

Marathon Oil Permian, LLC

Eddy County, NM (NAD27)

Cypress Fee 32-27-9 (5-6-7-8)

No. 5H

30-015-44377

OH

Survey: SDI Survey #1

Standard Survey Report

27 November, 2017



www.scientificdrilling.com

Survey Report

Company:	Marathon Oil Permian, LLC	Local Co-ordinate Reference:	Well No. 5H
Project:	Eddy County, NM (NAD27)	TVD Reference:	KB = 26.5 @ 3189.50usft (H&P 498)
Site:	Cypress Fee 32-27-9 (5-6-7-8)	MD Reference:	KB = 26.5 @ 3189.50usft (H&P 498)
Well:	No. 5H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Midland District

Project: Eddy County, NM (NAD27)			
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		Using geodetic scale factor

Site: Cypress Fee 32-27-9 (5-6-7-8)					
Site Position:		Northing:	479,338.54 usft	Latitude:	32° 19' 3.898 N
From:	Map	Easting:	540,590.90 usft	Longitude:	104° 12' 6.975 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.07 °

Well:	No. 5H					
Well Position	+N/-S	0.00 usft	Northing:	479,338.54 usft	Latitude:	32° 19' 3.898 N
	+E/-W	0.00 usft	Easting:	540,590.90 usft	Longitude:	104° 12' 6.975 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,163.00 usft

Wellbore						OH
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)	
	HDGM	11/2/2017	7.38	60.12	48,066	

Design:		OH			
Audit Notes:					
Version:		1.0	Phase:		ACTUAL
			Tie On Depth:		0.00
Vertical Section:		Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (bearing)
		0.00	0.00	0.00	88.33

Survey Program		Date	11/25/2017		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
204.00	13,587.00	SDI Survey #1 (OH)	MWD+HDGM	OWSG MWD + HDGM	

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
204.00	0.60	49.90	204.00	0.69	0.82	0.84	0.29	0.29	0.00
297.00	1.20	70.30	296.98	1.33	2.11	2.14	0.72	0.65	21.94
389.00	1.50	42.50	388.96	2.54	3.83	3.90	0.77	0.33	-30.22
432.00	1.50	35.30	431.95	3.42	4.53	4.63	0.44	0.00	-16.74
542.00	1.40	8.30	541.91	5.92	5.56	5.73	0.62	-0.09	-24.55
573.00	1.20	6.20	572.90	6.62	5.65	5.84	0.66	-0.65	-6.77
665.00	0.70	44.80	664.89	7.98	6.15	6.38	0.85	-0.54	41.96
758.00	1.50	137.00	757.88	7.49	7.38	7.59	1.81	0.86	99.14
850.00	1.80	149.90	849.84	5.36	8.92	9.08	0.52	0.33	14.02

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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Midland District

