



20-015-46174

Marathon Oil

Eddy County, NM

Rick Deckard State 25-28-4 (2-6-8-9)

WXY #6H

OH

Design: OH 513'-14189' PTB 14257'

Survey Report

01 May, 2019



PRODIRECTIONAL
RECEIVED

AUG 21 2019

DISTRICT 1-ARTESIA O.C.D.

Company:	Marathon Oil	Local Co-ordinate Reference:	Well WXY #6H
Project:	Eddy County, NM	TVD Reference:	Well @ 3024.00usft (GL: 2999' + KB: 25' (PD594))
Site:	Rick Deckard State 25-28-4 (2-6-8-9)	MD Reference:	Well @ 3024.00usft (GL: 2999' + KB: 25' (PD594))
Well:	WXY #6H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH 513'-14189' PTB 14257'	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 Rick Deckard State 25-28-4 (2-6-8-9)					
Site Position:		Northing:		423,513.57 usft	
From:		Easting:		573,687.59 usft	
Position Uncertainty:		Slot Radius:		13-3/16 "	
Map				Latitude:	
				32.164132	
				Longitude:	
				-104.095202	
				Grid Convergence:	
				0.13 °	

Well	WXY #6H					
Well Position	+N/-S	0.00 usft	Northing:	423,513.57 usft	Latitude:	32.164132
	+E/-W	0.00 usft	Easting:	573,687.59 usft	Longitude:	-104.095202
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	2,999.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	4/10/2019	7.12	59.88	47,886.80

Design		OH 513'-14189' PTB 14257'		
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.00	0.00	0.00	180.16

Company:	Marathon Oil	Local Co-ordinate Reference:	Well WXY #6H
Project:	Eddy County, NM	TVD Reference:	Well @ 3024.00usft (GL: 2999' + KB: 25' (PD594))
Site:	Rick Deckard State 25-28-4 (2-6-8-9)	MD Reference:	Well @ 3024.00usft (GL: 2999' + KB: 25' (PD594))
Well:	WXY #6H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH 513'-14189' PTB 14257'	Database:	WellPlanner1

Survey Program		Date	5/1/2019		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
95.00	410.00	Survey #1 (OH)	MWD - OWSG	MWD - OWSG	
513.00	14,257.00	Survey #2 (OH)	MWD+HDGM	OWSG MWD + HRGM	

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	423,513.57	573,687.59	
0.20	0.00	340.87	0.20	0.00	0.00	0.00	0.00	340.87	423,513.57	573,687.59	
[RickDeckard#6H]KOP											
3.90	0.02	340.87	3.90	0.00	0.00	0.00	0.00	340.87	423,513.57	573,687.59	
[RickDeckard#6H]FTP											
95.00	0.50	340.87	95.00	-0.39	0.39	-0.14	0.41	340.87	423,513.96	573,687.45	
180.00	0.40	21.87	180.00	-1.02	1.02	-0.15	1.03	351.79	423,514.59	573,687.44	
262.00	0.10	7.87	262.00	-1.35	1.35	-0.03	1.35	358.71	423,514.92	573,687.56	
357.00	0.40	130.87	356.99	-1.22	1.22	0.23	1.24	10.76	423,514.79	573,687.82	
410.00	0.50	89.87	409.99	-1.10	1.10	0.60	1.25	28.76	423,514.67	573,688.19	
513.00	0.10	32.80	512.99	-1.18	1.18	1.10	1.61	43.13	423,514.75	573,688.69	
603.00	0.30	250.80	602.99	-1.17	1.16	0.92	1.48	38.36	423,514.73	573,688.51	
693.00	0.70	268.80	692.99	-1.08	1.07	0.15	1.08	7.88	423,514.64	573,687.74	
786.00	0.90	280.30	785.98	-1.19	1.19	-1.14	1.65	316.36	423,514.76	573,686.45	
877.00	0.90	277.10	876.97	-1.40	1.41	-2.55	2.91	298.93	423,514.98	573,685.04	
969.00	0.80	283.90	968.96	-1.64	1.65	-3.89	4.23	293.02	423,515.22	573,683.70	
1,058.00	0.80	269.90	1,057.95	-1.79	1.80	-5.12	5.42	289.40	423,515.37	573,682.47	
1,148.00	0.70	265.00	1,147.94	-1.73	1.75	-6.29	6.53	285.56	423,515.32	573,681.30	
1,237.00	0.40	273.00	1,236.94	-1.70	1.72	-7.14	7.35	283.55	423,515.29	573,680.45	
1,326.00	0.10	123.80	1,325.94	-1.67	1.69	-7.39	7.58	282.91	423,515.26	573,680.20	
1,415.00	0.10	112.60	1,414.94	-1.60	1.62	-7.25	7.43	282.60	423,515.19	573,680.34	
1,505.00	0.20	97.90	1,504.94	-1.55	1.57	-7.02	7.20	282.59	423,515.14	573,680.57	

