



PHOENIX
TECHNOLOGY SERVICES USA INC.

EQT Production - Marcellus

Doddridge County, WV Grid

Doddridge County 514393

Well #514393

Main Wellbore

API: 47-170-6446

Design: As Drilled Surveys

Standard Survey Report

23 March, 2015

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Office of Oil and Gas
SEP 23 2015

WV Department of
Environmental Protection

EQT

Where energy meets innovation.

04/01/2016

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Doddridge County 514393
Company:	EQT Production - Marcellus	TVD Reference:	KB@23 @ 1153.0usft
Project:	Doddridge County, WV Grid	MD Reference:	KB@23 @ 1153.0usft
Site:	Doddridge County 514393	North Reference:	Grid
Well:	Well #514393	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	As Drilled Surveys		

Project Doddridge County, WV Grid

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 Doddridge County 514393

Site Position:		Northing:	277,539.80 usft	Latitude:	39.25
From:	Map	Easting:	1,635,665.40 usft	Longitude:	-80.79
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.82 °

Well Well #514393

Well Position	+N/-S	0.0 usft	Northing:	277,539.80 usft	Latitude:	39° 15' 17.452 N
	+E/-W	0.0 usft	Easting:	1,635,665.40 usft	Longitude:	80° 47' 11.843 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	1,130.0 usft

Wellbore Main Wellbore

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010_14	3/2/2015	-8.49	66.72	52,190

Design As Drilled Surveys

Audit Notes:

Version: 1.0 **Phase:** ACTUAL **Tie On Depth:** 0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	162.77

Survey Program Date 3/23/2015

From (')	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	5,665.0	514393 Gyrodata Gyros (Main Wellbore)	GYD_DP_MS	Gyrodata gyro-compassing and drop
0.00	16,633.0	514393 PHX MWD (Main Wellbore)	MWD+IGRF	MWD+IGRF v3:standard declination

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)
0.0	0.00	0.00	0.0	-1,153.0	0.0	0.0	0.0	0.00	0.00	0.00
110.0	0.35	219.34	110.0	-1,043.0	-0.3	-0.2	0.2	0.32	-0.32	0.00
210.0	0.33	202.71	210.0	-943.0	-0.8	-0.5	0.6	0.10	-0.02	-16.63
310.0	0.22	195.47	310.0	-843.0	-1.2	-0.7	1.0	0.12	-0.11	-7.24
410.0	0.15	181.97	410.0	-743.0	-1.5	-0.7	1.2	0.08	-0.07	-13.50
510.0	0.15	195.23	510.0	-643.0	-1.8	-0.8	1.5	0.03	0.00	13.26
610.0	0.12	185.08	610.0	-543.0	-2.0	-0.8	1.7	0.04	-0.03	-10.15
710.0	0.14	170.81	710.0	-443.0	-2.2	-0.8	1.9	0.04	0.02	-14.27

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Wellbore:	Main Wellbore		
Design:	As Drilled Surveys		