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
942.00	1.80	152.00	941.80	2.83	10.33	10.41	0.07	0.00	2.28	
1,066.00	1.80	151.60	1,065.73	-0.60	12.17	12.15	0.01	0.00	-0.32	
1,160.00	2.40	147.10	1,159.67	-3.55	13.94	13.83	0.66	0.64	-4.79	
1,255.00	3.60	143.30	1,254.54	-7.61	16.80	16.57	1.28	1.26	-4.00	
1,349.00	4.80	142.00	1,348.28	-13.08	20.99	20.60	1.28	1.28	-1.38	
1,444.00	4.20	156.50	1,442.99	-19.40	24.82	24.25	1.35	-0.63	15.26	
1,539.00	3.70	180.50	1,537.77	-25.66	26.18	25.42	1.80	-0.53	25.26	
1,634.00	3.50	188.30	1,632.59	-31.59	25.74	24.81	0.56	-0.21	8.21	
1,728.00	3.30	203.70	1,726.42	-36.91	24.24	23.15	0.99	-0.21	16.38	
1,823.00	3.50	216.80	1,821.26	-41.73	21.40	20.17	0.84	0.21	13.79	
1,910.00	3.00	214.70	1,908.12	-45.73	18.51	17.17	0.59	-0.57	-2.41	
2,010.00	2.65	216.39	2,008.00	-49.75	15.65	14.19	0.36	-0.35	1.69	
2,105.00	5.35	212.38	2,102.76	-55.25	11.98	10.36	2.86	2.84	-4.22	
2,199.00	9.12	210.61	2,195.99	-65.37	5.83	3.93	4.02	4.01	-1.88	
2,294.00	11.84	206.71	2,289.40	-80.56	-2.38	-4.73	2.96	2.86	-4.11	
2,388.00	11.96	206.18	2,381.38	-97.91	-11.01	-13.86	0.17	0.13	-0.56	
2,483.00	12.16	207.26	2,474.28	-115.64	-19.94	-23.30	0.32	0.21	1.14	
2,578.00	11.75	205.68	2,567.22	-133.25	-28.71	-32.59	0.55	-0.43	-1.66	
2,672.00	11.12	203.73	2,659.36	-150.18	-36.51	-40.87	0.79	-0.67	-2.07	
2,767.00	10.33	202.36	2,752.70	-166.44	-43.44	-48.27	0.87	-0.83	-1.44	
2,861.00	9.03	199.27	2,845.36	-181.20	-49.08	-54.34	1.49	-1.38	-3.29	
2,956.00	8.64	198.09	2,939.23	-195.02	-53.75	-59.41	0.45	-0.41	-1.24	
3,051.00	10.68	198.56	3,032.88	-210.15	-58.77	-64.87	2.15	2.15	0.49	
3,146.00	10.21	197.43	3,126.30	-226.53	-64.10	-70.67	0.54	-0.49	-1.19	
3,240.00	10.42	196.78	3,218.78	-242.62	-69.05	-76.09	0.26	0.22	-0.69	
3,335.00	10.89	207.78	3,312.15	-258.78	-75.71	-83.22	2.19	0.49	11.58	
3,430.00	10.99	207.87	3,405.43	-274.73	-84.13	-92.10	0.11	0.11	0.09	
3,524.00	10.51	213.37	3,497.78	-289.81	-93.03	-101.44	1.20	-0.51	5.85	
3,619.00	8.75	221.60	3,591.44	-302.45	-102.59	-111.36	2.35	-1.85	8.66	
3,713.00	6.23	222.46	3,684.63	-311.56	-110.79	-119.82	2.68	-2.68	0.91	
3,808.00	6.02	225.38	3,779.09	-318.86	-117.81	-127.05	0.40	-0.22	3.07	
3,903.00	3.57	234.62	3,873.75	-324.07	-123.77	-133.16	2.70	-2.58	9.73	
3,997.00	3.41	233.57	3,967.58	-327.43	-128.40	-137.89	0.18	-0.17	-1.12	
4,092.00	3.15	231.56	4,062.42	-330.73	-132.72	-142.30	0.30	-0.27	-2.12	
4,186.00	2.83	226.47	4,156.30	-333.93	-136.43	-146.10	0.44	-0.34	-5.41	
4,281.00	2.88	230.41	4,251.18	-337.07	-139.97	-149.73	0.21	0.05	4.15	
4,375.00	2.81	225.93	4,345.06	-340.18	-143.44	-153.30	0.25	-0.07	-4.77	
4,470.00	2.87	227.90	4,439.94	-343.39	-146.88	-156.83	0.12	0.06	2.07	
4,565.00	2.64	223.93	4,534.84	-346.56	-150.16	-160.20	0.31	-0.24	-4.18	
4,659.00	2.74	227.11	4,628.73	-349.65	-153.31	-163.44	0.19	0.11	3.38	
4,754.00	2.55	226.43	4,723.63	-352.65	-156.51	-166.72	0.20	-0.20	-0.72	
4,848.00	2.52	222.01	4,817.54	-355.63	-159.40	-169.70	0.21	-0.03	-4.70	
4,943.00	2.56	217.04	4,912.45	-358.87	-162.08	-172.47	0.24	0.04	-5.23	
5,037.00	2.69	215.34	5,006.35	-362.35	-164.62	-175.11	0.16	0.14	-1.81	