Company:	Marathon Oil	Local Co-ordinate Reference:	Well WXY #6H
Project:	Eddy County, NM	TVD Reference:	Well @ 3024.00usft (GL: 2999' + KB: 25' (PD594))
Site:	Rick Deckard State 25-28-4 (2-6-8-9)	MD Reference:	Well @ 3024.00usft (GL: 2999' + KB: 25' (PD594))
Well:	WXY #6H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH 513'-14189' PTB 14257'	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)	
1,594.00	0.60	91.50	1,593.93	-1.52	1.54	-6.40	6.59	283.48	423,515.11	573,681.19	
1,683.00	1.00	91.10	1,682.92	-1.49	1.51	-5.16	5.38	286.29	423,515.08	573,682.43	
1,773.00	2.70	96.90	1,772.87	-1.23	1.24	-2.27	2.59	298.60	423,514.81	573,685.32	
1,862.00	3.60	90.20	1,861.74	-0.98	0.98	2.60	2.78	69.42	423,514.55	573,690.19	
1,951.00	2.10	42.70	1,950.64	-2.18	2.17	6.50	6.85	71.58	423,515.74	573,694.09	
2,040.00	2.70	6.70	2,039.56	-5.47	5.45	7.85	9.56	55.26	423,519.02	573,695.44	
2,130.00	3.40	356.60	2,129.44	-10.24	10.22	7.94	12.94	37.87	423,523.79	573,695.53	
2,219.00	4.00	338.00	2,218.25	-15.75	15.73	6.62	17.07	22.84	423,529.30	573,694.21	
2,308.00	5.10	322.90	2,306.98	-21.77	21.76	3.07	21.98	8.04	423,535.33	573,690.66	
2,397.00	7.80	311.40	2,395.41	-28.90	28.91	-3.84	29.17	352.43	423,542.48	573,683.75	
2,439.00	9.00	307.70	2,436.96	-32.78	32.81	-8.58	33.91	345.34	423,546.38	573,679.01	
2,580.00	10.00	302.50	2,576.02	-46.05	46.13	-27.63	53.77	329.08	423,559.70	573,659.96	
2,669.00	12.50	301.30	2,663.31	-55.17	55.29	-42.38	69.66	322.53	423,568.86	573,645.21	
2,758.00	14.80	301.50	2,749.79	-66.06	66.23	-60.31	89.57	317.68	423,579.80	573,627.28	
2,848.00	14.60	300.40	2,836.84	-77.75	77.98	-79.89	111.64	314.31	423,591.55	573,607.70	
2,937.00	15.00	296.80	2,922.89	-88.57	88.85	-99.85	133.65	311.66	423,602.42	573,587.74	
3,026.00	15.10	293.50	3,008.84	-98.33	98.66	-120.76	155.94	309.25	423,612.23	573,566.83	
3,115.00	15.70	293.20	3,094.64	-107.63	108.03	-142.46	178.79	307.17	423,621.60	573,545.13	
3,205.00	14.30	292.10	3,181.57	-116.55	117.01	-163.95	201.42	305.51	423,630.58	573,523.64	
3,294.00	12.70	290.60	3,268.11	-124.07	124.59	-183.29	221.63	304.20	423,638.16	573,504.30	
3,383.00	12.50	289.50	3,354.97	-130.68	131.24	-201.53	240.50	303.07	423,644.81	573,486.06	
3,473.00	12.50	287.50	3,442.84	-136.81	137.42	-220.00	259.39	301.99	423,650.99	573,467.59	
3,563.00	12.80	286.20	3,530.65	-142.47	143.13	-238.86	278.46	300.93	423,656.70	573,448.73	
3,652.00	12.70	284.90	3,617.46	-147.68	148.40	-257.78	297.45	299.93	423,661.97	573,429.81	
3,741.00	12.20	288.90	3,704.37	-153.19	153.96	-276.14	316.16	299.14	423,667.53	573,411.45	
3,831.00	11.60	293.30	3,792.43	-159.80	160.62	-293.44	334.53	298.69	423,674.19	573,394.15	
3,920.00	11.70	292.50	3,879.60	-166.75	167.61	-310.00	352.41	298.40	423,681.18	573,377.59	

