



Marathon Oil

Marathon Oil

Eddy County, NM

Sweet Tea State 24-29-31 (2-3-4-5-6)

WXY #3H

OH

Design: OH 200'-17191' PTB 17244'

Survey Report

23 August, 2018

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MAR 18 2019

DISTRICT II-ARTESIA O.C.D.



Company:	Marathon Oil	Local Co-ordinate Reference:	Well WXY #3H
Project:	Eddy County, NM	TVD Reference:	Well @ 2946.00usft (GL: 2921' + KB; 25' (Prec594))
Site:	Sweet Tea State 24-29-31 (2-3-4-5-6)	MD Reference:	Well @ 2946.00usft (GL: 2921' + KB; 25' (Prec594))
Well:	WXY #3H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH 200'-17191' PTB 17244'	Database:	WellPlanner1

Project	Eddy County, NM		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Sweet Tea State 24-29-31 (2-3-4-5-6)		
Site Position:		Northing:	426,778.23 usft
From:	Map	Easting:	593,717.06 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32.172968
		Longitude:	-104.030446
		Grid Convergence:	0.16 °

Well	WXY #3H			
Well Position	+N/-S	0.00 usft	Northing:	426,778.20 usft
	+E/-W	0.00 usft	Easting:	593,767.08 usft
Position Uncertainty	0.00 usft		Wellhead Elevation:	usft
			Latitude:	32.172967
			Longitude:	-104.030284
			Ground Level:	2,921.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	HDGM	5/20/2018	(°) 7.12	(°) 59.95	(nT) 47,996.20

Design	OH 200'-17191' PTB 17244'		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(°) 180.01

Survey Program	Date 8/23/2018		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
200.00	17,244.00	Survey #1 (OH)	MWD+IFR1
			OWSG MWD + IFR1

Company: Marathon Oil
Project: Eddy County, NM
Site: Sweet Tea State 24-29-31 (2-3-4-5-6)
Well: WXY #3H
Wellbore: OH
Design: OH 200'-17191' PTB 17244'

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Well WXY #3H
 Well @ 2946.00usft (GL: 2921' + KB; 25' (Prec594))
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 Grid
 Minimum Curvature
 WellPlanner1

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	426,778.20	593,767.08	
[SweetTeaWXY#3H]FTP											
200.00	0.30	298.30	200.00	-0.25	0.25	-0.46	0.52	298.30	426,778.45	593,766.62	
234.00	0.30	214.60	234.00	-0.22	0.22	-0.59	0.63	290.21	426,778.42	593,766.49	
325.00	0.50	229.40	325.00	0.24	-0.24	-1.03	1.05	256.98	426,777.96	593,766.05	
384.00	0.40	211.70	383.99	0.58	-0.58	-1.33	1.45	246.44	426,777.62	593,765.75	
507.00	0.40	182.30	506.99	1.37	-1.37	-1.57	2.09	228.86	426,776.83	593,765.51	
598.00	0.30	158.80	597.99	1.91	-1.91	-1.50	2.43	218.08	426,776.29	593,765.58	
690.00	0.50	124.70	689.99	2.37	-2.37	-1.08	2.60	204.58	426,775.83	593,766.00	
781.00	0.50	144.90	780.98	2.92	-2.92	-0.53	2.97	190.26	426,775.28	593,766.55	
873.00	0.60	110.40	872.98	3.41	-3.41	0.15	3.42	177.41	426,774.79	593,767.23	
965.00	0.80	115.00	964.97	3.85	-3.85	1.19	4.03	162.87	426,774.35	593,768.27	
1,055.00	0.60	142.70	1,054.97	4.49	-4.49	2.04	4.94	155.55	426,773.71	593,769.12	
1,145.00	0.80	93.20	1,144.96	4.90	-4.90	2.96	5.73	148.92	426,773.30	593,770.04	
1,234.00	1.30	81.70	1,233.95	4.79	-4.79	4.58	6.63	136.33	426,773.41	593,771.66	
1,323.00	0.40	89.90	1,322.94	4.65	-4.65	5.88	7.50	128.29	426,773.55	593,772.96	
1,413.00	0.40	130.70	1,412.93	4.85	-4.85	6.44	8.06	127.00	426,773.35	593,773.52	
1,503.00	1.40	82.00	1,502.92	4.90	-4.90	7.76	9.18	122.27	426,773.30	593,774.84	
1,592.00	4.60	73.80	1,591.79	3.75	-3.76	12.27	12.83	107.02	426,774.44	593,779.35	
1,681.00	6.70	69.50	1,680.35	0.94	-0.94	20.56	20.58	92.62	426,777.26	593,787.64	
1,771.00	6.50	72.50	1,769.76	-2.43	2.43	30.34	30.43	85.42	426,780.63	593,797.42	
1,860.00	6.90	71.20	1,858.15	-5.67	5.67	40.20	40.60	81.98	426,783.87	593,807.28	
1,949.00	8.80	68.30	1,946.31	-9.92	9.91	51.59	52.53	79.13	426,788.11	593,818.67	
2,039.00	10.50	71.80	2,035.03	-15.03	15.01	65.78	67.47	77.14	426,793.21	593,832.86	
2,128.00	10.50	78.10	2,122.55	-19.23	19.22	81.42	83.65	76.72	426,797.42	593,848.50	
2,217.00	10.10	82.20	2,210.11	-21.97	21.95	97.08	99.53	77.26	426,800.15	593,864.16	
2,306.00	9.90	86.70	2,297.76	-23.47	23.45	112.45	114.87	78.22	426,801.65	593,879.53	

