



Where energy meets innovation.

EQT PRODUCTION

Doddridge County, WV

OXF43

OXF43H20 (516228) -MRC - Slot 516228

Main

Design: 516228 As Drilled

Standard Survey Report

19 March, 2020

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EQT Survey Report

Database: EDM_Definitive	Local Co-ordinate Reference: Well OXF43H20 (516228) -MRC - Slot 516228
Company: EQT PRODUCTION	TVD Reference: KB @13 @ 1242.000usft
Project: Doddridge County, WV	MD Reference: KB @13 @ 1242.000usft
Site: OXF43	North Reference: Grid
Well: OXF43H20 (516228) -MRC	Survey Calculation Method: Minimum Curvature
Wellbore: Main	
Design: 516228 As Drilled	

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 OXF43		
Site Position:	Northing: 241,913.000 usft	Latitude: 39.16
From: Map	Easting: 1,633,421.760 usft	Longitude: -80.79
Position Uncertainty: 0.000 usft	Slot Radius: 13-3/16 "	Grid Convergence: -0.8245 °

Well OXF43H20 (516228) -MRC - Slot 516228			
Well Position	+N/-S 0.000 usft	Northing: 241,913.000 usft	Latitude: 39.1569519
	+E/-W 0.000 usft	Easting: 1,633,421.760 usft	Longitude: 80.7927349°W
Position Uncertainty	0.000 usft	Wellhead Elevation: 0.000 usft	Ground Level: 1,229.000 usft

Wellbore Main					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	3/25/2015	-8.4196	66.6610	52,120.40574172

Design 516228 As Drilled					
Audit Notes:					
Version: 1.0	Phase: ACTUAL	Tie On Depth: 0.000			
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.000	0.000	0.000	156.934	

Survey Program	Date 3/19/2020			
From (')	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	5,331.000	Gyrodata Gyro (Main)	GYD_DP_MS Updated 06/27	Gyrodata Continuous Tool in

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)
0.000	0.000	0.000	0.000	-1,242.000	0.000	0.000	0.000	0.00000	0.00000	0.00000
100.000	0.400	176.230	99.999	-1,142.001	-0.348	0.023	0.329	0.40000	0.40000	0.00000
200.000	0.780	196.300	199.994	-1,042.006	-1.350	-0.145	1.185	0.42696	0.38000	20.07000
300.000	1.070	205.480	299.981	-942.019	-2.846	-0.738	2.329	0.32477	0.29000	9.18000
400.000	1.320	209.820	399.959	-842.041	-4.688	-1.712	3.643	0.26570	0.25000	4.34000
500.000	1.360	215.870	499.932	-742.068	-6.649	-2.980	4.950	0.14695	0.04000	6.05000
600.000	1.420	218.570	599.902	-642.098	-8.580	-4.448	6.151	0.08881	0.06000	2.70000
700.000	1.460	218.720	699.871	-542.129	-10.542	-6.018	7.342	0.04018	0.04000	0.15000
800.000	1.490	218.770	799.837	-442.163	-12.550	-7.629	8.558	0.03003	0.03000	0.05000