Company:	Marathon Oil	Local Co-ordinate Reference:	Well WXY #6H
Project:	Eddy County, NM	TVD Reference:	Well @ 3024.00usft (GL: 2999' + KB: 25' (PD594))
Site:	Rick Deckard State 25-28-4 (2-6-8-9)	MD Reference:	Well @ 3024.00usft (GL: 2999' + KB: 25' (PD594))
Well:	WXY #6H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH 513'-14189' PTB 14257'	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)	
4,009.00	11.50	291.40	3,966.78	-173.39	174.30	-326.60	370.20	298.09	423,687.87	573,360.99	
4,098.00	12.00	295.40	4,053.92	-180.55	181.51	-343.21	388.26	297.87	423,695.08	573,344.38	
4,187.00	12.40	302.40	4,140.91	-189.59	190.60	-359.64	407.03	297.92	423,704.17	573,327.95	
4,277.00	12.80	301.40	4,228.75	-199.92	200.97	-376.31	426.61	298.10	423,714.54	573,311.28	
4,366.00	13.20	300.60	4,315.46	-210.18	211.28	-393.47	446.61	298.23	423,724.85	573,294.12	
4,456.00	13.60	299.90	4,403.01	-220.64	221.79	-411.49	467.45	298.32	423,735.36	573,276.10	
4,545.00	12.90	301.80	4,489.64	-231.04	232.24	-429.00	487.83	298.43	423,745.81	573,258.59	
4,635.00	11.80	304.80	4,577.56	-241.54	242.78	-445.10	507.01	298.61	423,756.35	573,242.49	
4,724.00	11.70	303.20	4,664.70	-251.63	252.92	-460.12	525.05	298.80	423,766.49	573,227.47	
4,813.00	11.00	300.70	4,751.96	-260.87	262.20	-474.98	542.54	298.90	423,775.77	573,212.61	
4,902.00	10.70	300.00	4,839.37	-269.29	270.66	-489.43	559.29	298.94	423,784.23	573,198.16	
4,991.00	10.50	297.70	4,926.85	-277.15	278.56	-503.77	575.65	298.94	423,792.13	573,183.82	
5,080.00	10.30	296.50	5,014.39	-284.43	285.88	-518.07	591.71	298.89	423,799.45	573,169.52	
5,170.00	10.80	298.30	5,102.86	-291.98	293.47	-532.69	608.18	298.85	423,807.04	573,154.90	
5,259.00	11.20	300.50	5,190.23	-300.28	301.81	-547.48	625.16	298.87	423,815.38	573,140.11	
5,349.00	11.10	299.60	5,278.53	-308.95	310.53	-562.55	642.56	298.90	423,824.10	573,125.04	
5,438.00	11.00	299.20	5,365.88	-317.29	318.90	-577.41	659.62	298.91	423,832.47	573,110.18	
5,527.00	10.90	298.00	5,453.26	-325.34	326.99	-592.25	676.52	298.90	423,840.56	573,095.34	
5,616.00	11.50	300.70	5,540.56	-333.78	335.47	-607.31	693.80	298.92	423,849.04	573,080.28	
5,706.00	11.30	302.00	5,628.79	-342.99	344.73	-622.50	711.58	298.98	423,858.30	573,065.09	
5,795.00	12.20	303.30	5,715.92	-352.73	354.51	-637.75	729.66	299.07	423,868.08	573,049.84	
5,884.00	13.00	304.50	5,802.78	-363.52	365.34	-653.86	749.01	299.19	423,878.91	573,033.73	
5,974.00	12.50	302.70	5,890.56	-374.46	376.34	-670.40	768.81	299.31	423,889.91	573,017.19	
6,068.00	11.80	302.20	5,982.45	-385.04	386.96	-687.10	788.57	299.39	423,900.53	573,000.49	
6,157.00	12.80	303.80	6,069.41	-395.33	397.29	-702.99	807.49	299.47	423,910.86	572,984.60	
6,247.00	12.50	304.60	6,157.23	-406.36	408.37	-719.29	827.13	299.59	423,921.94	572,968.30	
6,336.00	10.70	304.20	6,244.40	-416.43	418.48	-734.06	844.96	299.69	423,932.05	572,953.53	