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)	
810.0	0.13	194.01	810.0	-343.0	-2.5	-0.8	2.1	0.06	-0.01	23.20	
910.0	0.14	194.47	910.0	-243.0	-2.7	-0.9	2.3	0.01	0.01	0.46	
1,010.0	0.22	192.24	1,010.0	-143.0	-3.0	-0.9	2.6	0.08	0.08	-2.23	
1,110.0	0.28	185.21	1,110.0	-43.0	-3.4	-1.0	3.0	0.07	0.06	-7.03	
1,210.0	0.36	192.32	1,210.0	57.0	-4.0	-1.1	3.5	0.09	0.08	7.11	
1,310.0	0.37	190.37	1,310.0	157.0	-4.6	-1.2	4.0	0.02	0.01	-1.95	
1,410.0	0.46	190.41	1,410.0	257.0	-5.3	-1.4	4.7	0.09	0.09	0.04	
1,510.0	0.54	193.82	1,510.0	357.0	-6.2	-1.5	5.4	0.09	0.08	3.41	
1,610.0	0.60	198.38	1,610.0	457.0	-7.1	-1.8	6.3	0.08	0.06	4.56	
1,710.0	0.77	206.45	1,710.0	557.0	-8.2	-2.3	7.2	0.20	0.17	8.07	
1,810.0	0.93	213.71	1,810.0	657.0	-9.5	-3.0	8.2	0.19	0.16	7.26	
1,910.0	0.90	212.33	1,909.9	756.9	-10.8	-3.9	9.2	0.04	-0.03	-1.38	
2,010.0	0.82	212.28	2,009.9	856.9	-12.1	-4.7	10.2	0.08	-0.08	-0.05	
2,110.0	0.68	213.13	2,109.9	956.9	-13.2	-5.4	11.0	0.14	-0.14	0.85	
2,210.0	0.60	208.01	2,209.9	1,056.9	-14.2	-6.0	11.8	0.10	-0.08	-5.12	
2,310.0	0.54	204.81	2,309.9	1,156.9	-15.1	-6.4	12.5	0.07	-0.06	-3.20	
2,410.0	0.53	205.47	2,409.9	1,256.9	-15.9	-6.8	13.2	0.01	-0.01	0.66	
2,510.0	0.50	204.38	2,509.9	1,356.9	-16.7	-7.2	13.8	0.03	-0.03	-1.09	
2,610.0	0.49	210.09	2,609.9	1,456.9	-17.5	-7.6	14.5	0.05	-0.01	5.71	
2,710.0	0.51	207.00	2,709.9	1,556.9	-18.3	-8.0	15.1	0.03	0.02	-3.09	
2,810.0	0.47	215.40	2,809.9	1,656.9	-19.0	-8.4	15.6	0.08	-0.04	8.40	
2,910.0	0.37	209.15	2,909.9	1,756.9	-19.6	-8.8	16.1	0.11	-0.10	-6.25	
3,010.0	0.36	200.85	3,009.9	1,856.9	-20.2	-9.1	16.6	0.05	-0.01	-8.30	
3,110.0	0.38	210.86	3,109.9	1,956.9	-20.8	-9.4	17.0	0.07	0.02	10.01	
3,210.0	0.34	206.96	3,209.9	2,056.9	-21.3	-9.7	17.5	0.05	-0.04	-3.90	
3,310.0	0.41	216.77	3,309.9	2,156.9	-21.9	-10.0	17.9	0.09	0.07	9.81	
3,410.0	0.39	219.46	3,409.9	2,256.9	-22.4	-10.5	18.3	0.03	-0.02	2.69	
3,510.0	0.40	220.67	3,509.9	2,356.9	-22.9	-10.9	18.7	0.01	0.01	1.21	
3,610.0	0.42	222.31	3,609.9	2,456.9	-23.5	-11.4	19.0	0.02	0.02	1.64	
3,710.0	0.46	229.87	3,709.9	2,556.9	-24.0	-12.0	19.4	0.07	0.04	7.56	
3,810.0	0.47	230.87	3,809.9	2,656.9	-24.5	-12.6	19.7	0.01	0.01	1.00	
3,910.0	0.50	242.42	3,909.9	2,756.9	-25.0	-13.3	19.9	0.10	0.03	11.55	
4,010.0	0.64	253.01	4,009.9	2,856.9	-25.3	-14.2	20.0	0.17	0.14	10.59	
4,110.0	0.73	257.65	4,109.9	2,956.9	-25.6	-15.4	19.9	0.11	0.09	4.64	
4,210.0	0.78	266.63	4,209.8	3,056.8	-25.8	-16.7	19.7	0.13	0.05	8.98	
4,310.0	0.97	275.04	4,309.8	3,156.8	-25.8	-18.2	19.2	0.23	0.19	8.41	
4,410.0	1.02	284.14	4,409.8	3,256.8	-25.5	-19.9	18.5	0.17	0.05	9.10	
4,510.0	1.15	290.43	4,509.8	3,356.8	-24.9	-21.7	17.4	0.18	0.13	6.29	
4,610.0	1.29	288.19	4,609.8	3,456.8	-24.2	-23.7	16.1	0.15	0.14	-2.24	
4,710.0	1.23	294.62	4,709.8	3,556.8	-23.4	-25.7	14.7	0.15	-0.06	6.43	
4,810.0	1.18	299.59	4,809.7	3,656.7	-22.5	-27.6	13.3	0.12	-0.05	4.97	
4,910.0	1.20	298.19	4,909.7	3,756.7	-21.5	-29.4	11.8	0.04	0.02	-1.40	