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Survey Report

Database: EDM_Definitive Company: EQT PRODUCTION Project: Doddridge County, WV Site: OXF43 Well: OXF43H20 (516228) -MRC Wellbore: Main Design: 516228 As Drilled	Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method:	Well OXF43H20 (516228) -MRC - Slot 516228 KB @13 @ 1242.000usft KB @13 @ 1242.000usft Grid Minimum Curvature
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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)
900.000	1.510	217.470	899.803	-342.197	-14.609	-9.244	9.820	0.03947	0.02000	-1.30000
1,000.000	1.500	215.280	999.769	-242.231	-16.724	-10.802	11.155	0.05838	-0.01000	-2.19000
1,100.000	1.520	214.780	1,099.734	-142.266	-18.881	-12.314	12.547	0.02395	0.02000	-0.50000
1,200.000	1.620	215.060	1,199.696	-42.304	-21.128	-13.883	13.999	0.10029	0.10000	0.28000
1,300.000	1.740	214.340	1,299.653	57.653	-23.538	-15.551	15.564	0.12184	0.12000	-0.72000
1,400.000	1.940	210.210	1,399.602	157.602	-26.255	-17.259	17.394	0.23984	0.20000	-4.13000
1,500.000	1.920	202.320	1,499.545	257.545	-29.267	-18.747	19.582	0.26626	-0.02000	-7.89000
1,600.000	1.640	195.890	1,599.497	357.497	-32.193	-19.775	21.872	0.34352	-0.28000	-6.43000
1,700.000	1.410	199.650	1,699.462	457.462	-34.728	-20.581	23.888	0.25070	-0.23000	3.76000
1,800.000	1.390	201.390	1,799.432	557.432	-37.016	-21.437	25.658	0.04698	-0.02000	1.74000
1,900.000	1.510	199.490	1,899.400	657.400	-39.388	-22.319	27.494	0.12926	0.12000	-1.90000
2,000.000	1.680	197.450	1,999.361	757.361	-42.028	-23.198	29.579	0.17921	0.17000	-2.04000
2,100.000	1.860	196.090	2,099.313	857.313	-44.986	-24.087	31.952	0.18482	0.18000	-1.36000
2,200.000	1.750	197.050	2,199.263	957.264	-48.005	-24.985	34.378	0.11408	-0.11000	0.96000
2,300.000	1.630	200.900	2,299.220	1,057.220	-50.793	-25.940	36.570	0.16514	-0.12000	3.85000
2,400.000	1.620	201.170	2,399.180	1,157.180	-53.440	-26.958	38.606	0.01259	-0.01000	0.27000
2,500.000	1.570	202.930	2,499.141	1,257.141	-56.020	-28.002	40.571	0.06999	-0.05000	1.76000
2,600.000	1.450	202.980	2,599.106	1,357.106	-58.447	-29.030	42.400	0.12001	-0.12000	0.05000
2,700.000	1.370	206.110	2,699.076	1,457.076	-60.685	-30.050	44.060	0.11102	-0.08000	3.13000
2,800.000	1.350	207.740	2,799.048	1,557.048	-62.801	-31.124	45.586	0.04355	-0.02000	1.63000
2,900.000	1.350	209.900	2,899.020	1,657.020	-64.865	-32.260	47.040	0.05089	0.00000	2.16000
3,000.000	1.350	209.350	2,998.992	1,756.992	-66.913	-33.424	48.468	0.01296	0.00000	-0.55000
3,100.000	1.400	210.700	3,098.963	1,856.964	-68.990	-34.625	49.908	0.05957	0.05000	1.35000
3,200.000	1.380	209.980	3,198.934	1,956.934	-71.083	-35.851	51.354	0.02655	-0.02000	-0.72000
3,300.000	1.400	209.400	3,298.905	2,056.905	-73.191	-37.052	52.823	0.02445	0.02000	-0.58000
3,400.000	1.330	209.740	3,398.876	2,156.876	-75.263	-38.228	54.268	0.07047	-0.07000	0.34000
3,500.000	1.280	208.980	3,498.850	2,256.850	-77.247	-39.344	55.657	0.05291	-0.05000	-0.76000
3,600.000	1.310	208.660	3,598.825	2,356.825	-79.227	-40.434	57.052	0.03086	0.03000	-0.32000
3,700.000	1.320	209.420	3,698.798	2,456.798	-81.234	-41.548	58.461	0.02010	0.01000	0.76000
3,800.000	1.310	213.360	3,798.772	2,556.772	-83.192	-42.742	59.795	0.09095	-0.01000	3.94000
3,900.000	1.260	217.620	3,898.747	2,656.747	-85.017	-44.042	60.965	0.10779	-0.05000	4.26000
4,000.000	0.990	239.360	3,998.728	2,756.728	-86.328	-45.456	61.618	0.50032	-0.27000	21.74000
4,100.000	1.020	257.560	4,098.713	2,856.713	-86.960	-47.069	61.567	0.31926	0.03000	18.20000
4,200.000	1.210	273.430	4,198.694	2,956.694	-87.089	-48.992	60.932	0.36079	0.19000	15.87000
4,300.000	1.600	288.850	4,298.664	3,056.664	-86.575	-51.367	59.528	0.53987	0.39000	15.42000
4,400.000	1.800	295.990	4,398.620	3,156.620	-85.436	-54.100	57.409	0.29095	0.20000	7.14000
4,500.000	2.100	302.550	4,498.562	3,256.562	-83.762	-57.056	54.711	0.37347	0.30000	6.56000
4,600.000	2.460	307.490	4,598.483	3,356.483	-81.470	-60.303	51.330	0.40983	0.36000	4.94000
4,700.000	2.910	313.720	4,698.373	3,456.373	-78.409	-63.841	47.128	0.53572	0.45000	6.23000
4,800.000	3.230	317.190	4,798.230	3,556.230	-74.588	-67.590	42.144	0.36991	0.32000	3.47000
4,900.000	3.550	321.920	4,898.055	3,656.055	-70.084	-71.414	36.502	0.42475	0.32000	4.73000
5,000.000	3.750	323.300	4,997.852	3,755.852	-65.025	-75.278	30.334	0.21843	0.20000	1.38000