Company: Marathon Oil
Project: Eddy County, NM
Site: Sweet Tea State 24-29-31 (2-3-4-5-6)
Well: WXY #3H
Wellbore: OH
Design: OH 200'-17191' PTB 17244'

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Well WXY #3H
 Well @ 2946.00usft (GL: 2921' + KB; 25' (Prec594))
 Well @ 2946.00usft (GL: 2921' + KB; 25' (Prec594))
 Grid
 Minimum Curvature
 WellPlanner1

Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
2,395.00	10.10	90.00	2,385.41	-23.91	23.89	127.90	130.11	79.42	426,802.09	593,894.98
2,485.00	9.50	82.90	2,474.10	-24.83	24.81	143.16	145.29	80.17	426,803.01	593,910.24
2,574.00	9.10	69.60	2,561.94	-28.20	28.17	157.04	159.55	79.83	426,806.37	593,924.12
2,675.00	8.00	59.30	2,661.82	-34.57	34.54	170.58	174.04	78.55	426,812.74	593,937.66
2,752.00	7.00	63.00	2,738.16	-39.44	39.41	179.36	183.64	77.61	426,817.61	593,946.44
2,841.00	8.80	70.00	2,826.32	-44.23	44.20	190.59	195.65	76.94	426,822.40	593,957.67
2,931.00	12.00	71.60	2,914.83	-49.55	49.51	205.94	211.81	76.48	426,827.71	593,973.02
3,020.00	13.20	71.00	3,001.68	-55.78	55.74	224.33	231.15	76.05	426,833.94	593,991.41
3,109.00	13.50	70.90	3,088.28	-62.49	62.45	243.76	251.63	75.63	426,840.65	594,010.84
3,199.00	13.90	70.20	3,175.72	-69.59	69.55	263.86	272.87	75.23	426,847.75	594,030.94
3,288.00	13.70	69.30	3,262.15	-76.94	76.89	283.77	294.01	74.84	426,855.09	594,050.85
3,377.00	13.70	68.80	3,348.62	-84.48	84.43	303.46	314.98	74.45	426,862.63	594,070.54
3,467.00	14.00	68.50	3,436.00	-92.33	92.27	323.52	336.42	74.08	426,870.47	594,090.60
3,556.00	13.70	68.00	3,522.41	-100.23	100.17	343.31	357.63	73.73	426,878.37	594,110.39
3,646.00	12.20	74.60	3,610.12	-106.75	106.68	362.36	377.74	73.59	426,884.88	594,129.44
3,734.00	11.80	77.40	3,696.20	-111.18	111.12	380.11	396.02	73.70	426,889.32	594,147.19
3,824.00	11.60	76.80	3,784.33	-115.26	115.19	397.90	414.24	73.85	426,893.39	594,164.98
3,913.00	12.80	80.50	3,871.32	-118.93	118.86	416.34	432.97	74.07	426,897.06	594,183.42
4,002.00	14.10	83.00	3,957.88	-121.89	121.81	436.82	453.49	74.42	426,900.01	594,203.90
4,092.00	14.00	82.60	4,045.19	-124.63	124.55	458.50	475.11	74.80	426,902.75	594,225.58
4,181.00	13.80	81.50	4,131.58	-127.59	127.50	479.67	496.33	75.11	426,905.70	594,246.75
4,270.00	13.20	81.10	4,218.12	-130.73	130.64	500.21	516.99	75.36	426,908.84	594,267.29
4,360.00	12.60	80.50	4,305.85	-133.95	133.85	520.04	536.99	75.57	426,912.05	594,287.12
4,449.00	12.10	80.70	4,392.79	-137.06	136.96	538.82	555.96	75.74	426,915.16	594,305.90
4,539.00	12.20	80.30	4,480.77	-140.19	140.09	557.50	574.84	75.89	426,918.29	594,324.58
4,628.00	12.70	80.00	4,567.68	-143.47	143.37	576.41	593.97	76.03	426,921.57	594,343.49
4,717.00	12.80	79.90	4,654.49	-146.91	146.80	595.75	613.57	76.16	426,925.00	594,362.83

