9	2,268.9	-14.9	1.9	13.8	0.15	0.04	18.60
3,646.0	0.42	220.27	3,645.9	2,368.9	-15.3	1.2	13.8	0.26	-0.06	-32.17
3,746.0	0.39	253.32	3,745.9	2,468.9	-15.7	0.7	13.8	0.23	-0.03	33.05
3,846.0	0.43	274.87	3,845.9	2,568.9	-15.8	0.0	13.5	0.16	0.04	21.55
3,946.0	0.47	269.24	3,945.9	2,668.9	-15.8	-0.8	13.1	0.06	0.04	-5.63
4,046.0	0.46	297.85	4,045.9	2,768.9	-15.6	-1.6	12.5	0.23	-0.01	28.61
4,146.0	0.44	319.09	4,145.9	2,868.9	-15.1	-2.2	11.8	0.17	-0.02	21.24
4,246.0	0.76	319.65	4,245.9	2,968.9	-14.3	-2.9	10.8	0.32	0.32	0.56
4,346.0	0.82	320.18	4,345.9	3,068.9	-13.2	-3.8	9.4	0.06	0.06	14.53
4,446.0	0.95	317.50	4,445.9	3,168.9	-12.1	-4.8	7.9	0.14	0.13	-2.68
4,546.0	0.98	331.80	4,545.9	3,268.9	-10.7	-5.7	6.2	0.24	0.05	14.30
4,646.0	1.26	318.98	4,645.9	3,368.9	-9.1	-6.9	4.3	0.57	0.28	12.82
4,746.0	1.27	330.18	4,745.8	3,468.8	-7.3	-8.1	2.1	0.25	0.01	11.20
4,846.0	1.51	332.17	4,845.8	3,568.8	-5.2	-9.3	-0.3	0.24	0.24	1.99
4,946.0	1.56	336.79	4,945.8	3,668.8	-2.8	-10.4	-3.0	0.13	0.05	4.62

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WV Department of Environmental Protection



Phoenix Technologies, Inc.  
Survey Report



Database:	EQT CB	Local Co-ordinate Reference:	Well: Well #514654
Company:	EQT Production - Gettysburg State	TVD Reference:	KB @ 1277 usft
Project:	Doddridge County, WV	MD Reference:	KB @ 1277 (wall)
Site:	Doddridge County 514654	North Reference:	Grid
Well:	Well #514654	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	AS Drilled		