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Company:	EQT PRODUCTION	TVD Reference:	KB @13 @ 1242.000usft
Project:	Doddridge County, WV	MD Reference:	KB @13 @ 1242.000usft
Site:	OXF43	North Reference:	Grid
Well:	OXF43H20 (516228) -MRC	Survey Calculation Method:	Minimum Curvature
Wellbore:	Main		
Design:	516228 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)
5,100.000	3.710	327.510	5,097.640	3,855.640	-59.674	-78.970	23.964	0.27672	-0.04000	4.21000
5,200.000	4.320	328.320	5,197.394	3,955.394	-53.740	-82.686	17.048	0.61262	0.61000	0.81000
5,300.000	4.440	328.890	5,297.102	4,055.102	-47.221	-86.664	9.492	0.12765	0.12000	0.57000
Final Survey=5306' MD										
5,306.000	4.480	328.930	5,303.084	4,061.084	-46.821	-86.905	9.030	0.66868	0.66667	0.66667
Projection to Bottom Hole Depth=5331' MD - 20H 516228 BHL - 20H 516228 LP										
5,331.000	4.480	328.930	5,328.008	4,086.008	-45.149	-87.912	7.096	0.00000	0.00000	0.00000

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
5,306.000	5,303.084	-46.821	-86.905	Final Survey=5306' MD
5,331.000	5,328.008	-45.149	-87.912	Projection to Bottom Hole Depth=5331' MD