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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)	
5,010.0	1.19	308.95	5,009.7	3,856.7	-20.3	-31.2	10.2	0.22	-0.01	10.76	
5,110.0	1.31	309.12	5,109.7	3,956.7	-18.9	-32.9	8.4	0.12	0.12	0.17	
5,210.0	1.61	318.02	5,209.6	4,056.6	-17.2	-34.7	6.1	0.38	0.30	8.90	
5,310.0	1.82	319.33	5,309.6	4,156.6	-14.9	-36.7	3.4	0.21	0.21	1.31	
5,410.0	2.29	334.26	5,409.5	4,256.5	-11.9	-38.6	0.0	0.71	0.47	14.93	
5,510.0	2.88	353.31	5,509.4	4,356.4	-7.6	-39.7	-4.5	1.03	0.59	19.05	
5,610.0	3.65	3.50	5,609.3	4,456.3	-2.0	-39.8	-9.9	0.96	0.77	10.19	
Gyro Tie in= 5665' MD											
5,665.0	4.05	11.83	5,664.1	4,511.1	1.7	-39.3	-13.3	1.25	0.73	15.15	
5,690.0	4.40	13.30	5,689.1	4,536.1	3.5	-38.9	-14.9	1.47	1.40	5.88	
5,722.0	4.60	20.50	5,721.0	4,568.0	5.9	-38.2	-16.9	1.87	0.63	22.50	
5,754.0	4.00	4.30	5,752.9	4,599.9	8.2	-37.7	-19.0	4.21	-1.88	-50.63	
5,785.0	4.30	317.60	5,783.8	4,630.8	10.1	-38.4	-21.0	10.64	0.97	-150.65	
5,817.0	7.30	293.30	5,815.6	4,662.6	11.8	-41.0	-23.4	11.92	9.38	-75.94	
5,849.0	10.90	288.70	5,847.2	4,694.2	13.6	-45.8	-26.5	11.47	11.25	-14.38	
5,880.0	14.10	285.60	5,877.5	4,724.5	15.6	-52.2	-30.3	10.54	10.32	-10.00	
5,912.0	17.30	277.20	5,908.3	4,755.3	17.2	-60.7	-34.4	12.24	10.00	-26.25	
5,944.0	18.40	274.90	5,938.8	4,785.8	18.2	-70.4	-38.3	4.08	3.44	-7.19	
5,975.0	21.20	271.00	5,967.9	4,814.9	18.7	-80.9	-41.9	9.98	9.03	-12.58	
6,007.0	23.70	270.20	5,997.5	4,844.5	18.9	-93.1	-45.6	7.87	7.81	-2.50	
6,039.0	27.20	267.00	6,026.4	4,873.4	18.5	-106.9	-49.3	11.75	10.94	-10.00	
6,070.0	30.40	263.60	6,053.6	4,900.6	17.3	-121.7	-52.6	11.59	10.32	-10.97	
6,102.0	33.70	260.60	6,080.7	4,927.7	14.9	-138.5	-55.3	11.45	10.31	-9.38	
6,134.0	37.10	263.00	6,106.8	4,953.8	12.3	-156.9	-58.2	11.48	10.63	7.50	
6,165.0	39.90	264.20	6,131.0	4,978.0	10.1	-176.1	-61.8	9.35	9.03	3.87	
6,197.0	42.30	263.50	6,155.1	5,002.1	7.9	-197.0	-65.9	7.64	7.50	-2.19	
6,229.0	44.40	261.60	6,178.4	5,025.4	5.0	-218.7	-69.6	7.72	6.56	-5.94	
6,260.0	47.80	259.70	6,199.9	5,046.9	1.4	-240.8	-72.7	11.82	10.97	-6.13	
6,292.0	51.80	258.90	6,220.5	5,067.5	-3.2	-264.8	-75.4	12.64	12.50	-2.50	
6,324.0	55.70	258.90	6,239.5	5,086.5	-8.1	-290.1	-78.2	12.19	12.19	0.00	
6,355.0	59.60	259.20	6,256.1	5,103.1	-13.1	-315.8	-81.1	12.61	12.58	0.97	
6,387.0	62.80	258.90	6,271.5	5,118.5	-18.4	-343.3	-84.1	10.03	10.00	-0.94	
6,419.0	66.30	257.80	6,285.2	5,132.2	-24.3	-371.6	-86.9	11.37	10.94	-3.44	
6,450.0	68.80	257.60	6,297.1	5,144.1	-30.4	-399.6	-89.4	8.09	8.06	-0.65	
6,482.0	71.30	257.40	6,308.0	5,155.0	-36.9	-429.0	-91.9	7.83	7.81	-0.63	
6,545.0	73.80	260.40	6,326.9	5,173.9	-48.4	-488.0	-98.3	6.03	3.97	4.76	
6,577.0	74.10	260.40	6,335.7	5,182.7	-53.6	-518.3	-102.4	0.94	0.94	0.00	
6,608.0	72.40	260.80	6,344.6	5,191.6	-58.4	-547.6	-106.5	5.62	-5.48	1.29	
6,640.0	70.60	261.50	6,354.8	5,201.8	-63.1	-577.5	-110.9	6.00	-5.63	2.19	
6,671.0	68.70	261.90	6,365.6	5,212.6	-67.3	-606.3	-115.4	6.25	-6.13	1.29	
6,703.0	68.70	260.30	6,377.2	5,224.2	-71.9	-635.8	-119.7	4.66	0.00	-5.00	
6,735.0	68.00	256.00	6,389.0	5,236.0	-78.0	-664.9	-122.5	12.68	-2.19	-13.44	
6,767.0	68.00	251.20	6,401.0	5,248.0	-86.4	-693.3	-122.9	13.91	0.00	-15.00	