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)
5,046.0	1.40	334.65	5,045.7	3,768.7	-0.4	-11.5	-5.5	0.17	-0.16	-2.14
5,146.0	1.54	333.87	5,145.7	3,868.7	1.9	-12.6	-8.1	0.14	0.14	-0.78
5,246.0	1.92	332.16	5,245.7	3,968.7	4.6	-14.0	-11.1	0.38	0.38	-1.71
5,346.0	1.75	336.74	5,345.6	4,068.6	7.4	-15.4	-14.3	0.22	-0.17	4.58
5,362.0	1.80	341.54	5,361.6	4,084.6	7.9	-15.6	-14.8	0.98	0.31	30.00
5,463.0	1.60	344.60	5,462.5	4,185.5	10.8	-16.4	-17.7	0.22	-0.20	3.03
5,495.0	1.50	340.90	5,494.5	4,217.5	11.6	-16.7	-18.5	0.44	-0.31	-11.56
5,526.0	1.80	2.30	5,525.5	4,248.5	12.5	-16.8	-19.3	2.19	0.97	69.03
5,557.0	5.10	22.40	5,556.5	4,279.5	14.2	-16.3	-20.6	11.18	10.65	64.84
5,589.0	9.30	21.60	5,588.2	4,311.2	17.9	-14.8	-23.0	13.13	13.13	-2.50
5,620.0	12.80	19.00	5,618.6	4,341.6	23.5	-12.7	-26.7	11.40	11.29	-8.39
Circ. Tra In MD=6522										
5,632.0	13.58	17.32	5,630.3	4,353.3	26.1	-11.9	-28.5	7.24	6.50	-14.02
5,652.0	14.90	14.90	5,649.7	4,372.7	30.9	-10.5	-31.9	7.24	6.60	-12.09
5,683.0	16.30	14.50	5,679.6	4,402.6	38.9	-8.4	-37.7	4.53	4.52	-1.29
5,714.0	17.50	14.20	5,709.2	4,432.2	47.6	-6.2	-44.0	3.88	3.87	-0.97
5,746.0	19.70	15.00	5,739.5	4,462.5	57.5	-3.6	-51.2	6.92	6.88	2.50
5,777.0	22.80	17.10	5,768.4	4,491.4	68.3	-0.5	-58.8	10.30	10.00	6.77
5,809.0	26.10	17.10	5,797.6	4,520.6	81.0	3.4	-67.7	10.31	10.31	0.00
5,840.0	29.50	15.00	5,825.0	4,548.0	94.9	7.4	-77.5	11.41	10.97	-6.77
5,872.0	32.90	13.60	5,852.3	4,575.3	110.9	11.5	-89.2	10.86	10.63	-4.38
5,903.0	36.90	13.70	5,877.8	4,600.8	128.2	15.7	-101.8	12.90	12.90	0.32
5,934.0	41.10	13.60	5,901.8	4,624.8	147.1	20.3	-115.7	13.55	13.55	-0.32
5,966.0	43.80	16.40	5,925.5	4,648.5	168.0	25.9	-130.7	10.30	8.44	8.75
5,997.0	41.60	21.90	5,948.2	4,671.2	187.8	32.7	-144.2	13.96	-7.10	17.74
6,029.0	39.30	28.40	5,972.6	4,695.6	206.6	41.5	-155.8	15.00	-7.19	20.31
6,060.0	37.30	32.20	5,996.9	4,719.9	223.2	51.2	-165.0	9.96	-6.45	12.26
6,092.0	36.50	37.80	6,022.5	4,745.5	238.9	62.2	-172.9	10.80	-2.50	17.50
6,123.0	35.50	41.50	6,047.6	4,770.6	252.9	73.8	-178.9	7.72	-3.23	11.94
6,154.0	34.00	46.50	6,073.1	4,796.1	265.7	86.1	-183.5	10.39	-4.84	16.13
6,186.0	32.70	52.60	6,099.8	4,822.8	277.1	99.4	-186.4	11.23	-4.06	19.06
6,217.0	31.70	57.40	6,126.1	4,849.1	286.5	113.0	-187.6	8.86	-3.23	15.48
6,249.0	30.50	61.20	6,153.5	4,876.5	295.0	127.2	-187.5	7.19	-3.75	11.88
6,280.0	29.90	65.40	6,180.3	4,903.3	302.0	141.1	-186.4	7.08	-1.94	13.55
6,311.0	29.40	70.10	6,207.2	4,930.2	307.8	155.3	-184.1	7.67	-1.61	15.16
6,343.0	29.50	78.10	6,235.1	4,958.1	312.1	170.4	-180.0	12.29	0.31	25.00
6,374.0	30.10	85.30	6,262.0	4,985.0	314.3	185.6	-174.1	11.70	1.94	23.23
6,406.0	30.90	92.40	6,289.6	5,012.6	314.6	201.8	-166.0	11.53	2.50	22.19
6,437.0	32.50	97.40	6,316.0	5,039.0	313.2	218.0	-156.5	9.92	5.16	16.13
6,468.0	34.20	100.40	6,341.9	5,064.9	310.6	234.8	-145.5	7.64	5.48	9.68
6,499.0	37.00	102.60	6,367.1	5,090.1	307.0	252.5	-133.3	9.93	9.03	7.10
6,531.0	39.80	106.70	6,392.1	5,115.1	301.9	271.7	-119.1	11.82	8.75	12.81
6,562.0	41.70	110.50	6,415.6	5,138.6	295.5	290.9	-103.7	10.08	6.13	12.26