Company:	Marathon Oil	Local Co-ordinate Reference:	Well WXY #6H
Project:	Eddy County, NM	TVD Reference:	Well @ 3024.00usft (GL: 2999' + KB: 25' (PD594))
Site:	Rick Deckard State 25-28-4 (2-6-8-9)	MD Reference:	Well @ 3024.00usft (GL: 2999' + KB: 25' (PD594))
Well:	WXY #6H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH 513'-14189' PTB 14257'	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)	
6,425.00	10.60	302.10	6,331.87	-425.38	427.47	-747.82	861.38	299.75	423,941.04	572,939.77	
6,514.00	10.90	301.60	6,419.31	-434.10	436.23	-761.92	877.97	299.79	423,949.80	572,925.67	
6,604.00	9.90	301.80	6,507.83	-442.60	444.77	-775.75	894.21	299.83	423,958.34	572,911.84	
6,693.00	10.90	306.70	6,595.37	-451.63	453.83	-789.00	910.21	299.91	423,967.40	572,898.59	
6,782.00	10.70	306.20	6,682.79	-461.50	463.74	-802.41	926.78	300.02	423,977.31	572,885.18	
6,872.00	12.80	308.70	6,770.90	-472.63	474.91	-816.94	944.95	300.17	423,988.48	572,870.65	
6,961.00	12.50	311.50	6,857.74	-485.13	487.45	-831.84	964.15	300.37	424,001.02	572,855.75	
7,051.00	12.10	312.60	6,945.68	-497.93	500.29	-846.08	982.93	300.60	424,013.86	572,841.51	
7,140.00	11.70	308.40	7,032.76	-509.81	512.21	-860.02	1,001.00	300.78	424,025.78	572,827.57	
7,230.00	12.60	303.30	7,120.75	-520.82	523.27	-875.38	1,019.85	300.87	424,036.84	572,812.21	
7,319.00	12.90	303.40	7,207.56	-531.58	534.07	-891.79	1,039.48	300.92	424,047.64	572,795.80	
7,409.00	13.50	304.10	7,295.18	-542.95	545.49	-908.87	1,060.00	300.97	424,059.06	572,778.72	
7,498.00	12.50	302.20	7,381.90	-553.86	556.45	-925.62	1,080.01	301.01	424,070.02	572,761.97	
7,587.00	11.30	301.50	7,468.98	-563.50	566.14	-941.21	1,098.36	301.03	424,079.71	572,746.38	
7,672.00	11.70	305.00	7,552.28	-572.76	575.43	-955.37	1,115.28	301.06	424,089.00	572,732.22	
7,761.00	11.50	311.80	7,639.46	-583.81	586.52	-969.38	1,133.00	301.18	424,100.09	572,718.21	
7,851.00	9.10	305.40	7,728.01	-593.88	596.62	-981.87	1,148.92	301.28	424,110.19	572,705.72	
7,940.00	10.90	308.70	7,815.65	-603.18	605.96	-994.17	1,164.29	301.36	424,119.53	572,693.42	
8,029.00	13.40	309.00	7,902.65	-614.90	617.72	-1,008.76	1,182.86	301.48	424,131.29	572,678.83	
8,118.00	11.70	306.50	7,989.52	-626.71	629.58	-1,024.03	1,202.08	301.58	424,143.15	572,663.56	
8,208.00	12.60	303.90	8,077.51	-637.57	640.48	-1,039.51	1,220.98	301.64	424,154.05	572,648.08	
8,297.00	12.60	301.70	8,164.36	-648.04	650.99	-1,055.83	1,240.39	301.66	424,164.56	572,631.76	
8,386.00	11.40	296.10	8,251.42	-656.97	659.97	-1,071.99	1,258.85	301.62	424,173.54	572,615.60	
8,476.00	10.40	295.60	8,339.80	-664.35	667.39	-1,087.30	1,275.79	301.54	424,180.96	572,600.29	
8,565.00	9.20	302.60	8,427.50	-671.62	674.69	-1,100.54	1,290.89	301.51	424,188.26	572,587.05	
8,655.00	8.00	304.30	8,516.49	-678.99	682.10	-1,111.78	1,304.34	301.53	424,195.67	572,575.81	
8,747.00	4.80	290.10	8,607.91	-683.90	687.03	-1,120.68	1,314.51	301.51	424,200.60	572,566.91	



Professional Directional Survey Report



Company:	Marathon Oil	Local Co-ordinate Reference:	Well WXY #6H
Project:	Eddy County, NM	TVD Reference:	Well @ 3024.00usft (GL: 2999' + KB: 25' (PD594))
Site:	Rick Deckard State 25-28-4 (2-6-8-9)	MD Reference:	Well @ 3024.00usft (GL: 2999' + KB: 25' (PD594))
Well:	WXY #6H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH 513'-14189' PTB 14257'	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)	
8,838.00	2.30	267.30	8,698.73	-685.11	688.25	-1,126.08	1,319.76	301.43	424,201.82	572,561.51	
8,917.00	4.60	261.80	8,777.58	-684.57	687.73	-1,130.80	1,323.51	301.31	424,201.30	572,556.79	
9,007.00	8.00	266.10	8,867.02	-683.60	686.79	-1,140.63	1,331.43	301.05	424,200.36	572,546.96	
9,096.00	11.50	239.40	8,954.77	-678.62	681.84	-1,154.45	1,340.77	300.57	424,195.41	572,533.14	
9,185.00	21.20	211.60	9,040.19	-660.28	663.55	-1,170.58	1,345.57	299.55	424,177.12	572,517.01	
9,275.00	28.00	207.30	9,121.98	-627.56	630.88	-1,188.82	1,345.85	297.95	424,144.45	572,498.77	
9,364.00	35.80	202.30	9,197.49	-584.78	588.16	-1,208.31	1,343.86	295.95	424,101.73	572,479.28	
9,453.00	43.50	191.70	9,266.04	-530.51	533.93	-1,224.45	1,335.80	293.56	424,047.50	572,463.14	
9,543.00	53.20	188.70	9,325.79	-464.36	467.82	-1,236.21	1,321.76	290.73	423,981.39	572,451.38	
9,632.00	64.10	188.50	9,372.03	-389.29	392.78	-1,247.55	1,307.92	287.48	423,906.35	572,440.04	
9,722.00	72.50	187.00	9,405.27	-306.48	309.99	-1,258.78	1,296.39	283.83	423,823.56	572,428.81	
9,811.00	80.40	187.50	9,426.11	-220.68	224.23	-1,269.70	1,289.35	280.02	423,737.80	572,417.89	
9,901.00	86.20	192.80	9,436.61	-132.73	136.32	-1,285.46	1,292.67	276.05	423,649.89	572,402.13	
9,991.00	87.90	190.50	9,441.25	-44.66	48.30	-1,303.61	1,304.50	272.12	423,561.87	572,383.98	
10,081.00	90.40	186.40	9,442.58	44.37	-40.69	-1,316.83	1,317.46	268.23	423,472.88	572,370.76	
10,170.00	91.10	181.20	9,441.42	133.15	-129.46	-1,322.72	1,329.04	264.41	423,384.11	572,364.87	
10,260.00	91.60	178.60	9,439.29	223.12	-219.42	-1,322.57	1,340.65	260.58	423,294.15	572,365.02	
10,349.00	92.30	178.30	9,436.27	312.02	-308.34	-1,320.16	1,355.69	256.85	423,205.23	572,367.43	
10,439.00	92.40	178.70	9,432.58	401.91	-398.23	-1,317.81	1,376.66	253.19	423,115.34	572,369.78	
10,528.00	92.60	178.10	9,428.69	490.78	-487.11	-1,315.32	1,402.62	249.68	423,026.46	572,372.27	
10,618.00	91.60	179.20	9,425.40	580.69	-577.02	-1,313.21	1,434.39	246.28	422,936.55	572,374.38	
10,708.00	89.70	179.50	9,424.38	670.67	-667.01	-1,312.19	1,471.98	243.05	422,846.56	572,375.40	
10,797.00	90.40	180.00	9,424.30	759.67	-756.01	-1,311.80	1,514.05	240.04	422,757.56	572,375.79	
10,886.00	90.20	179.40	9,423.83	848.66	-845.00	-1,311.33	1,560.01	237.20	422,668.57	572,376.26	
10,976.00	90.90	180.00	9,422.97	938.65	-935.00	-1,310.86	1,610.15	234.50	422,578.57	572,376.73	
11,065.00	90.40	179.80	9,421.96	1,027.65	-1,023.99	-1,310.70	1,663.28	232.00	422,489.58	572,376.89	
11,154.00	90.60	179.80	9,421.18	1,116.64	-1,112.99	-1,310.39	1,719.26	229.66	422,400.58	572,377.20	