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6,798.0	68.70	247.10	6,412.4	5,259.4	-96.6	-720.2	-121.1	12.50	2.26	-13.23	
6,830.0	68.40	243.30	6,424.2	5,271.2	-109.1	-747.3	-117.2	11.09	-0.94	-11.88	
6,861.0	69.20	240.60	6,435.4	5,282.4	-122.7	-772.8	-111.8	8.52	2.58	-8.71	
6,893.0	69.80	236.10	6,446.6	5,293.6	-138.4	-798.3	-104.3	13.30	1.88	-14.06	
6,925.0	69.40	232.70	6,457.7	5,304.7	-155.9	-822.7	-94.9	10.04	-1.25	-10.63	
6,956.0	69.20	229.60	6,468.7	5,315.7	-174.1	-845.2	-84.2	9.38	-0.65	-10.00	
6,988.0	68.90	226.80	6,480.1	5,327.1	-194.0	-867.5	-71.8	8.23	-0.94	-8.75	
7,020.0	69.50	224.10	6,491.5	5,338.5	-215.0	-888.8	-58.0	8.11	1.88	-8.44	
7,051.0	69.00	221.70	6,502.5	5,349.5	-236.2	-908.6	-43.6	7.42	-1.61	-7.74	
7,083.0	69.30	218.70	6,513.9	5,360.9	-259.0	-927.9	-27.5	8.81	0.94	-9.38	
7,115.0	69.60	215.30	6,525.1	5,372.1	-283.0	-945.9	-10.0	9.99	0.94	-10.63	
7,146.0	70.50	212.10	6,535.7	5,382.7	-307.2	-962.0	8.4	10.13	2.90	-10.32	
7,178.0	72.20	208.60	6,545.9	5,392.9	-333.4	-977.4	28.8	11.64	5.31	-10.94	
7,210.0	73.30	206.40	6,555.4	5,402.4	-360.5	-991.5	50.5	7.41	3.44	-6.88	
7,241.0	73.50	203.00	6,564.3	5,411.3	-387.5	-1,003.9	72.6	10.53	0.65	-10.97	
7,273.0	73.90	200.20	6,573.3	5,420.3	-416.0	-1,015.2	96.5	8.49	1.25	-8.75	
7,305.0	75.30	197.80	6,581.8	5,428.8	-445.2	-1,025.2	121.4	8.45	4.38	-7.50	
7,336.0	76.00	195.00	6,589.4	5,436.4	-474.0	-1,033.7	146.4	9.04	2.26	-9.03	
7,368.0	75.50	191.30	6,597.3	5,444.3	-504.2	-1,040.8	173.2	11.31	-1.56	-11.56	
7,400.0	75.50	188.40	6,605.3	5,452.3	-534.7	-1,046.1	200.8	8.77	0.00	-9.06	
7,431.0	75.00	184.90	6,613.2	5,460.2	-564.5	-1,049.5	228.2	11.04	-1.61	-11.29	
7,463.0	74.90	180.90	6,621.5	5,468.5	-595.3	-1,051.1	257.2	12.08	-0.31	-12.50	
7,495.0	75.60	177.90	6,629.7	5,476.7	-626.3	-1,050.8	286.8	9.33	2.19	-9.38	
7,526.0	76.80	174.50	6,637.1	5,484.1	-656.3	-1,048.8	316.1	11.33	3.87	-10.97	
7,558.0	77.90	171.40	6,644.1	5,491.1	-687.3	-1,044.9	346.8	10.06	3.44	-9.69	
7,590.0	78.80	168.60	6,650.6	5,497.6	-718.1	-1,039.5	377.9	9.02	2.81	-8.75	
7,621.0	80.70	166.50	6,656.1	5,503.1	-747.9	-1,032.9	408.3	9.06	6.13	-6.77	
7,653.0	81.90	164.20	6,660.9	5,507.9	-778.5	-1,024.9	439.9	8.03	3.75	-7.19	
7,685.0	83.10	161.50	6,665.1	5,512.1	-808.8	-1,015.6	471.6	9.17	3.75	-8.44	
7,716.0	84.60	159.30	6,668.4	5,515.4	-837.9	-1,005.2	502.4	8.56	4.84	-7.10	
7,748.0	86.50	157.60	6,670.9	5,517.9	-867.5	-993.5	534.2	7.96	5.94	-5.31	
LP= 7780' MD/6673' TVD											
7,780.0	87.90	157.20	6,672.5	5,519.5	-897.1	-981.2	566.0	4.55	4.38	-1.25	
7,874.0	89.60	154.40	6,674.5	5,521.5	-982.8	-942.7	659.3	3.48	1.81	-2.98	
7,969.0	88.20	154.80	6,676.3	5,523.3	-1,068.6	-902.0	753.3	1.53	-1.47	0.42	
8,064.0	88.70	154.70	6,678.9	5,525.9	-1,154.4	-861.5	847.4	0.54	0.53	-0.11	
8,159.0	88.20	155.00	6,681.5	5,528.5	-1,240.4	-821.1	941.4	0.61	-0.53	0.32	
8,254.0	88.80	154.70	6,684.0	5,531.0	-1,326.4	-780.7	1,035.5	0.71	0.63	-0.32	
8,349.0	87.70	154.10	6,686.9	5,533.9	-1,412.0	-739.7	1,129.4	1.32	-1.16	-0.63	
8,443.0	88.20	154.70	6,690.2	5,537.2	-1,496.7	-699.1	1,222.4	0.83	0.53	0.64	
8,538.0	87.00	154.90	6,694.2	5,541.2	-1,582.6	-658.7	1,316.4	1.28	1.26	0.21	
8,634.0	86.00	154.10	6,700.1	5,547.1	-1,669.1	-617.5	1,411.2	1.33	-1.04	-0.83	
8,728.0	86.30	154.00	6,706.4	5,553.4	-1,753.4	-576.4	1,503.9	0.34	0.32	-0.11	

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Database:	EDM 5000.1 Single-User Db	Local Co-ordinate Reference:	Site Doddridge County 514393
Company:	EQT Production - Marcellus	TVD Reference:	KB@23 @ 1153.0usft
Project:	Doddridge County, WV Grid	MD Reference:	KB@23 @ 1153.0usft
Site:	Doddridge County 514393	North Reference:	Grid
Well:	Well #514393	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	As Drilled Surveys		