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Design:	OH	Database:	Midland District

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5,132.00	1.86	199.32	5,101.27	-365.62	-166.42	-177.00	1.09	-0.87	-16.86
5,227.00	1.69	201.80	5,196.23	-368.38	-167.45	-178.11	0.20	-0.18	2.61
5,321.00	1.20	157.14	5,290.20	-370.57	-167.58	-178.31	1.26	-0.52	-47.51
5,416.00	1.15	139.64	5,385.18	-372.22	-166.58	-177.36	0.38	-0.05	-18.42
5,510.00	0.39	166.29	5,479.17	-373.24	-165.89	-176.70	0.87	-0.81	28.35
5,605.00	0.42	218.06	5,574.17	-373.83	-166.03	-176.85	0.37	0.03	54.49
5,699.00	0.36	227.68	5,668.17	-374.30	-166.46	-177.30	0.09	-0.06	10.23
5,794.00	0.48	217.34	5,763.16	-374.82	-166.92	-177.77	0.15	0.13	-10.88
5,888.00	1.88	208.48	5,857.14	-376.49	-167.90	-178.80	1.50	1.49	-9.43
5,983.00	2.68	204.05	5,952.07	-379.89	-169.54	-180.54	0.86	0.84	-4.66
6,077.00	1.49	155.56	6,046.01	-383.01	-169.93	-181.02	2.16	-1.27	-51.59
6,172.00	1.82	162.43	6,140.97	-385.57	-168.97	-180.13	0.40	0.35	7.23
6,267.00	1.05	66.02	6,235.95	-386.65	-167.72	-178.91	2.32	-0.81	-101.48
6,361.00	1.80	1.98	6,329.92	-384.83	-166.88	-178.02	1.74	0.80	-68.15
6,456.00	1.19	14.83	6,424.89	-382.38	-166.58	-177.65	0.73	-0.64	13.55
6,550.00	0.72	51.92	6,518.88	-381.08	-165.86	-176.90	0.80	-0.50	39.46
6,645.00	0.97	76.93	6,613.87	-380.53	-164.61	-175.63	0.46	0.26	26.33
6,739.00	0.97	80.61	6,707.85	-380.22	-163.05	-174.06	0.07	0.00	3.91
6,834.00	0.81	127.42	6,802.84	-380.49	-161.72	-172.74	0.76	-0.17	49.27
6,928.00	1.04	177.15	6,896.83	-381.75	-161.15	-172.21	0.86	0.24	52.90
7,023.00	0.44	253.97	6,991.83	-382.71	-161.46	-172.54	1.09	-0.63	80.86
7,118.00	1.34	316.54	7,086.82	-382.00	-162.57	-173.64	1.27	0.95	65.86
7,213.00	1.37	320.06	7,181.79	-380.33	-164.07	-175.08	0.09	0.03	3.71
7,307.00	1.11	314.41	7,275.77	-378.83	-165.44	-176.41	0.31	-0.28	-6.01
7,401.00	0.89	289.68	7,369.76	-378.00	-166.62	-177.57	0.60	-0.45	-26.31
7,496.00	0.81	258.72	7,464.75	-377.94	-167.82	-178.76	0.44	0.13	-32.59
7,590.00	1.02	260.08	7,558.74	-378.21	-169.30	-180.25	0.22	0.22	1.45
7,685.00	1.09	256.84	7,653.72	-378.57	-171.01	-181.97	0.10	0.07	-3.41
7,779.00	1.19	216.57	7,747.70	-379.55	-172.46	-183.45	0.84	0.11	-42.84
7,874.00	1.32	232.00	7,842.68	-381.02	-173.91	-184.94	0.38	0.14	16.24
7,969.00	0.89	267.42	7,937.66	-381.73	-175.51	-186.56	0.83	-0.45	37.28
8,063.00	1.23	258.20	8,031.65	-381.97	-177.23	-188.28	0.40	0.36	-9.81
8,158.00	2.10	210.67	8,126.61	-383.67	-179.11	-190.22	1.64	0.92	-50.03
8,253.00	2.93	192.85	8,221.52	-387.54	-180.54	-191.76	1.19	0.87	-18.76
8,427.00	0.99	185.24	8,395.41	-393.37	-181.67	-193.05	1.12	-1.11	-4.37
8,521.00	5.41	86.83	8,489.27	-393.93	-177.31	-188.72	6.00	4.70	-104.69
8,568.00	9.86	80.96	8,535.84	-393.18	-171.12	-182.51	9.60	9.47	-12.49
8,616.00	14.42	77.62	8,582.76	-391.25	-161.22	-172.56	9.61	9.50	-6.96
8,663.00	18.56	73.38	8,627.81	-387.85	-148.33	-159.57	9.17	8.81	-9.02
8,711.00	22.93	74.13	8,672.69	-383.11	-132.01	-143.12	9.12	9.10	1.56
8,758.00	26.01	76.91	8,715.47	-378.27	-113.16	-124.14	6.99	6.55	5.91
8,805.00	26.97	78.18	8,757.53	-373.75	-92.69	-103.54	2.37	2.04	2.70
8,854.00	31.80	78.57	8,800.26	-368.93	-69.22	-79.94	9.46	9.45	0.80