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 Well @ 2946.00usft (GL: 2921' + KB; 25' (Prec594))
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MD (usft)	Inc (°)	Azi (azimuth) (°)		TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
4,807.00	12.90	79.70		4,742.23	-150.45	150.35	615.45	633.55	76.27	426,928.55	594,382.53
4,896.00	12.40	79.50		4,829.07	-153.98	153.86	634.62	653.01	76.37	426,932.06	594,401.70
4,985.00	11.80	81.10		4,916.09	-157.13	157.01	653.01	671.62	76.48	426,935.21	594,420.09
5,075.00	12.00	80.00		5,004.16	-160.18	160.06	671.31	690.13	76.59	426,938.26	594,438.39
5,164.00	11.50	74.80		5,091.30	-164.12	163.99	688.99	708.23	76.61	426,942.19	594,456.07
5,254.00	10.90	74.20		5,179.58	-168.79	168.66	705.83	725.70	76.56	426,946.86	594,472.91
5,343.00	9.40	73.90		5,267.19	-173.10	172.97	720.91	741.37	76.51	426,951.17	594,487.99
5,432.00	8.10	74.60		5,355.15	-176.78	176.65	733.94	754.90	76.47	426,954.85	594,501.02
5,521.00	8.00	75.20		5,443.27	-180.03	179.90	745.97	767.36	76.44	426,958.10	594,513.05
5,611.00	6.60	74.80		5,532.54	-182.99	182.85	757.02	778.79	76.42	426,961.05	594,524.10
5,700.00	4.60	80.80		5,621.11	-184.90	184.77	765.48	787.46	76.43	426,962.97	594,532.56
5,789.00	3.80	85.20		5,709.87	-185.72	185.58	771.94	793.94	76.48	426,963.78	594,539.02
5,878.00	3.40	73.90		5,798.70	-186.70	186.56	777.42	799.49	76.51	426,964.76	594,544.50
5,968.00	3.10	70.60		5,888.55	-188.25	188.11	782.28	804.57	76.48	426,966.31	594,549.36
6,057.00	3.00	74.30		5,977.43	-189.68	189.54	786.79	809.30	76.46	426,967.74	594,553.87
6,146.00	2.80	76.90		6,066.31	-190.80	190.66	791.15	813.80	76.45	426,968.86	594,558.23
6,235.00	2.40	75.50		6,155.22	-191.76	191.62	795.07	817.83	76.45	426,969.82	594,562.15
6,324.00	2.20	82.60		6,244.15	-192.45	192.31	798.57	821.40	76.46	426,970.51	594,565.65
6,414.00	1.90	83.10		6,334.09	-192.85	192.71	801.76	824.59	76.48	426,970.91	594,568.84
6,503.00	1.50	78.70		6,423.05	-193.26	193.12	804.37	827.22	76.50	426,971.32	594,571.45
6,592.00	0.80	30.60		6,512.04	-194.02	193.88	805.83	828.82	76.47	426,972.08	594,572.91
6,682.00	0.50	310.70		6,602.03	-194.82	194.68	805.85	829.03	76.42	426,972.88	594,572.93
6,771.00	0.90	280.60		6,691.03	-195.20	195.06	804.87	828.17	76.38	426,973.26	594,571.95
6,860.00	1.50	261.00		6,780.01	-195.15	195.00	803.03	826.37	76.35	426,973.20	594,570.11
6,949.00	1.70	248.50		6,868.97	-194.48	194.34	800.65	823.90	76.36	426,972.54	594,567.73
7,039.00	1.50	227.90		6,958.94	-193.20	193.06	798.53	821.54	76.41	426,971.26	594,565.61
7,128.00	2.20	169.60		7,047.90	-190.74	190.60	797.98	820.42	76.57	426,968.80	594,565.06

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Project: Eddy County, NM
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Well: WXY #3H
Wellbore: OH
Design: OH 200'-17191' PTB 17244'

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Well WXY #3H
 Well @ 2946.00usft (GL: 2921' + KB; 25' (Prec594))
 Well @ 2946.00usft (GL: 2921' + KB; 25' (Prec594))
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 Minimum Curvature
 WellPlanner1