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)
8,823.0	89.50	154.60	6,709.9	5,556.9	-1,839.0	-535.3	1,597.8	3.43	3.37	0.63
Deepest Point of Well= 8918' MD/6710' TVD										
8,918.0	90.20	154.60	6,710.1	5,557.1	-1,924.8	-494.5	1,691.8	0.74	0.74	0.00
9,013.0	91.00	154.40	6,709.1	5,556.1	-2,010.5	-453.6	1,785.8	0.87	0.84	-0.21
9,108.0	91.30	153.80	6,707.2	5,554.2	-2,096.0	-412.1	1,879.7	0.71	0.32	-0.63
9,203.0	89.90	154.70	6,706.2	5,553.2	-2,181.5	-370.8	1,973.7	1.75	-1.47	0.95
9,298.0	90.20	155.90	6,706.1	5,553.1	-2,267.8	-331.2	2,067.9	1.30	0.32	1.26
9,393.0	90.60	155.50	6,705.5	5,552.5	-2,354.4	-292.1	2,162.1	0.60	0.42	-0.42
9,488.0	89.80	156.00	6,705.1	5,552.1	-2,441.0	-253.0	2,256.4	0.99	-0.84	0.53
9,583.0	90.30	156.30	6,705.1	5,552.1	-2,527.9	-214.6	2,350.8	0.61	0.53	0.32
9,678.0	91.10	155.90	6,703.9	5,550.9	-2,614.7	-176.1	2,445.2	0.94	0.84	-0.42
9,773.0	91.70	156.40	6,701.6	5,548.6	-2,701.6	-137.7	2,539.5	0.82	0.63	0.53
9,868.0	90.40	156.20	6,699.8	5,546.8	-2,788.6	-99.6	2,633.9	1.38	-1.37	-0.21
9,963.0	91.50	156.80	6,698.3	5,545.3	-2,875.7	-61.7	2,728.3	1.32	1.16	0.63
10,057.0	90.40	155.40	6,696.7	5,543.7	-2,961.6	-23.6	2,821.6	1.89	-1.17	-1.49
10,152.0	90.40	155.60	6,696.0	5,543.0	-3,048.1	15.8	2,915.9	0.21	0.00	0.21
10,247.0	92.60	154.20	6,693.5	5,540.5	-3,134.1	56.1	3,009.9	2.74	2.32	-1.47
10,342.0	93.70	152.60	6,688.3	5,535.3	-3,218.9	98.5	3,103.5	2.04	1.16	-1.68
10,437.0	94.10	153.90	6,681.9	5,528.9	-3,303.5	141.2	3,197.0	1.43	0.42	1.37
10,532.0	94.60	154.30	6,674.7	5,521.7	-3,388.7	182.6	3,290.6	0.67	0.53	0.42
10,627.0	95.00	153.60	6,666.7	5,513.7	-3,473.8	224.1	3,384.2	0.85	0.42	-0.74
10,722.0	96.70	153.40	6,657.0	5,504.0	-3,558.3	266.3	3,477.5	1.80	1.79	-0.21
10,818.0	96.20	154.50	6,646.2	5,493.2	-3,644.0	308.2	3,571.7	1.25	-0.52	1.15
10,912.0	96.00	154.50	6,636.3	5,483.3	-3,728.4	348.4	3,664.2	0.21	-0.21	0.00
11,007.0	96.90	155.00	6,625.6	5,472.6	-3,813.8	388.7	3,757.7	1.08	0.95	0.53
11,102.0	97.50	155.20	6,613.7	5,460.7	-3,899.3	428.4	3,851.1	0.67	0.63	0.21
11,197.0	93.90	155.50	6,604.2	5,451.2	-3,985.2	467.8	3,944.8	3.80	-3.79	0.32
11,292.0	94.10	155.90	6,597.6	5,444.6	-4,071.5	506.8	4,038.9	0.47	0.21	0.42
11,387.0	93.70	156.40	6,591.2	5,438.2	-4,158.2	545.1	4,133.0	0.67	-0.42	0.53
11,482.0	90.60	156.90	6,587.6	5,434.6	-4,245.4	582.7	4,227.4	3.31	-3.26	0.53
11,577.0	90.90	157.60	6,586.3	5,433.3	-4,333.0	619.5	4,322.0	0.80	0.32	0.74
11,671.0	90.80	155.30	6,585.0	5,432.0	-4,419.1	657.0	4,415.4	2.45	-0.11	-2.45
11,766.0	88.90	152.80	6,585.2	5,432.2	-4,504.5	698.6	4,509.3	3.31	-2.00	-2.63
11,861.0	89.10	152.40	6,586.9	5,433.9	-4,588.9	742.3	4,602.8	0.47	0.21	-0.42
11,957.0	89.30	154.20	6,588.2	5,435.2	-4,674.6	785.4	4,697.4	1.89	0.21	1.88
12,052.0	89.80	154.60	6,588.9	5,435.9	-4,760.3	826.5	4,791.4	0.67	0.53	0.42
12,147.0	90.10	154.00	6,589.0	5,436.0	-4,845.9	867.7	4,885.4	0.71	0.32	-0.63
12,243.0	90.50	154.40	6,588.5	5,435.5	-4,932.3	909.5	4,980.3	0.59	0.42	0.42
12,338.0	90.90	154.60	6,587.4	5,434.4	-5,018.1	950.4	5,074.3	0.47	0.42	0.21
12,432.0	91.30	154.00	6,585.6	5,432.6	-5,102.7	991.1	5,167.3	0.77	0.43	-0.64
12,527.0	91.60	153.90	6,583.2	5,430.2	-5,188.1	1,032.8	5,261.1	0.33	0.32	-0.11
12,622.0	91.60	154.20	6,580.5	5,427.5	-5,273.5	1,074.4	5,355.0	0.32	0.00	0.32