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8,900.00	37.18	79.46	8,838.20	-364.00	-43.72	-54.31	12.18	12.13	1.93	
8,931.00	41.69	80.02	8,862.14	-360.49	-24.35	-34.84	14.59	14.55	1.81	
8,963.00	45.89	82.26	8,885.24	-357.10	-2.47	-12.88	13.99	13.13	7.00	
8,994.00	49.87	84.49	8,906.02	-354.46	20.36	10.02	13.90	12.84	7.19	
9,054.80	56.18	86.65	8,942.57	-350.75	68.76	58.51	10.77	10.39	3.55	
FTP[CF#5H]										
9,084.00	59.23	87.57	8,958.17	-349.51	93.41	83.19	10.77	10.43	3.16	
9,131.00	63.58	89.13	8,980.66	-348.33	134.65	124.44	9.70	9.26	3.32	
9,179.00	66.27	88.66	9,001.01	-347.49	178.12	167.91	5.67	5.60	-0.98	
9,201.00	66.61	88.25	9,009.80	-346.95	198.27	188.08	2.30	1.55	-1.86	
9,232.00	68.06	88.08	9,021.74	-346.03	226.86	216.68	4.70	4.68	-0.55	
9,260.00	72.73	88.55	9,031.14	-345.26	253.22	243.05	16.75	16.68	1.68	
9,295.00	76.79	90.14	9,040.34	-344.88	286.98	276.81	12.40	11.60	4.54	
9,327.00	79.34	90.94	9,046.95	-345.17	318.29	308.09	8.34	7.97	2.50	
9,359.00	83.99	91.56	9,051.59	-345.86	349.93	339.70	14.66	14.53	1.94	
9,390.00	87.59	91.39	9,053.87	-346.66	380.83	370.57	11.63	11.61	-0.55	
9,422.00	89.70	91.57	9,054.62	-347.49	412.81	402.51	6.62	6.59	0.56	
9,485.00	90.07	91.14	9,054.75	-348.98	475.79	465.42	0.90	0.59	-0.68	
9,579.00	87.88	90.08	9,056.43	-349.98	569.77	559.32	2.59	-2.33	-1.13	
9,673.00	89.03	89.57	9,058.96	-349.69	663.73	653.26	1.34	1.22	-0.54	
9,768.00	89.50	89.37	9,060.18	-348.81	758.72	748.23	0.54	0.49	-0.21	
9,862.00	88.56	88.11	9,061.77	-346.74	852.68	842.21	1.67	-1.00	-1.34	
9,956.00	86.23	87.60	9,066.05	-343.23	946.51	936.10	2.54	-2.48	-0.54	
10,051.00	89.33	86.95	9,069.73	-338.72	1,041.32	1,031.00	3.33	3.26	-0.68	
10,144.00	90.40	86.64	9,069.95	-333.52	1,134.17	1,123.97	1.20	1.15	-0.33	
10,238.00	91.88	87.24	9,068.08	-328.50	1,228.01	1,217.92	1.70	1.57	0.64	
10,333.00	91.48	87.38	9,065.29	-324.04	1,322.87	1,312.86	0.45	-0.42	0.15	
10,426.00	89.53	86.17	9,064.47	-318.81	1,415.71	1,405.82	2.47	-2.10	-1.30	
10,521.00	91.18	87.13	9,063.88	-313.26	1,510.54	1,500.77	2.01	1.74	1.01	
10,615.00	89.26	86.31	9,063.52	-307.88	1,604.38	1,594.73	2.22	-2.04	-0.87	
10,709.00	87.92	86.93	9,065.83	-302.34	1,698.19	1,688.66	1.57	-1.43	0.66	
10,803.00	88.82	87.72	9,068.51	-297.96	1,792.05	1,782.60	1.27	0.96	0.84	
10,896.00	89.76	88.53	9,069.66	-294.92	1,884.99	1,875.59	1.33	1.01	0.87	
10,990.00	91.61	86.83	9,068.54	-291.11	1,978.90	1,969.57	2.67	1.97	-1.81	
11,084.00	92.55	86.37	9,065.12	-285.54	2,072.67	2,063.47	1.11	1.00	-0.49	
11,178.00	91.07	89.87	9,062.15	-282.46	2,166.55	2,157.40	4.04	-1.57	3.72	
11,273.00	89.29	90.72	9,061.86	-282.95	2,261.55	2,252.34	2.08	-1.87	0.89	
11,367.00	88.56	90.25	9,063.62	-283.74	2,355.53	2,346.26	0.92	-0.78	-0.50	
11,461.00	87.71	89.66	9,066.68	-283.67	2,449.47	2,440.17	1.10	-0.90	-0.63	
11,555.00	89.50	88.89	9,068.97	-282.48	2,543.43	2,534.12	2.07	1.90	-0.82	
11,649.00	87.58	89.09	9,071.36	-280.82	2,637.39	2,628.08	2.05	-2.04	0.21	
11,742.00	89.36	87.90	9,073.85	-278.38	2,730.31	2,721.04	2.30	1.91	-1.28	
11,837.00	89.87	88.51	9,074.48	-275.41	2,825.26	2,816.04	0.84	0.54	0.64	
11,931.00	89.43	88.54	9,075.06	-272.99	2,919.23	2,910.04	0.47	-0.47	0.03	