<b>Database:</b>	EQT DB	<b>Local Co-ordinate Reference:</b>	Well Well #51455+
<b>Company:</b>	EQT Production - Genesee Basin	<b>TVD Reference:</b>	KB @ 1277.0usft
<b>Project:</b>	Doddridge County, WV	<b>MD Reference:</b>	KB @ 1277.0usft
<b>Site:</b>	Doddridge County 01455+	<b>North Reference:</b>	Grid
<b>Well:</b>	Well #51455+	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Main Wellbore		
<b>Design:</b>	AS Drilled		

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)	
6,594.0	42.70	115.30	6,439.3	5,162.3	287.1	310.7	-86.4	10.55	3.13	15.00	
6,625.0	44.50	119.30	6,461.8	5,184.8	277.3	329.7	-68.2	10.62	5.81	12.90	
6,656.0	47.10	123.40	6,483.4	5,206.4	265.7	348.6	-48.5	12.66	8.39	13.23	
6,688.0	50.50	125.70	6,504.5	5,227.5	252.0	368.5	-26.6	11.92	10.63	7.19	
6,719.0	54.80	127.50	6,523.3	5,246.3	237.3	388.2	-3.8	14.62	13.87	5.81	
6,751.0	59.10	128.60	6,540.7	5,263.7	220.8	409.3	21.2	13.74	13.44	3.44	
6,782.0	62.10	130.30	6,555.9	5,278.9	203.6	430.2	46.6	10.79	9.68	5.48	
6,813.0	64.60	133.40	6,569.9	5,292.9	185.2	450.8	73.1	12.04	8.06	10.00	
6,845.0	66.20	135.90	6,583.2	5,306.2	164.7	471.5	101.3	8.69	5.00	7.81	
6,876.0	67.60	138.30	6,595.3	5,318.3	143.8	490.9	129.2	8.43	4.52	7.74	
6,908.0	69.20	140.40	6,607.1	5,330.1	121.3	510.3	158.5	7.89	5.00	6.56	
6,939.0	70.90	142.40	6,617.7	5,340.7	98.5	528.5	187.4	8.18	5.48	6.45	
6,970.0	73.40	144.60	6,627.2	5,350.2	74.8	546.0	216.8	10.52	8.06	7.10	
7,002.0	75.70	146.50	6,635.7	5,358.7	49.3	563.5	247.5	9.19	7.19	5.94	
7,033.0	77.90	148.40	6,642.8	5,365.8	23.9	579.7	277.7	9.27	7.10	6.13	
7,064.0	80.00	149.60	6,648.7	5,371.7	-2.2	595.4	308.1	7.77	6.77	3.87	
7,097.0	82.20	151.10	6,653.9	5,376.9	-30.5	611.5	340.7	8.04	6.67	4.55	
7,160.0	86.20	154.60	6,660.2	5,383.2	-86.3	640.1	403.2	8.42	6.35	5.56	
7,191.0	86.40	155.20	6,662.2	5,385.2	-114.3	653.2	434.0	2.04	0.65	1.94	