Checked By: _____ Approved By: _____ Date: _____

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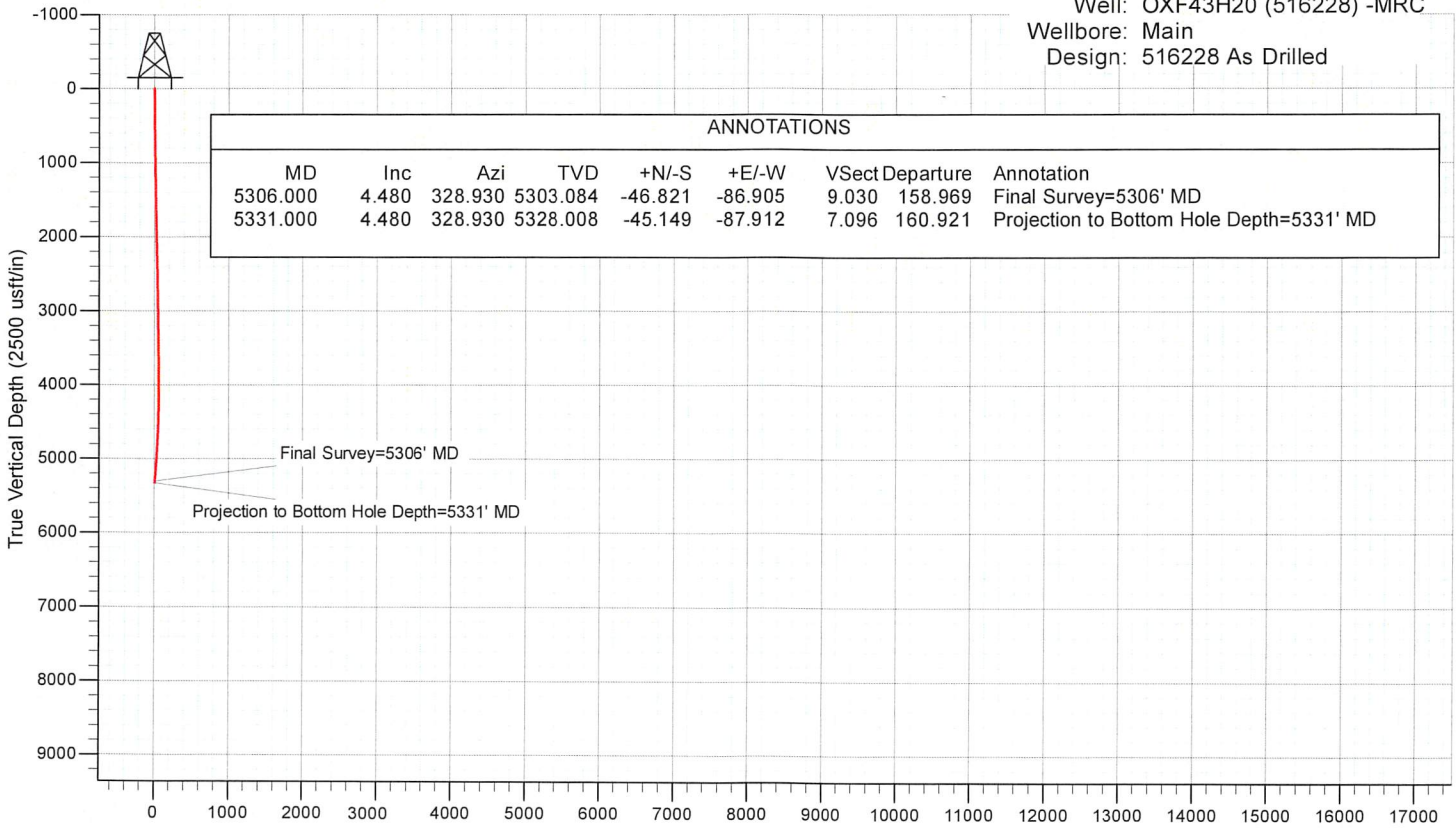