Company:	Marathon Oil	Local Co-ordinate Reference:	Well WXY #6H
Project:	Eddy County, NM	TVD Reference:	Well @ 3024.00usft (GL: 2999' + KB: 25' (PD594))
Site:	Rick Deckard State 25-28-4 (2-6-8-9)	MD Reference:	Well @ 3024.00usft (GL: 2999' + KB: 25' (PD594))
Well:	WXY #6H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH 513'-14189' PTB 14257'	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)	
11,243.00	90.90	179.40	9,420.02	1,205.63	-1,201.98	-1,309.77	1,777.71	227.46	422,311.59	572,377.82	
11,332.00	90.30	178.70	9,419.08	1,294.61	-1,290.96	-1,308.30	1,837.99	225.38	422,222.61	572,379.29	
11,422.00	90.90	178.90	9,418.14	1,384.58	-1,380.93	-1,306.41	1,900.97	223.41	422,132.64	572,381.18	
11,511.00	90.70	178.50	9,416.90	1,473.54	-1,469.90	-1,304.39	1,965.21	221.59	422,043.67	572,383.20	
11,601.00	90.10	177.20	9,416.27	1,563.46	-1,559.83	-1,301.02	2,031.19	219.83	421,953.74	572,386.57	
11,690.00	90.20	178.00	9,416.04	1,652.37	-1,648.75	-1,297.29	2,097.94	218.20	421,864.82	572,390.30	
11,779.00	90.20	180.70	9,415.73	1,741.35	-1,737.74	-1,296.28	2,167.97	216.72	421,775.83	572,391.31	
11,868.00	89.90	182.20	9,415.65	1,830.33	-1,826.71	-1,298.53	2,241.22	215.41	421,686.86	572,389.06	
11,957.00	89.90	182.20	9,415.80	1,919.27	-1,915.64	-1,301.95	2,316.19	214.20	421,597.93	572,385.64	
12,046.00	91.50	183.20	9,414.72	2,008.17	-2,004.53	-1,306.14	2,392.52	213.09	421,509.04	572,381.45	
12,136.00	90.50	182.90	9,413.15	2,098.04	-2,094.39	-1,310.93	2,470.83	212.04	421,419.18	572,376.66	
12,225.00	90.60	182.70	9,412.29	2,186.95	-2,183.28	-1,315.28	2,548.86	211.07	421,330.29	572,372.31	
12,314.00	91.20	182.90	9,410.89	2,275.84	-2,272.16	-1,319.62	2,627.57	210.15	421,241.41	572,367.97	
12,404.00	89.30	182.20	9,410.50	2,365.76	-2,362.07	-1,323.63	2,707.65	209.26	421,151.50	572,363.96	
12,493.00	89.60	182.20	9,411.36	2,454.69	-2,451.00	-1,327.04	2,787.19	208.43	421,062.57	572,360.55	
12,582.00	88.80	181.50	9,412.60	2,543.65	-2,539.94	-1,329.92	2,867.05	207.64	420,973.63	572,357.67	
12,671.00	89.40	180.90	9,414.00	2,632.62	-2,628.91	-1,331.78	2,947.00	206.87	420,884.66	572,355.81	
12,761.00	89.10	180.40	9,415.17	2,722.61	-2,718.90	-1,332.80	3,028.00	206.11	420,794.67	572,354.79	
12,850.00	90.10	180.80	9,415.80	2,811.60	-2,807.89	-1,333.73	3,108.55	205.41	420,705.68	572,353.86	
12,940.00	91.30	181.70	9,414.70	2,901.58	-2,897.86	-1,335.70	3,190.87	204.75	420,615.71	572,351.89	
13,029.00	89.50	180.60	9,414.08	2,990.56	-2,986.83	-1,337.48	3,272.62	204.12	420,526.74	572,350.11	
13,118.00	89.40	180.10	9,414.93	3,079.55	-3,075.83	-1,338.03	3,354.25	203.51	420,437.74	572,349.56	
13,207.00	90.50	180.70	9,415.01	3,168.55	-3,164.82	-1,338.65	3,436.29	202.93	420,348.75	572,348.94	
13,296.00	91.40	180.90	9,413.53	3,257.53	-3,253.80	-1,339.89	3,518.88	202.38	420,259.77	572,347.70	
13,385.00	90.50	180.40	9,412.06	3,346.51	-3,342.78	-1,340.90	3,601.69	201.86	420,170.79	572,346.69	
13,475.00	89.40	179.90	9,412.13	3,436.51	-3,432.78	-1,341.13	3,685.46	201.34	420,080.79	572,346.46	
13,564.00	89.80	180.10	9,412.76	3,525.51	-3,521.78	-1,341.13	3,768.50	200.85	419,991.79	572,346.46	