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)	
7,218.00	2.10	154.50	7,137.83	-187.55	187.41	799.00	820.68	76.80	426,965.61	594,566.08	
7,307.00	1.90	147.60	7,226.78	-184.83	184.69	800.49	821.52	77.01	426,962.89	594,567.57	
7,398.00	1.20	150.70	7,317.75	-182.73	182.59	801.77	822.29	77.17	426,960.79	594,568.85	
7,487.00	1.10	134.60	7,406.73	-181.32	181.18	802.83	823.02	77.28	426,959.38	594,569.91	
7,576.00	1.30	149.60	7,495.71	-179.85	179.71	803.95	823.79	77.40	426,957.91	594,571.03	
7,666.00	0.70	158.70	7,585.70	-178.45	178.31	804.67	824.19	77.51	426,956.51	594,571.75	
7,755.00	0.20	240.30	7,674.69	-177.87	177.73	804.73	824.12	77.55	426,955.93	594,571.81	
7,844.00	0.80	349.10	7,763.69	-178.40	178.26	804.48	823.99	77.51	426,956.46	594,571.56	
7,934.00	0.60	317.90	7,853.68	-179.37	179.23	804.04	823.78	77.43	426,957.43	594,571.12	
8,023.00	1.00	247.60	7,942.68	-179.42	179.28	803.01	822.78	77.41	426,957.48	594,570.09	
8,112.00	1.20	259.30	8,031.66	-178.95	178.81	801.38	821.08	77.42	426,957.01	594,568.46	
8,201.00	0.80	320.80	8,120.65	-179.26	179.12	800.07	819.87	77.38	426,957.32	594,567.15	
8,291.00	1.10	47.00	8,210.64	-180.33	180.19	800.30	820.34	77.31	426,958.39	594,567.38	
8,380.00	1.30	39.80	8,299.62	-181.69	181.55	801.58	821.88	77.24	426,959.75	594,568.66	
8,469.00	1.20	30.50	8,388.60	-183.27	183.13	802.69	823.32	77.15	426,961.33	594,569.77	
8,558.00	1.00	19.60	8,477.58	-184.81	184.67	803.43	824.38	77.06	426,962.87	594,570.51	
8,648.00	1.00	329.20	8,567.57	-186.22	186.08	803.29	824.56	76.96	426,964.28	594,570.37	
8,737.00	0.80	304.10	8,656.56	-187.24	187.10	802.38	823.90	76.87	426,965.30	594,569.46	
8,826.00	0.30	295.70	8,745.56	-187.69	187.55	801.65	823.30	76.83	426,965.75	594,568.73	
8,916.00	0.50	185.20	8,835.56	-187.40	187.26	801.40	822.99	76.85	426,965.46	594,568.48	
9,005.00	0.80	198.60	8,924.55	-186.42	186.28	801.17	822.54	76.91	426,964.48	594,568.25	
9,095.00	1.20	196.50	9,014.54	-184.92	184.78	800.70	821.75	77.01	426,962.98	594,567.78	
9,180.00	1.50	200.50	9,099.51	-183.03	182.89	800.06	820.70	77.12	426,961.09	594,567.14	
9,269.00	1.50	216.20	9,188.48	-180.99	180.86	798.96	819.18	77.25	426,959.06	594,566.04	
9,285.35	2.30	196.66	9,204.82	-180.51	180.37	798.74	818.86	77.28	426,958.57	594,565.82	
[SweetTeaWXY#3H]KOP											
9,358.00	6.60	176.90	9,277.24	-174.94	174.80	798.55	817.46	77.65	426,953.00	594,565.63	

Company: Marathon Oil
Project: Eddy County, NM
Site: Sweet Tea State 24-29-31 (2-3-4-5-6)
Well: WXY #3H
Wellbore: OH
Design: OH 200'-17191' PTB 17244'

Local Co-ordinate Reference:
TVD Reference:
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Database:

Well WXY #3H
 Well @ 2946.00usft (GL: 2921' + KB; 25' (Prec594))
 Well @ 2946.00usft (GL: 2921' + KB; 25' (Prec594))
 Grid
 Minimum Curvature
 WellPlanner1