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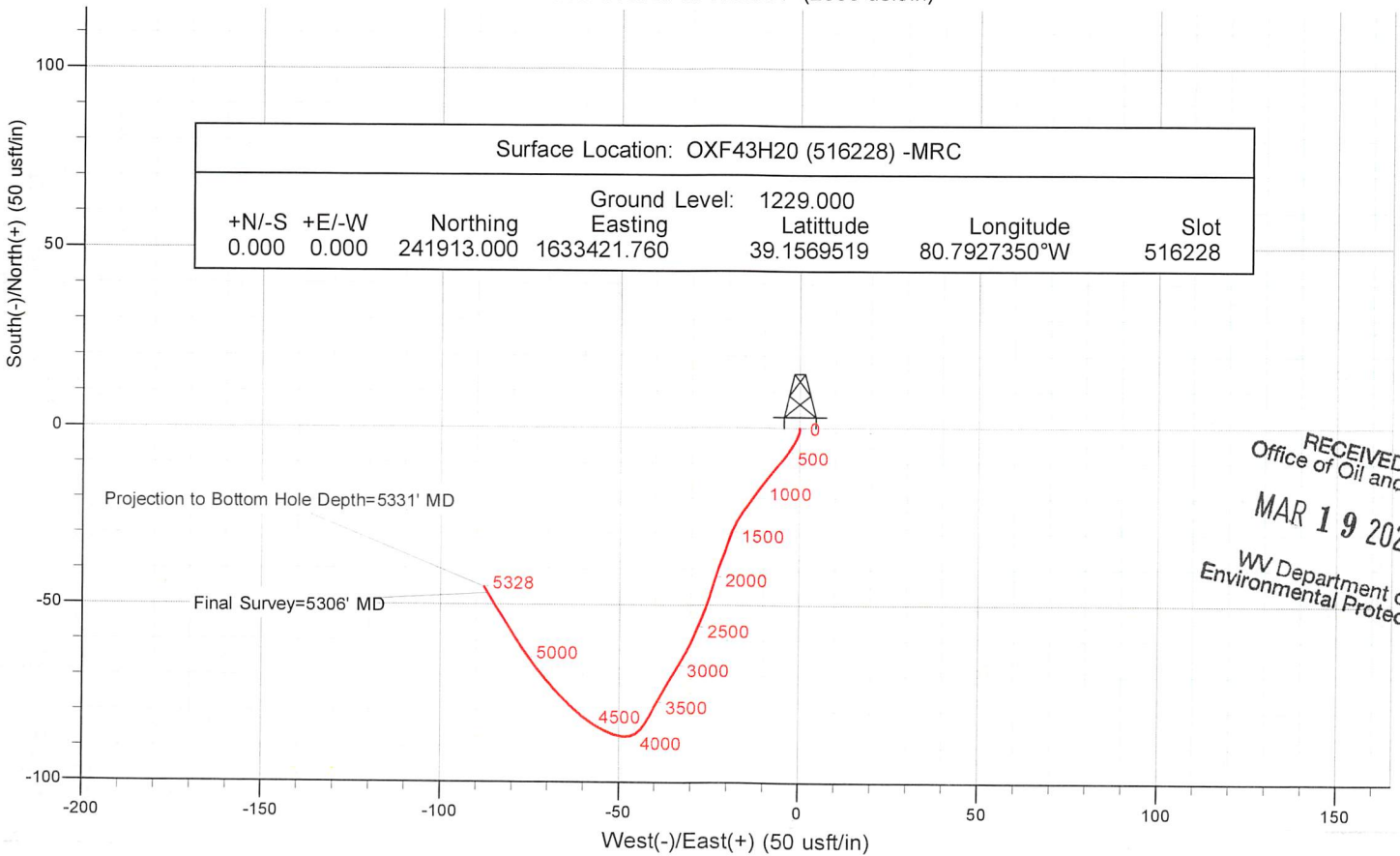
KB Elevation= KB @13 @ 1242.000usft
 Ground Elevation= 1229.000
 All measurements were taken from KB Elevation

Project: Doddridge County, WV
 Site: OXF43
 Well: OXF43H20 (516228) -MRC
 Wellbore: Main
 Design: 516228 As Drilled



ANNOTATIONS								
MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Departure	Annotation
5306.000	4.480	328.930	5303.084	-46.821	-86.905	9.030	158.969	Final Survey=5306' MD
5331.000	4.480	328.930	5328.008	-45.149	-87.912	7.096	160.921	Projection to Bottom Hole Depth=5331' MD

Vertical Section at 156.934° (2500 usft/in)



Surface Location: OXF43H20 (516228) -MRC							
+N/-S	+E/-W	Northing	Ground Level:	Easting	Latitude	Longitude	Slot
0.000	0.000	241913.000	1229.000	1633421.760	39.1569519	80.7927350°W	516228

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Canonsburg, PA 15317
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John Zavatchan
Project Specialist - Permitting
O: 724-746-9073
C: 412-584-3132
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March 19, 2020

Via FedEx Overnight

West Virginia Department of Environmental Protection
Office of Oil and Gas
601 57th Street, S.E.
Charleston, WV 25304

RE: WR-35 Well Operator's Report of Work
OXF43 Well Pad
Southwest/Cove District, Doddridge County

WVDEP Recipient,

Attached please find the completed WR-35 Well Operator's Reports of Well Work for the following wells:

- OXF43 516228 – Permit Number 47-017-06739
- OXF43 516229 – Permit Number 47-017-06740
- OXF43 516230 – Permit Number 47-017-06741
- OXF43 516232 – Permit Number 47-017-06742

EQT Production Company has submitted drill deeper permit applications to the Department for these wells. We intend to continue drilling operations later this year.

If you have any questions or comments regarding this application, please contact me at your earliest convenience.

Best Regards,

John Zavatchan
Landman - Permitting
jzavatchan@eqt.com
724-746-9073

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