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Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Doddridge County 514393
Company:	EQT Production - Marcellus	TVD Reference:	KB@23 @ 1153.0usft
Project:	Doddridge County, WV Grid	MD Reference:	KB@23 @ 1153.0usft
Site:	Doddridge County 514393	North Reference:	Grid
Well:	Well #514393	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	As Drilled Surveys		

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)	
12,717.0	89.50	154.80	6,579.6	5,426.6	-5,359.2	1,115.3	5,449.0	2.30	-2.21	0.63	
12,812.0	88.20	155.60	6,581.5	5,428.5	-5,445.4	1,155.1	5,543.1	1.61	-1.37	0.84	
12,906.0	88.40	155.60	6,584.3	5,431.3	-5,531.0	1,193.9	5,636.4	0.21	0.21	0.00	
13,001.0	88.50	155.50	6,586.9	5,433.9	-5,617.4	1,233.2	5,730.6	0.15	0.11	-0.11	
13,096.0	88.60	155.50	6,589.3	5,436.3	-5,703.8	1,272.6	5,824.8	0.11	0.11	0.00	
13,191.0	89.20	155.40	6,591.1	5,438.1	-5,790.2	1,312.1	5,919.0	0.64	0.63	-0.11	
13,286.0	90.10	155.00	6,591.7	5,438.7	-5,876.5	1,351.9	6,013.2	1.04	0.95	-0.42	
13,380.0	91.50	154.90	6,590.4	5,437.4	-5,961.6	1,391.7	6,106.3	1.49	1.49	-0.11	
13,475.0	92.00	154.60	6,587.5	5,434.5	-6,047.5	1,432.2	6,200.3	0.61	0.53	-0.32	
13,570.0	91.10	155.30	6,584.9	5,431.9	-6,133.5	1,472.4	6,294.4	1.20	-0.95	0.74	
13,665.0	91.70	154.60	6,582.6	5,429.6	-6,219.6	1,512.6	6,388.5	0.97	0.63	-0.74	
13,759.0	89.80	156.10	6,581.3	5,428.3	-6,305.0	1,551.8	6,481.7	2.58	-2.02	1.60	
13,854.0	88.70	156.20	6,582.6	5,429.6	-6,391.9	1,590.3	6,576.0	1.16	-1.16	0.11	
13,949.0	89.50	156.10	6,584.1	5,431.1	-6,478.7	1,628.7	6,670.4	0.85	0.84	-0.11	
14,043.0	88.40	156.70	6,585.8	5,432.8	-6,564.9	1,666.3	6,763.8	1.33	-1.17	0.64	
14,138.0	88.80	156.20	6,588.1	5,435.1	-6,651.9	1,704.2	6,858.2	0.67	0.42	-0.53	
14,233.0	88.90	155.70	6,590.0	5,437.0	-6,738.7	1,742.9	6,952.5	0.54	0.11	-0.53	
14,328.0	88.80	155.50	6,591.9	5,438.9	-6,825.2	1,782.2	7,046.7	0.24	-0.11	-0.21	
14,423.0	90.50	155.40	6,592.5	5,439.5	-6,911.6	1,821.6	7,141.0	1.79	1.79	-0.11	
14,518.0	90.50	153.70	6,591.7	5,438.7	-6,997.3	1,862.5	7,235.0	1.79	0.00	-1.79	
14,612.0	90.20	152.70	6,591.1	5,438.1	-7,081.2	1,904.8	7,327.7	1.11	-0.32	-1.06	
14,707.0	92.00	153.30	6,589.3	5,436.3	-7,165.9	1,948.0	7,421.3	2.00	1.89	0.63	
14,802.0	92.40	153.00	6,585.6	5,432.6	-7,250.6	1,990.8	7,514.9	0.53	0.42	-0.32	
14,896.0	91.40	154.00	6,582.5	5,429.5	-7,334.6	2,032.8	7,607.6	1.50	-1.06	1.06	
14,991.0	91.70	153.30	6,579.9	5,426.9	-7,419.7	2,074.9	7,701.4	0.80	0.32	-0.74	
15,086.0	92.00	153.40	6,576.9	5,423.9	-7,504.6	2,117.5	7,795.0	0.33	0.32	0.11	
15,181.0	92.60	154.40	6,573.1	5,420.1	-7,589.8	2,159.3	7,888.8	1.23	0.63	1.05	
15,276.0	92.80	154.50	6,568.6	5,415.6	-7,675.5	2,200.2	7,982.7	0.24	0.21	0.11	
15,370.0	92.40	155.10	6,564.3	5,411.3	-7,760.4	2,240.2	8,075.7	0.77	-0.43	0.64	
15,465.0	92.50	153.90	6,560.3	5,407.3	-7,846.1	2,281.0	8,169.6	1.27	0.11	-1.26	
15,560.0	93.30	154.10	6,555.5	5,402.5	-7,931.4	2,322.6	8,263.4	0.87	0.84	0.21	
15,655.0	91.50	156.40	6,551.5	5,398.5	-8,017.6	2,362.4	8,357.5	3.07	-1.89	2.42	
15,750.0	90.10	157.20	6,550.2	5,397.2	-8,104.9	2,399.8	8,452.0	1.70	-1.47	0.84	
15,844.0	90.40	156.90	6,549.7	5,396.7	-8,191.4	2,436.4	8,545.5	0.45	0.32	-0.32	
15,940.0	91.30	156.90	6,548.3	5,395.3	-8,279.7	2,474.1	8,641.0	0.94	0.94	0.00	
16,034.0	90.60	158.40	6,546.8	5,393.8	-8,366.6	2,509.8	8,734.6	1.76	-0.74	1.60	
16,129.0	88.00	157.90	6,547.9	5,394.9	-8,454.8	2,545.2	8,829.3	2.79	-2.74	-0.53	
16,224.0	87.10	156.90	6,552.0	5,399.0	-8,542.4	2,581.6	8,923.8	1.42	-0.95	-1.05	
16,319.0	86.90	156.20	6,557.0	5,404.0	-8,629.5	2,619.4	9,018.1	0.77	-0.21	-0.74	
16,414.0	87.40	156.20	6,561.7	5,408.7	-8,716.3	2,657.7	9,112.3	0.53	0.53	0.00	
16,508.0	87.80	155.60	6,565.6	5,412.6	-8,802.0	2,696.0	9,205.6	0.77	0.43	-0.64	
Final Survey= 16580' MD/6568' TVD											
16,580.0	88.00	155.00	6,568.3	5,415.3	-8,867.4	2,726.1	9,276.9	0.88	0.28	-0.83	