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)	
9,447.00	11.90	175.00	9,365.05	-160.68	160.54	799.63	815.59	78.65	426,938.74	594,566.71	
9,536.00	22.70	165.90	9,449.91	-134.81	134.67	804.63	815.82	80.50	426,912.87	594,571.71	
9,626.00	30.20	170.40	9,530.44	-95.59	95.45	812.65	818.23	83.30	426,873.65	594,579.73	
9,715.00	37.90	171.10	9,604.13	-46.44	46.29	820.62	821.93	86.77	426,824.49	594,587.70	
9,804.00	50.90	170.90	9,667.58	14.93	-15.08	830.35	830.49	91.04	426,763.12	594,597.43	
9,893.00	61.20	178.10	9,717.26	88.27	-88.41	837.13	841.79	96.03	426,689.79	594,604.21	
9,983.00	70.20	179.90	9,754.26	170.19	-170.34	838.52	855.64	101.48	426,607.86	594,605.60	
10,072.00	81.10	174.20	9,776.31	256.13	-256.27	843.05	881.14	106.91	426,521.93	594,610.13	
10,095.00	84.60	173.80	9,779.17	278.82	-278.97	845.44	890.27	108.26	426,499.23	594,612.52	
10,150.00	87.40	175.60	9,783.00	333.44	-333.59	850.50	913.58	111.42	426,444.61	594,617.58	
10,195.00	89.00	181.10	9,784.42	378.38	-378.53	851.80	932.12	113.96	426,399.67	594,618.88	
10,244.00	88.30	181.00	9,785.57	427.36	-427.51	850.90	952.25	116.68	426,350.69	594,617.98	
10,338.00	92.60	181.00	9,784.84	521.32	-521.47	849.26	996.58	121.55	426,256.73	594,616.34	
10,432.00	88.70	181.10	9,783.77	615.28	-615.43	847.54	1,047.41	125.98	426,162.77	594,614.62	
10,528.00	91.60	182.00	9,783.52	711.23	-711.38	844.94	1,104.53	130.10	426,066.82	594,612.02	
10,622.00	89.70	181.30	9,782.45	805.18	-805.33	842.23	1,165.30	133.72	425,972.87	594,609.31	
10,716.00	90.60	181.80	9,782.21	899.15	-899.30	839.69	1,230.37	136.96	425,878.90	594,606.77	
10,811.00	88.70	180.60	9,782.79	994.12	-994.27	837.70	1,300.12	139.88	425,783.93	594,604.78	
10,906.00	89.90	181.90	9,783.95	1,089.09	-1,089.23	835.63	1,372.85	142.51	425,688.97	594,602.71	
11,001.00	90.90	183.50	9,783.28	1,183.98	-1,184.12	831.15	1,446.71	144.93	425,594.08	594,598.23	
11,095.00	90.80	184.10	9,781.89	1,277.76	-1,277.90	824.92	1,521.03	147.16	425,500.30	594,592.00	
11,190.00	89.00	181.60	9,782.05	1,372.63	-1,372.77	820.20	1,599.14	149.14	425,405.43	594,587.28	
11,284.00	88.90	182.10	9,783.78	1,466.57	-1,466.71	817.17	1,678.99	150.88	425,311.49	594,584.25	
11,378.00	90.20	184.20	9,784.52	1,560.42	-1,560.56	812.00	1,759.17	152.51	425,217.64	594,579.08	
11,448.00	89.10	182.80	9,784.94	1,630.28	-1,630.42	807.73	1,819.53	153.65	425,147.78	594,574.81	
11,542.00	87.90	180.80	9,787.40	1,724.20	-1,724.34	804.78	1,902.89	154.98	425,053.86	594,571.86	
11,636.00	91.10	180.50	9,788.22	1,818.18	-1,818.32	803.71	1,988.02	156.15	424,959.88	594,570.79	

Company: Marathon Oil
Project: Eddy County, NM
Site: Sweet Tea State 24-29-31 (2-3-4-5-6)
Well: WXY #3H
Wellbore: OH
Design: OH 200'-17191' PTB 17244'

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Well WXY #3H
 Well @ 2946.00usft (GL: 2921' + KB; 25' (Prec594))
 Well @ 2946.00usft (GL: 2921' + KB; 25' (Prec594))
 Grid
 Minimum Curvature
 WellPlanner1

Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
11,730.00	89.40	179.90	9,787.81	1,912.17	-1,912.31	803.38	2,074.21	157.21	424,865.89	594,570.46
11,824.00	91.80	180.50	9,786.83	2,006.16	-2,006.30	803.06	2,161.05	158.19	424,771.90	594,570.14
11,918.00	90.10	180.60	9,785.27	2,100.14	-2,100.28	802.15	2,248.25	159.10	424,677.92	594,569.23
12,013.00	88.80	181.10	9,786.18	2,195.12	-2,195.26	800.74	2,336.74	159.96	424,582.94	594,567.82
12,107.00	88.80	180.50	9,788.15	2,289.09	-2,289.23	799.43	2,424.80	160.75	424,488.97	594,566.51
12,202.00	91.00	180.50	9,788.32	2,384.08	-2,384.22	798.60	2,514.41	161.48	424,393.98	594,565.68
12,296.00	92.70	178.40	9,785.28	2,478.02	-2,478.16	799.50	2,603.93	162.12	424,300.04	594,566.58
12,391.00	92.50	178.70	9,780.97	2,572.89	-2,573.03	801.91	2,695.09	162.69	424,205.17	594,568.99
12,485.00	92.30	178.40	9,777.04	2,666.78	-2,666.92	804.28	2,785.55	163.22	424,111.28	594,571.36
12,578.00	91.70	178.40	9,773.79	2,759.68	-2,759.82	806.88	2,875.36	163.70	424,018.38	594,573.96
12,672.00	91.00	178.10	9,771.58	2,853.61	-2,853.75	809.75	2,966.41	164.16	423,924.45	594,576.83
12,767.00	89.70	178.60	9,771.00	2,948.57	-2,948.71	812.48	3,058.60	164.60	423,829.49	594,579.56
12,862.00	89.30	179.80	9,771.83	3,043.55	-3,043.69	813.81	3,150.61	165.03	423,734.51	594,580.89
12,956.00	90.00	180.50	9,772.40	3,137.55	-3,137.69	813.56	3,241.45	165.46	423,640.51	594,580.64
13,051.00	88.80	181.00	9,773.39	3,232.53	-3,232.68	812.32	3,333.17	165.89	423,545.52	594,579.40
13,145.00	88.00	181.20	9,776.02	3,326.48	-3,326.62	810.52	3,423.94	166.31	423,451.58	594,577.60
13,240.00	86.30	180.20	9,780.74	3,421.35	-3,421.49	809.36	3,515.92	166.69	423,356.71	594,576.44
13,334.00	88.20	179.10	9,785.25	3,515.23	-3,515.38	809.93	3,607.47	167.03	423,262.82	594,577.01
13,429.00	92.70	179.20	9,784.51	3,610.20	-3,610.34	811.34	3,700.38	167.33	423,167.86	594,578.42
13,523.00	93.00	179.30	9,779.83	3,704.07	-3,704.21	812.57	3,792.29	167.63	423,073.99	594,579.65
13,619.00	90.30	178.40	9,777.07	3,800.00	-3,800.14	814.49	3,886.45	167.90	422,978.06	594,581.57
13,713.00	90.10	177.90	9,776.74	3,893.95	-3,894.09	817.53	3,978.99	168.14	422,884.11	594,584.61
13,807.00	90.10	177.30	9,776.58	3,987.87	-3,988.01	821.46	4,071.74	168.36	422,790.19	594,588.54
13,902.00	90.80	176.10	9,775.83	4,082.70	-4,082.85	826.93	4,165.75	168.55	422,695.35	594,594.01
13,996.00	90.20	178.10	9,775.01	4,176.57	-4,176.72	831.69	4,258.72	168.74	422,601.48	594,598.77
14,091.00	89.70	178.50	9,775.09	4,271.53	-4,271.68	834.51	4,352.43	168.95	422,506.52	594,601.59
14,185.00	88.60	178.70	9,776.49	4,365.49	-4,365.64	836.80	4,445.11	169.15	422,412.56	594,603.88