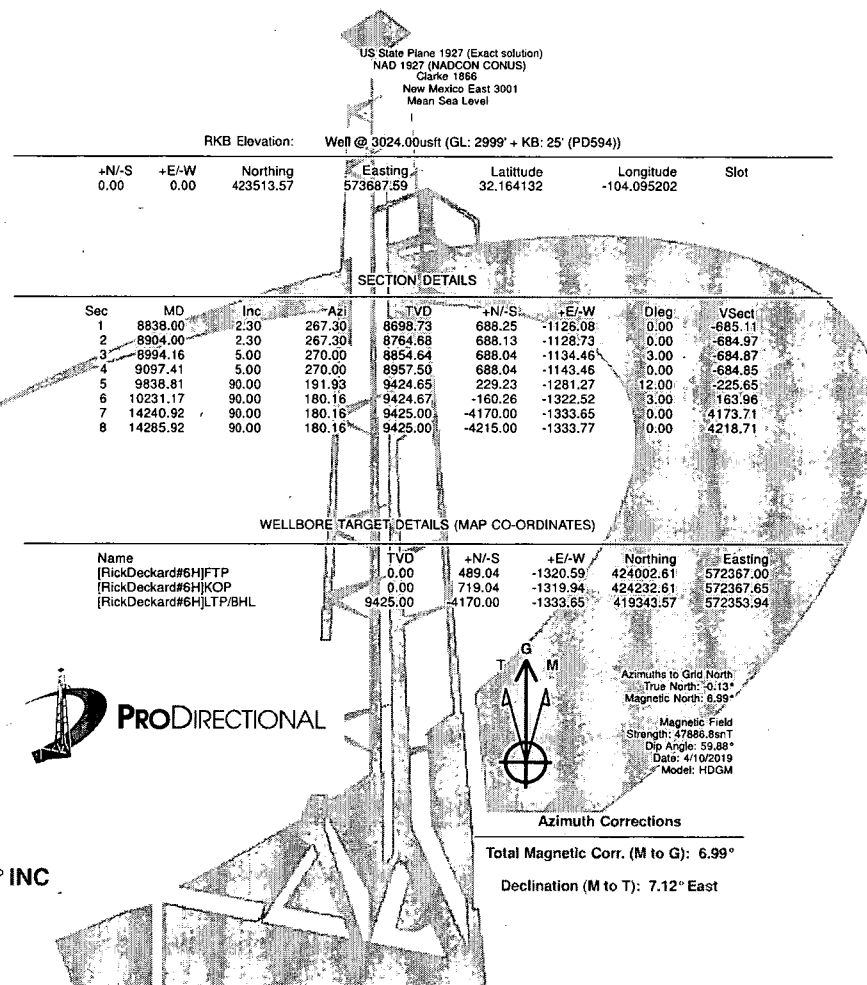
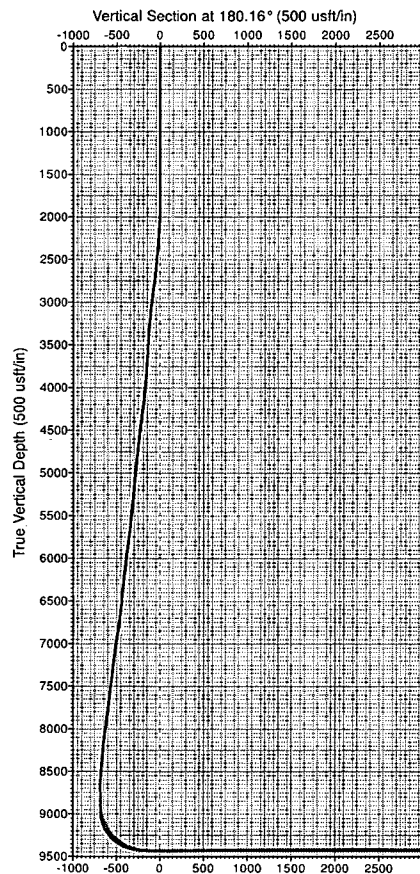
Company:	Marathon Oil	Local Co-ordinate Reference:	Well WXY #6H
Project:	Eddy County, NM	TVD Reference:	Well @ 3024.00usft (GL: 2999' + KB: 25' (PD594))
Site:	Rick Deckard State 25-28-4 (2-6-8-9)	MD Reference:	Well @ 3024.00usft (GL: 2999' + KB: 25' (PD594))
Well:	WXY #6H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH 513'-14189' PTB 14257'	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)
13,653.00	90.80	180.40	9,412.29	3,614.51	-3,610.77	-1,341.52	3,851.93	200.38	419,902.80	572,346.07
13,742.00	91.30	180.50	9,410.66	3,703.49	-3,699.76	-1,342.22	3,935.70	199.94	419,813.81	572,345.37
13,832.00	91.50	181.10	9,408.46	3,793.46	-3,789.72	-1,343.48	4,020.81	199.52	419,723.85	572,344.11
13,921.00	88.70	179.70	9,408.30	3,882.44	-3,878.71	-1,344.10	4,104.99	199.11	419,634.86	572,343.49
14,010.00	88.10	179.40	9,410.79	3,971.40	-3,967.67	-1,343.40	4,188.93	198.71	419,545.90	572,344.19
14,099.00	88.70	179.90	9,413.27	4,060.37	-4,056.63	-1,342.86	4,273.12	198.32	419,456.94	572,344.73
14,189.00	88.80	179.80	9,415.24	4,150.34	-4,146.61	-1,342.62	4,358.56	197.94	419,366.96	572,344.97
Last Survey: 14189'MD, 9415.24'TVD - [RickDeckard#6H]LTP/BHL										
14,257.00	88.80	179.80	9,416.66	4,218.33	-4,214.59	-1,342.38	4,423.21	197.67	419,298.98	572,345.21
PTB: 14257'MD, 9416.66'TVD										