7,254.0	86.60	154.70	6,666.1	5,389.1	-171.3	679.8	496.6	0.85	0.32	-0.79	
7,348.0	88.80	154.40	6,669.8	5,392.8	-256.1	720.2	590.0	2.36	2.34	-0.32	
7,442.0	89.10	157.20	6,671.6	5,394.6	-341.8	758.7	683.4	3.00	0.32	2.98	
7,537.0	89.10	156.50	6,673.1	5,396.1	-429.1	796.0	777.5	0.74	0.00	-0.74	
7,631.0	89.40	157.60	6,674.3	5,397.3	-515.7	832.7	870.5	1.21	0.32	1.17	
7,725.0	90.00	158.20	6,674.8	5,397.8	-602.8	868.1	963.4	0.90	0.64	0.64	
7,819.0	90.20	154.00	6,674.6	5,397.6	-688.7	906.1	1,056.7	4.47	0.21	-4.47	
7,914.0	90.70	155.40	6,673.9	5,396.9	-774.6	946.7	1,151.2	1.56	0.53	1.47	
8,008.0	90.40	152.40	6,673.0	5,396.0	-859.0	988.1	1,244.9	3.21	-0.32	-3.19	
8,102.0	90.30	149.90	6,672.4	5,395.4	-941.3	1,033.4	1,338.8	2.66	-0.11	-2.66	
8,196.0	89.80	154.10	6,672.3	5,395.3	-1,024.3	1,077.5	1,432.6	4.50	-0.53	4.47	
8,290.0	90.20	152.10	6,672.3	5,395.3	-1,108.1	1,120.1	1,526.4	2.17	0.43	-2.13	
8,384.0	90.00	155.60	6,672.1	5,395.1	-1,192.5	1,161.5	1,620.1	3.73	-0.21	3.72	
8,478.0	90.20	153.90	6,672.0	5,395.0	-1,277.5	1,201.6	1,713.6	1.82	0.21	-1.81	
8,572.0	90.40	152.50	6,671.5	5,394.5	-1,361.4	1,244.0	1,807.3	1.50	0.21	-1.49	
8,667.0	89.00	154.20	6,672.0	5,395.0	-1,446.3	1,286.6	1,902.1	2.32	-1.47	1.79	
8,761.0	88.60	156.10	6,674.0	5,397.0	-1,531.5	1,326.1	1,995.5	2.07	-0.43	2.02	
8,855.0	88.80	154.50	6,676.1	5,399.1	-1,616.9	1,365.3	2,088.9	1.71	0.21	-1.70	
8,948.0	88.50	153.60	6,678.3	5,401.3	-1,700.5	1,406.0	2,181.5	1.02	-0.32	-0.97	
9,042.0	88.90	154.50	6,680.4	5,403.4	-1,785.0	1,447.1	2,275.2	1.05	0.43	0.96	
9,136.0	89.80	156.30	6,681.5	5,404.5	-1,870.5	1,486.3	2,368.6	2.14	0.96	1.91	
9,231.0	89.80	155.90	6,681.8	5,404.8	-1,957.3	1,524.8	2,462.8	0.42	0.00	-0.42	
9,325.0	89.90	153.90	6,682.1	5,405.1	-2,042.5	1,564.6	2,556.3	2.13	0.11	-2.13	
9,419.0	90.40	155.10	6,681.8	5,404.8	-2,127.3	1,605.1	2,649.9	1.38	0.53	1.28	