Professional Directional Survey Report



Company: Marathon Oil
Project: Eddy County, NM
Site: Sweet Tea State 24-29-31 (2-3-4-5-6)
Well: WXY #3H
Wellbore: OH
Design: OH 200'-17191' PTB 17244'

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Well WXY #3H
 Well @ 2946.00usft (GL: 2921' + KB; 25' (Prec594))
 Well @ 2946.00usft (GL: 2921' + KB; 25' (Prec594))
 Grid
 Minimum Curvature
 WellPlanner1

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)	
14,280.00	90.80	181.60	9,776.98	4,460.47	-4,460.62	836.55	4,538.39	169.38	422,317.58	594,603.63	
14,374.00	89.00	180.90	9,777.15	4,554.45	-4,554.59	834.50	4,630.41	169.62	422,223.61	594,601.58	
14,489.00	94.60	181.10	9,773.54	4,669.33	-4,669.47	832.50	4,743.10	169.89	422,108.73	594,599.58	
14,584.00	92.50	179.80	9,767.66	4,764.14	-4,764.28	831.76	4,836.34	170.10	422,013.92	594,598.84	
14,679.00	89.70	180.30	9,765.83	4,859.11	-4,859.25	831.67	4,929.91	170.29	421,918.95	594,598.75	
14,772.00	89.10	180.70	9,766.81	4,952.10	-4,952.24	830.86	5,021.46	170.48	421,825.96	594,597.94	
14,866.00	89.10	180.50	9,768.28	5,046.08	-5,046.23	829.88	5,114.01	170.66	421,731.97	594,596.96	
14,959.00	87.70	180.10	9,770.88	5,139.04	-5,139.19	829.39	5,205.68	170.83	421,639.01	594,596.47	
15,054.00	86.10	180.00	9,776.02	5,233.90	-5,234.05	829.31	5,299.34	171.00	421,544.15	594,596.39	
15,148.00	87.10	179.80	9,781.59	5,327.73	-5,327.88	829.47	5,392.06	171.15	421,450.32	594,596.55	
15,242.00	88.60	179.80	9,785.12	5,421.66	-5,421.81	829.80	5,484.94	171.30	421,356.39	594,596.88	
15,336.00	89.60	179.70	9,786.59	5,515.65	-5,515.80	830.21	5,577.92	171.44	421,262.40	594,597.29	
15,429.00	88.70	179.60	9,787.97	5,608.64	-5,608.78	830.78	5,669.98	171.57	421,169.42	594,597.86	
15,523.00	91.50	181.30	9,787.81	5,702.62	-5,702.77	830.04	5,762.86	171.72	421,075.43	594,597.12	
15,617.00	91.00	181.30	9,785.76	5,796.57	-5,796.72	827.91	5,855.54	171.87	420,981.48	594,594.99	
15,711.00	90.40	181.30	9,784.61	5,890.54	-5,890.69	825.77	5,948.29	172.02	420,887.51	594,592.85	
15,805.00	89.70	181.30	9,784.53	5,984.52	-5,984.66	823.64	6,041.07	172.16	420,793.54	594,590.72	
15,900.00	89.30	181.30	9,785.36	6,079.49	-6,079.63	821.49	6,134.88	172.30	420,698.57	594,588.57	
15,994.00	88.30	180.50	9,787.33	6,173.46	-6,173.60	820.01	6,227.82	172.43	420,604.60	594,587.09	
16,088.00	90.90	180.80	9,787.98	6,267.44	-6,267.58	818.94	6,320.86	172.56	420,510.62	594,586.02	
16,183.00	90.20	180.50	9,787.07	6,362.43	-6,362.57	817.87	6,414.92	172.68	420,415.63	594,584.95	
16,277.00	91.40	181.10	9,785.76	6,456.41	-6,456.55	816.55	6,507.98	172.79	420,321.65	594,583.63	
16,372.00	90.70	181.10	9,784.02	6,551.38	-6,551.52	814.73	6,601.98	172.91	420,226.68	594,581.81	
16,467.00	88.30	180.20	9,784.85	6,646.36	-6,646.50	813.65	6,696.12	173.02	420,131.70	594,580.73	
16,561.00	91.30	180.40	9,785.17	6,740.35	-6,740.49	813.16	6,789.36	173.12	420,037.71	594,580.24	
16,656.00	90.90	180.20	9,783.35	6,835.33	-6,835.47	812.66	6,883.61	173.22	419,942.73	594,579.74	
16,750.00	90.00	179.90	9,782.61	6,929.32	-6,929.46	812.58	6,976.95	173.31	419,848.74	594,579.66	