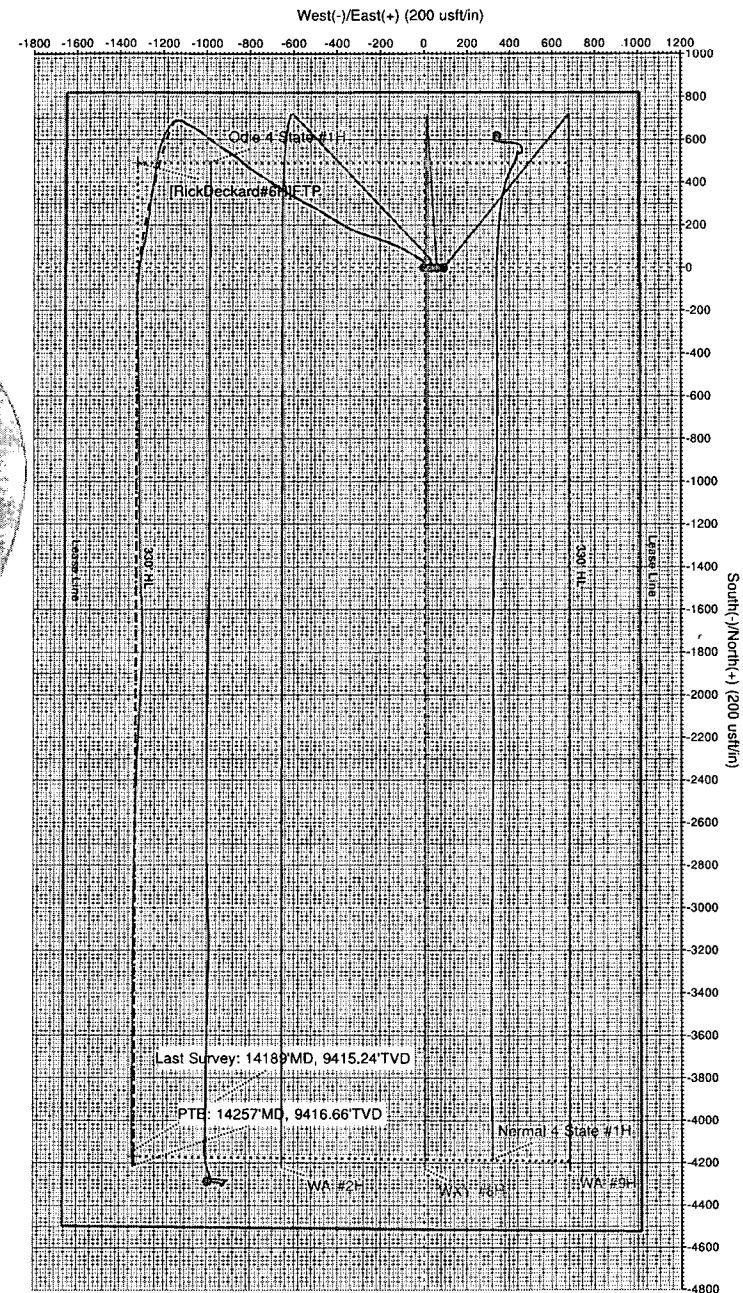
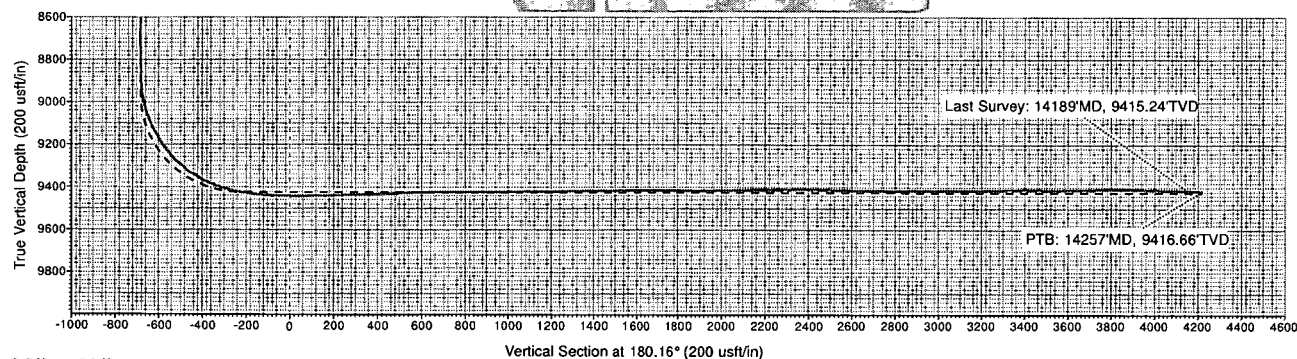
Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
14,189.00	9,415.24	-4,146.61	-1,342.62	Last Survey: 14189'MD, 9415.24'TVD
14,257.00	9,416.66	-4,214.59	-1,342.38	PTB: 14257'MD, 9416.66'TVD