<b>Database:</b>	EQT DB	<b>Local Co-ordinate Reference:</b>	Well Well #514854
<b>Company:</b>	EQT Production - Geneva Zone	<b>TVD Reference:</b>	KB @ 1277' Quam
<b>Project:</b>	Doddridge County, WV	<b>MD Reference:</b>	KB @ 1277' Quam
<b>Site:</b>	Doddridge County 514854	<b>North Reference:</b>	Gad
<b>Well:</b>	Well #514854	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Main Wellbore		
<b>Design:</b>	AS Drilled		

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)
9,513.0	89.70	155.60	6,681.7	5,404.7	-2,212.7	1,644.3	2,743.3	0.92	-0.74	0.53
9,607.0	90.70	156.40	6,681.4	5,404.4	-2,298.6	1,682.5	2,836.7	1.36	1.06	0.85
9,701.0	91.30	154.20	6,679.8	5,402.8	-2,384.0	1,721.8	2,930.1	2.43	0.64	-2.34
9,795.0	89.60	154.80	6,679.0	5,402.0	-2,468.8	1,762.3	3,023.6	1.92	-1.81	0.64
9,889.0	90.00	158.40	6,679.3	5,402.3	-2,555.1	1,799.6	3,116.8	3.85	0.43	3.83
9,984.0	90.10	159.50	6,679.3	5,402.3	-2,643.7	1,833.7	3,210.4	1.16	0.11	1.16
10,078.0	90.20	155.90	6,679.0	5,402.0	-2,730.7	1,869.4	3,303.3	3.83	0.11	-3.83
10,172.0	90.20	153.80	6,678.7	5,401.7	-2,815.8	1,909.3	3,396.8	2.23	0.00	-2.23
10,266.0	89.80	154.90	6,678.7	5,401.7	-2,900.5	1,950.0	3,490.4	1.25	-0.43	1.17
10,360.0	89.00	154.90	6,679.7	5,402.7	-2,985.6	1,989.9	3,583.9	0.85	-0.85	0.00
10,455.0	89.20	155.50	6,681.2	5,404.2	-3,071.8	2,029.7	3,678.4	0.67	0.21	0.63
10,549.0	89.50	156.40	6,682.2	5,405.2	-3,157.7	2,068.0	3,771.7	1.01	0.32	0.96
10,642.0	89.70	154.60	6,682.9	5,405.9	-3,242.3	2,106.6	3,864.1	1.95	0.22	-1.94
10,736.0	89.50	150.40	6,683.5	5,406.5	-3,325.7	2,150.0	3,957.9	4.47	-0.21	-4.47
10,830.0	89.00	150.90	6,684.8	5,407.8	-3,407.6	2,196.1	4,051.8	0.75	-0.53	0.53
10,924.0	90.40	153.10	6,685.3	5,408.3	-3,490.6	2,240.2	4,145.7	2.77	1.49	2.34
11,018.0	89.00	154.40	6,685.8	5,408.8	-3,574.9	2,281.8	4,239.4	2.03	-1.49	1.38
11,112.0	89.30	157.10	6,687.1	5,410.1	-3,660.6	2,320.4	4,332.7	2.89	0.32	2.87
11,206.0	89.50	155.40	6,688.1	5,411.1	-3,746.6	2,358.2	4,426.0	1.82	0.21	-1.81
11,300.0	89.30	150.30	6,689.1	5,412.1	-3,830.2	2,401.1	4,519.7	5.43	-0.21	-5.43
11,394.0	90.00	151.80	6,689.7	5,412.7	-3,912.5	2,446.6	4,613.7	1.76	0.74	1.60
11,488.0	89.20	154.70	6,690.3	5,413.3	-3,996.4	2,488.9	4,707.4	3.20	-0.85	3.09
11,582.0	88.50	159.00	6,692.2	5,415.2	-4,082.8	2,525.8	4,800.5	4.63	-0.74	4.57
11,676.0	90.00	161.70	6,693.5	5,416.5	-4,171.3	2,557.4	4,892.6	3.29	1.60	2.87
11,770.0	90.20	159.20	6,693.3	5,416.3	-4,259.9	2,588.9	4,984.8	2.67	0.21	-2.66
11,864.0	89.80	158.40	6,693.3	5,416.3	-4,347.5	2,622.9	5,077.4	0.95	-0.43	-0.85
11,959.0	88.10	157.60	6,695.0	5,418.0	-4,435.6	2,658.5	5,171.2	1.98	-1.79	-0.84
Last Survey MD=12001'										
12,001.0	88.10	156.60	6,696.4	5,419.4	-4,474.2	2,674.8	5,212.8	2.38	0.00	-2.38
Projection to TD MD=12056'										
12,056.0	88.10	156.60	6,698.3	5,421.3	-4,524.7	2,696.6	5,267.3	0.00	0.00	0.00

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
5,632.0	5,630.3	26.1	-11.9	Gyro Tie In MD=5632'
12,001.0	6,696.4	-4,474.2	2,674.8	Last Survey MD=12001'
12,056.0	6,698.3	-4,524.7	2,696.6	Projection to TD MD=12056'

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_



Project: Doddridge County, WV  
 Site: Doddridge County 514654  
 Well: Well #514654  
 Wellbore: Main Wellbore  
 Design: AS Drilled