Survey Report

Company:	Marathon Oil Permian, LLC	Local Co-ordinate Reference:	Well No. 5H
Project:	Eddy County, NM (NAD27)	TVD Reference:	KB = 26.5 @ 3189.50usft (H&P 498)
Site:	Cypress Fee 32-27-9 (5-6-7-8)	MD Reference:	KB = 26.5 @ 3189.50usft (H&P 498)
Well:	No. 5H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Midland District

Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/S (usft)	+E/W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,025.00	88.86	88.13	9,076.38	-270.26	3,013.18	3,004.03	0.66	-0.50	-0.44
12,119.00	85.56	87.28	9,080.87	-266.50	3,106.99	3,097.90	3.73	-3.62	-0.90
12,212.00	87.35	87.41	9,086.62	-262.20	3,199.70	3,190.70	1.93	1.92	0.14
12,306.00	89.73	87.18	9,089.02	-257.76	3,293.56	3,284.65	2.54	2.53	-0.24
12,401.00	92.35	90.30	9,087.29	-255.68	3,388.50	3,379.61	4.29	2.76	3.28
12,495.00	92.49	90.69	9,083.32	-256.49	3,482.42	3,473.46	0.44	0.15	0.41
12,589.00	91.48	90.22	9,080.07	-257.23	3,576.35	3,567.34	1.18	-1.07	-0.50
12,684.00	89.19	90.75	9,079.51	-258.04	3,671.34	3,662.26	2.47	-2.41	0.56
12,779.00	90.50	91.73	9,079.77	-260.09	3,766.32	3,757.14	1.72	1.38	1.03
12,873.00	88.86	91.28	9,080.29	-262.56	3,860.28	3,850.99	1.81	-1.74	-0.48
12,968.00	89.23	91.73	9,081.88	-265.06	3,955.23	3,945.83	0.61	0.39	0.47