Company: Marathon Oil
Project: Eddy County, NM
Site: Sweet Tea State 24-29-31 (2-3-4-5-6)
Well: WXY #3H
Wellbore: OH
Design: OH 200'-17191' PTB 17244'

Local Co-ordinate Reference: Well WXY #3H
TVD Reference: Well @ 2946.00usft (GL: 2921' + KB; 25' (Prec594))
MD Reference: Well @ 2946.00usft (GL: 2921' + KB; 25' (Prec594))
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)		TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
16,844.00	89.10	179.30		9,783.35	7,023.32	-7,023.46	813.24	7,070.38	173.40	419,754.74	594,580.32
16,938.00	88.50	179.10		9,785.32	7,117.29	-7,117.43	814.55	7,163.89	173.47	419,660.77	594,581.63
17,032.00	88.30	179.30		9,787.94	7,211.24	-7,211.38	815.86	7,257.39	173.55	419,566.82	594,582.94
17,127.00	87.60	178.80		9,791.34	7,306.16	-7,306.31	817.44	7,351.89	173.62	419,471.89	594,584.52
17,191.00	86.40	178.70		9,794.69	7,370.06	-7,370.20	818.83	7,415.55	173.66	419,408.00	594,585.91
Last Survey: 17191' MD, 9795' TVD - [SweetTeaWXY#3H]LTP/BHL											
17,244.00	86.40	178.70		9,798.02	7,422.94	-7,423.09	820.03	7,468.24	173.70	419,355.11	594,587.11
PTB: 17244' MD, 9798' TVD											

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
17,191.00	9,794.69	-7,370.20	818.83	Last Survey: 17191' MD, 9795' TVD	
17,244.00	9,798.02	-7,423.09	820.03	PTB: 17244' MD, 9798' TVD	

Marathon Oil Corporation

Marathon Oil
Eddy County, NM
Sweet Tea State 24-29-31 (2-3-4-5-6)
WXY #3H
Plan #1
GL: 2921' + KB; 25' (Prec594)

US State Plane 1927 (Exact solution)
NAD 1927 (NADCON CONUS)
Clarke 1866
New Mexico East 3001
Mean Sea Level

RKB Elevation: Well @ 2946.00usft (GL: 2921' + KB; 25' (Prec594))

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	426778.20	593787.08	32.172967	-104.030284	

SECTION DETAILS

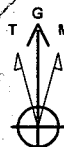
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	Vsect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	1500.00	0.00	0.00	1500.00	0.00	0.00	0.00	0.00
3	2000.00	10.00	76.43	1997.47	10.21	42.31	2.00	-10.22
4	6332.89	10.00	76.43	6264.53	186.79	773.69	0.00	-186.92
5	6832.89	0.00	0.00	6761.99	197.00	816.00	2.00	-197.14
6	9276.94	0.00	0.00	9206.04	197.00	816.00	0.00	-197.14
7	10176.94	90.00	180.01	9779.00	-375.96	815.93	10.00	-375.32
8	17179.78	90.00	180.01	9779.00	-7378.80	815.14	0.00	7378.66
9	17224.78	90.00	180.01	9779.00	-7423.80	815.13	0.00	7423.66

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
[SweetTeaWXY#3H]FTP	0.00	-62.52	816.02	426715.68	594583.10
[SweetTeaWXY#3H]KOP	9206.04	197.00	816.00	426975.20	594583.08
[SweetTeaWXY#3H]LTP/BHL	9779.00	7378.80	815.14	419399.40	594582.22