Marathon Oil Corporation

Marathon Oil
Eddy County, NM
Rick Deckard State 25-28-4 (2-6-8-9)
WXY #6H
Plan #4
GL: 2999' + KB: 25' (PD594)



Target Line: 9425' TVD @ 0° VS: 90° INC





Wellbore Schematic

Well Name: RICK DECKARD 25-28-4 WXY STATE 006H

State/Province NEW MEXICO	Prospect Area MALAGA	Field Name PURPLE SAGE	Well Subtype	Lat/Long Datum NAD27	Latitude (°) 32.164132	Longitude (°) -104.095203
Well Configuration Type HORIZONTAL	Well Objective EXPLOITATION	Well Status DRILLING	Ground Elevation (ft) 2,999.00	KB-Ground Distance (ft) 25.00		

HORIZONTAL - RICK DECKARD 25-28-4 WXY STATE 006H, 5/14/2019 10:47:03 AM

MD (ftKB)	TVD (ftKB)	Incl (°)	Vertical schematic (actual)
24.9	24.9	0.1	
25.9	25.9	0.1	
100.1	100.1	0.5	
105.0	105.0	0.5	
150.3	150.3	0.4	
158.8	160.8	0.4	
396.0	396.0	0.5	
415.0	415.0	0.5	
417.7	417.6	0.5	
456.4	456.4	0.3	
458.0	458.0	0.3	
2,446.6	2,446.6	9.1	
2,447.0	2,447.0	9.1	
2,448.6	2,448.6	9.1	
2,497.7	2,494.9	9.4	
2,499.7	2,496.8	9.4	
8,873.7	8,873.7	8.3	
8,884.1	8,884.1	8.7	
9,414.7	9,414.7	88.8	
9,415.6	9,415.6	88.8	
14,207.0	9,415.6	88.8	
14,208.4	9,416.5	88.8	
14,250.7	9,416.5	88.8	

Directions to Well: FROM THE MARATHON OFFICE AT 1111 TIDWELL, CARLSBAD, NM, HEAD SOUTH ON TIDWELL RD TOWARD US HWY 285 NORTH FOR 0.2 MILES TURN LEFT ONTO US HWY 285 SOUTH, HEADING SOUTH, FOR 17.6 MILES TO A CALICHE ROAD. TURN RIGHT ONTO CALICHE ROAD HEADING WEST FOR 2.1 MILES TO THE PROPOSED LEASE ROAD FOR THE RICK DECKARD STATE 25-28-4 WA #2H, WXY 6H, WA 9H AND WXY 8H. WELL PAD LOCATION. TURN LEFT ONTO SAID PROPOSED LEASE ROAD, HEADING SOUTHEAST FOR 47 FEET ENTERING THE NORTHWEST CORNER OF SAID WELL PAD LOCATION.