13,062.00	87.62	89.87	9,084.46	-266.37	4,049.18	4,039.70	2.62	-1.71	-1.98
13,156.00	88.05	88.28	9,088.01	-264.85	4,143.10	4,133.62	1.75	0.46	-1.69
13,251.00	86.94	85.88	9,092.16	-260.02	4,237.88	4,228.50	2.78	-1.17	-2.53
13,345.00	87.18	86.39	9,096.99	-253.69	4,331.54	4,322.31	0.60	0.26	0.54
13,440.00	87.85	86.38	9,101.11	-247.71	4,426.26	4,417.16	0.71	0.71	-0.01
13,524.00	91.95	87.58	9,101.25	-243.28	4,510.12	4,501.12	5.09	4.88	1.43
FINAL MWD Survey (13524.00' MD)									
13,587.00	91.95	87.58	9,099.11	-240.62	4,573.03	4,564.08	0.00	0.00	0.00
FINAL Proj. to Bit (13587.00' MD) - BHL[CF#5H]									

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/S (usft)	+E/W (usft)	
13,524.00	9,101.25	-243.28	4,510.12	FINAL MWD Survey (13524.00' MD)
13,587.00	9,099.11	-240.62	4,573.03	FINAL Proj. to Bit (13587.00' MD)

Checked By: _____ Approved By: _____ Date: _____

Marathon Oil Corporation

EDDY COUNTY, NM (NAD27)
CYPRESS FEE 32-27-9 (5-6-7-8)
NO. 5H
OH
FINAL AS-DRILLED
H&P 498

WELL DETAILS:

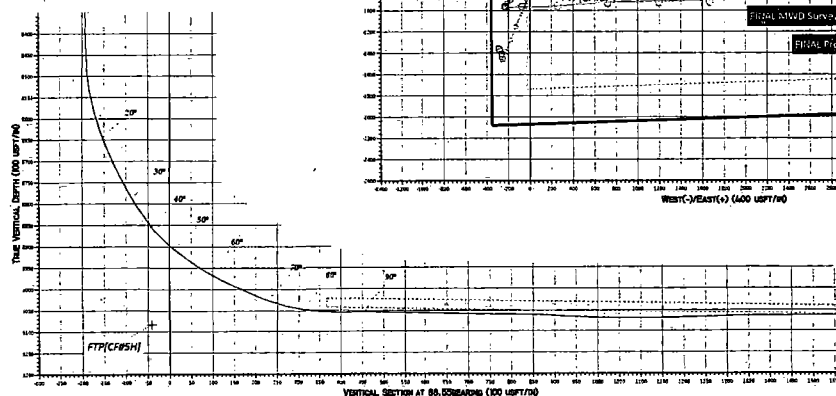
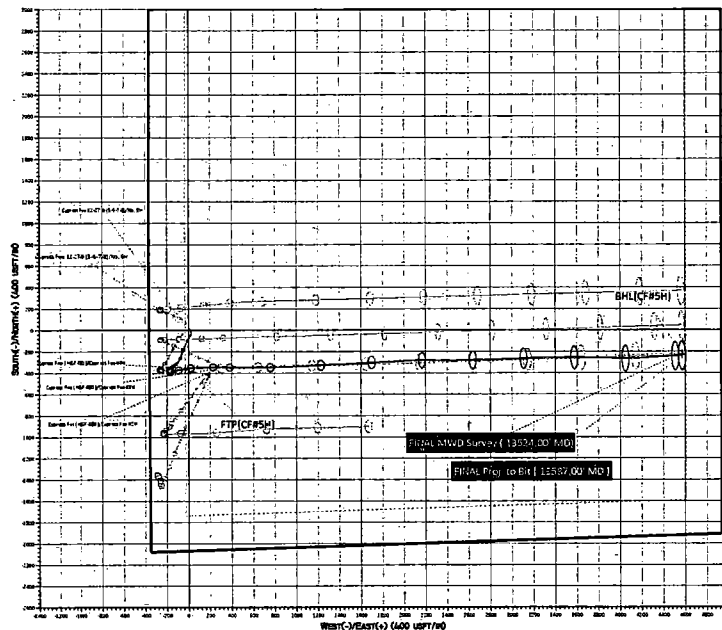
Ground Level: 3163.00
+N/-S +E/-W Northing Easting Latitude Longitude
0.00 0.00 479338.54 540590.90 32° 19' 3.898 N 104° 12' 6.975 W