PRO DIRECTIONAL



Azimuths to Grid North
True North: -0.16°
Magnetic North: 6.96°

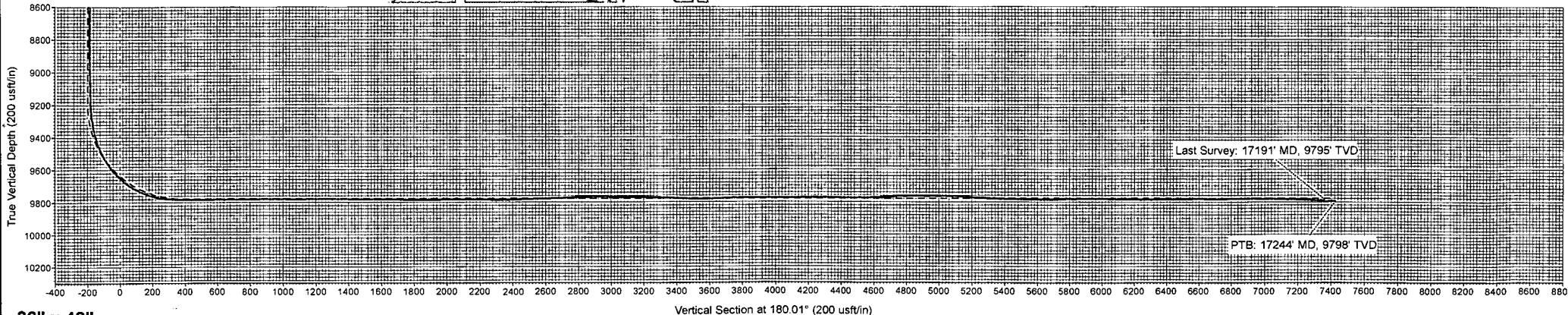
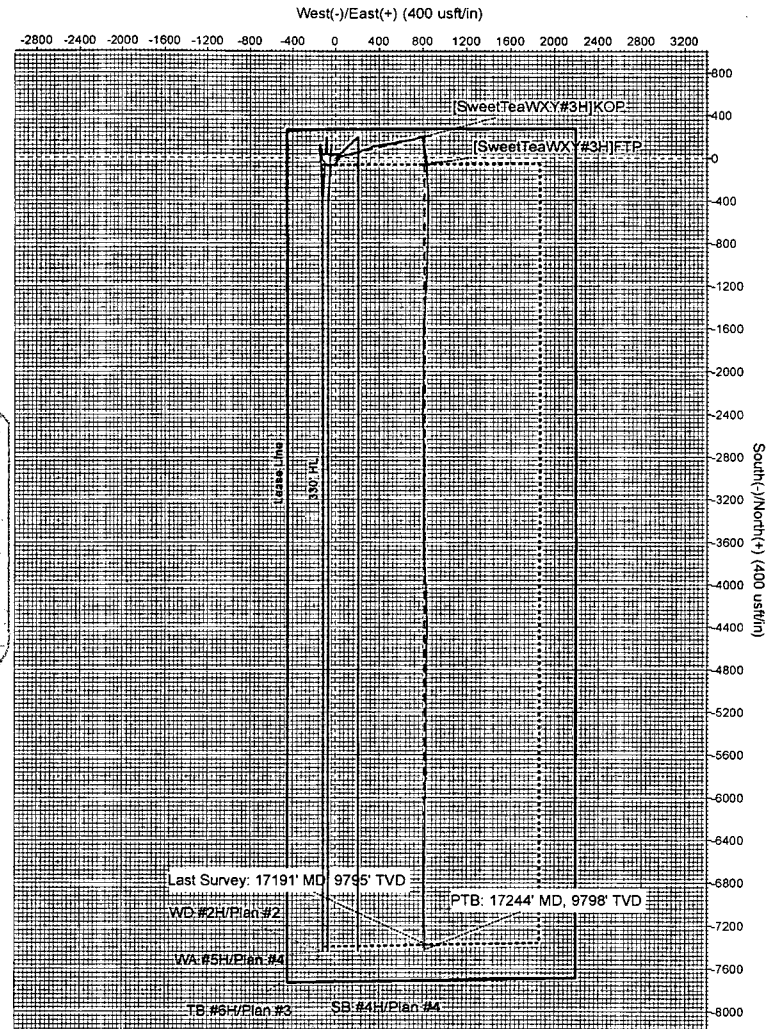
Magnetic Field
Strength: 47996.2nT
Dip Angle: 59.86°
Date: 5/20/2018
Model: HDGM

Azimuth Corrections

Total Magnetic Corr. (M to G): 6.96°

Declination (M to T): 7.12° East

Target Line: 9779' TVD @ 0° VS: 90° INC



36" x 48"