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Company:	EQT Production - Marcellus	TVD Reference:	KB@23 @ 1153.0usft
Project:	Doddridge County, WV Grid	MD Reference:	KB@23 @ 1153.0usft
Site:	Doddridge County 514393	North Reference:	Grid
Well:	Well #514393	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main Wellbore		
Design:	As Drilled Surveys		

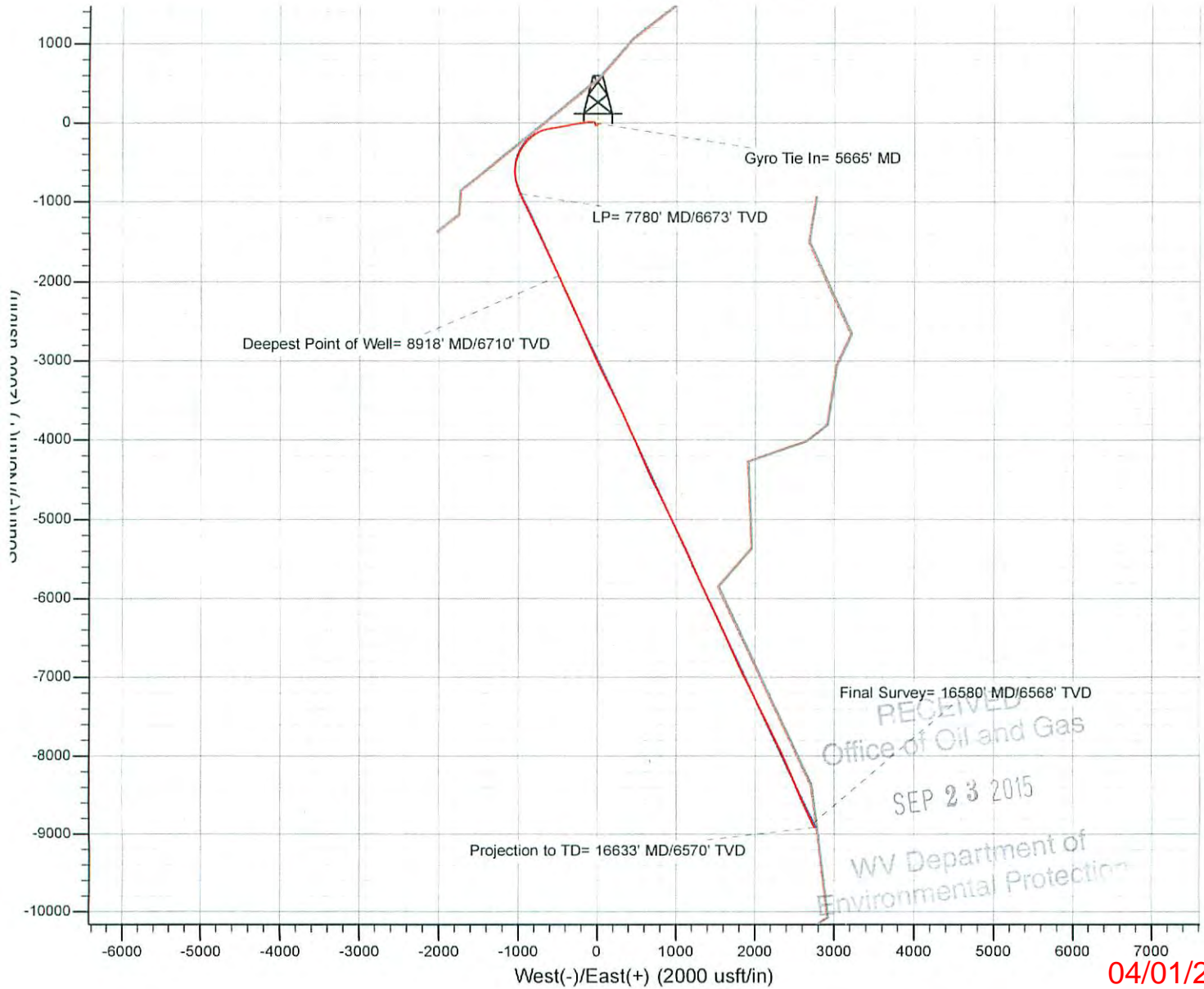
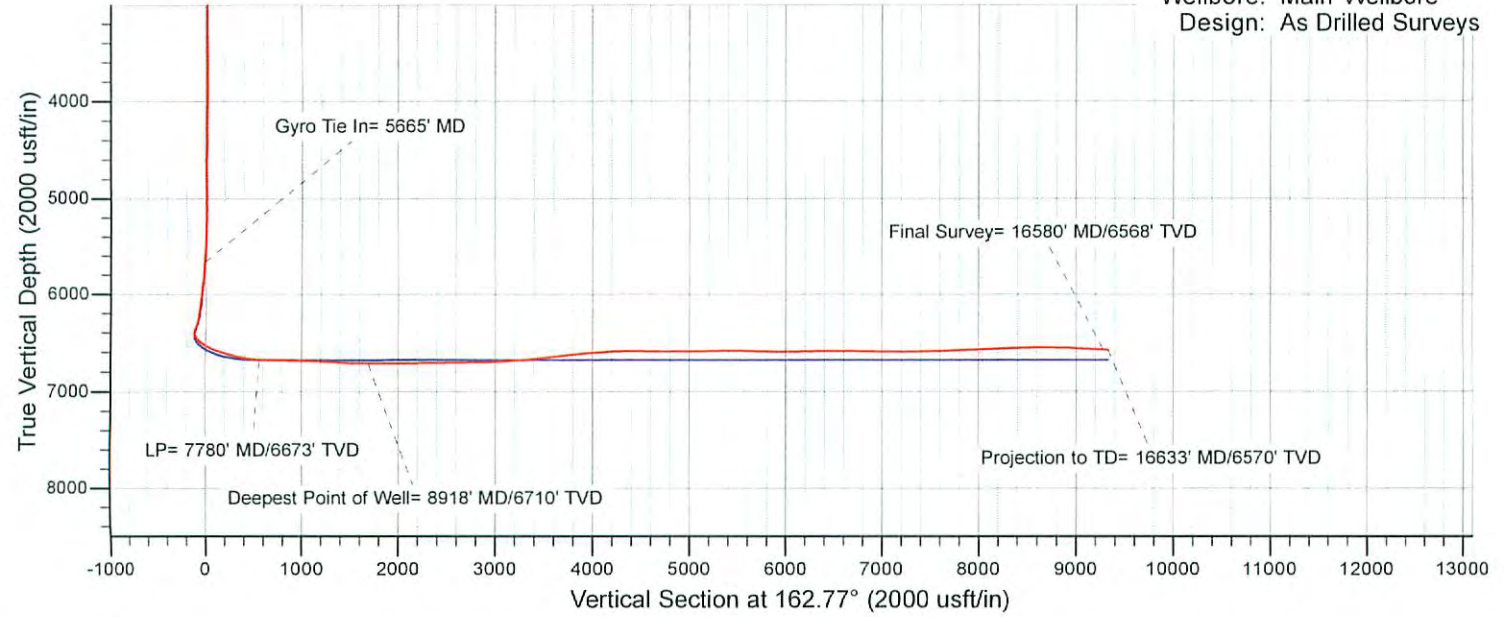
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
Projection to TD= 16633' MD/6570' TVD										
16,633.0	88.00	155.00	6,570.1	5,417.1	-8,915.4	2,748.5	9,329.4	0.00	0.00	0.00

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
5,665.0	5,664.1	1.7	-39.3	Gyro Tie In= 5665' MD
7,780.0	6,672.5	-897.1	-981.2	LP= 7780' MD/6673' TVD
8,918.0	6,710.1	-1,924.8	-494.5	Deepest Point of Well= 8918' MD/6710' TVD
16,580.0	6,568.3	-8,867.4	2,726.1	Final Survey= 16580' MD/6568' TVD
16,633.0	6,570.1	-8,915.4	2,748.5	Projection to TD= 16633' MD/6570' TVD

Checked By: _____ Approved By: _____ Date: _____

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Project: Doddridge County, WV Grid
 Site: Doddridge County 514393
 Well: Well #514393
 Wellbore: Main Wellbore
 Design: As Drilled Surveys



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