SECTION DETAILS

MD	INC	AZI	TVD	+N/-S	+E/-W	DLEG	TFACE	VSECT	TARGET
0.00	0.00	6.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	6.00	500.00	0.00	0.00	0.00	0.00	0.00	
1000.00	1.75	141.00	1099.89	-8.31	6.73	0.25	141.00	6.48	
2134.38	10.03	204.45	2129.02	-93.44	-17.93	1.00	72.99	-20.62	
3374.44	10.00	204.45	3350.29	-289.47	-107.09	0.00	0.00	-115.45	
4374.01	0.00	0.00	4344.71	-369.67	-163.07	1.00	-180.00	-53.75	
8467.27	0.00	0.00	8435.00	-368.67	-163.07	0.00	0.00	-153.75	
9021.27	56.46	89.33	8915.23	-361.21	112.71	10.00	89.33	102.14	
9120.01	89.10	89.33	9034.90	-349.99	497.63	8.00	0.00	487.21	
15517.91	89.10	89.33	9098.70	-231.16	4573.29	0.00	0.00	4544.91	BHL(CF#5H)

DESIGN-TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting
FTP(CF#5H)	9083.71	-365.02	-31.04	478973.55	540569.86
BHL(CF#5H)	9098.70	-231.16	4573.29	479107.40	545163.78



FINAL DATA: 11/2/2017
FINAL PLAN: 11/2/2017
BHL(CF#5H)



Scientific Drilling



To convert Magnetic North to Grid, Add 7.31°
To convert True North to Grid, Subtract 0.07°

Azimuths to Grid North
True North: -0.07°
Magnetic North: 7.31°
Magnetic Field
Strength: 48065.8nT
Dip Angle: 60.12°
Date: 11/2/2017
Model: HDGM

CASING DETAILS

No casing data is available

SITE DETAILS: Cypress Fee 32-27-9 (5-6-7-8)
Site Centre Northing: 479338.54
Easting: 540590.90

Positional Uncertainty: 0.00
Convergence: 0.07
Local North: Grid

Map System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone Name: New Mexico East 3001
Local Origin: Well No. 5H, Grid North
Latitude: 32° 19' 3.898 N
Longitude: 104° 12' 6.975 W
Grid East: 540590.90
Grid North: 479338.54
Scale Factor: 1.000

Geomagnetic Model: HDGM
Sample Date: 02-Nov-17
Magnetic Declination: 7.38°
Dip Angle from Horizontal: 60.12°
Magnetic Field Strength: 48068

To convert Magnetic North to Grid, Add 7.31°
To convert Magnetic North to True, Add 7.38° East
To convert True North to Grid, Subtract 0.07°

PROJECT DETAILS: Eddy County, NM (NAD27)
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001

System Datum: Mean Sea Level

