

30-015-44380

MARTHON OIL

SURVEY REPORT

CYPRESS FEE 23-27-9 8H

H&P 498

12/12/2017

NM OIL CONSERVATION
ARTESIA DISTRICT

MAY 07 2018

RECEIVED



The Ultimate Partner In Wellbore Placement

SURVEY REPORT**CYPRESS FEE 23-27-9 8H****COMPUTED SURVEY**

CUSTOMER Marthon Oil
PROJECT Eddy County, NM
FIELD Wolf Camp A

SDI JOB NO. OP.006579
SDI DISTRICT Midland
SDI KIT/UNIT KIT MUD PULSE

SITE INFORMATION

Site Name Cypress Fee
Lat/Long 32° 19' 3.898" N, 104° 12' 6.975" W
Northing 479,338.54 ft
Easting 540,590.9 ft

Section 32
Township 27
Range 9

MAP INFORMATION

North Reference Grid North
Grid Correction -0.07 deg
System US State Plane 1927
Datum North American Datum 1927 (Clarke 1866)
Map Zone New Mexico East: 3001

**WELL INFORMATION**

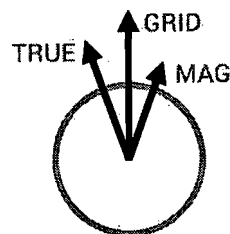
Lat/Long 32° 19' 4.378" N, 104° 12' 7.386" W
Northing 479,387.02 ft
Easting 540,555.59 ft
UWI 30-015-44380

DEPTH AND ELEVATION REFERENCE

Ground Level 3164 ft above Mean Sea Level
Reference Datum RKB
Reference Height 26.5 ft above G.L.
Reference Elevation 3190.5 ft

VERTICAL SECTION REFERENCE

+N/-S 0 ft
+E/-W 0 ft
Proposal Direction 88.51°
Calculation Method Minimum Curvature

**GEOMAGNETIC REFERENCE INFORMATION**

Local Gravity: 998.531 mG [computed]

MD	MODEL	DATE	DECLINATION	TRUE TO GRID	MAG TO GRID
0-13663 ft	HDGM2017	11 Dec 2017	7.38°	subtract 0.07°	add 7.31°

WELL NOTES**OPERATORS**

B. Stallings, P. Bankov

SDI Operator Name (Printed)

SIGNATURE

DATE

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Invalid	0.00	0.00
204.00	0.60	335.60	204.00	-0.42	0.97	-0.44	0.29	1.07	335.60
297.00	2.20	351.30	296.97	-0.83	3.18	-0.91	1.75	3.31	343.99
391.00	1.80	345.80	390.91	-1.38	6.40	-1.55	0.47	6.58	346.40
417.00	1.30	345.00	416.90	-1.54	7.08	-1.72	1.92	7.28	346.31
511.00	0.50	351.80	510.89	-1.84	8.51	-2.06	0.86	8.76	346.41
604.00	1.10	8.70	603.88	-1.73	9.80	-1.98	0.69	9.99	348.57
696.00	1.80	55.00	695.85	-0.36	11.50	-0.66	1.42	11.52	356.69
788.00	2.00	75.50	787.80	2.40	12.73	2.07	0.77	12.90	9.25
880.00	1.90	81.80	879.75	5.48	13.35	5.14	0.26	14.30	21.05
973.00	1.90	64.60	972.70	8.42	14.23	8.06	0.61	16.35	29.52
1065.00	1.50	48.40	1064.66	10.74	15.68	10.33	0.68	18.78	33.38
1160.00	1.80	66.10	1159.62	13.07	17.11	12.63	0.62	21.27	36.42
1254.00	2.10	73.60	1253.56	16.10	18.20	15.63	0.42	23.99	40.66
1349.00	2.80	72.00	1348.48	20.00	19.41	19.51	0.74	27.52	45.15
1444.00	2.90	56.20	1443.36	24.26	21.46	23.71	0.83	31.98	47.85
1539.00	2.60	43.40	1538.25	27.81	24.36	27.19	0.72	36.51	48.14
1633.00	1.60	24.10	1632.19	29.88	27.11	29.19	1.29	39.84	47.12
1728.00	1.50	356.70	1727.15	30.42	29.56	29.66	0.78	41.88	45.09
1823.00	2.30	278.40	1822.11	28.50	31.08	27.70	2.61	41.63	41.71
1910.00	3.10	277.60	1909.02	24.46	31.65	23.64	0.92	39.50	36.76
2009.00	2.86	273.08	2007.88	19.35	32.13	18.52	0.34	37.09	29.96
2103.00	3.17	278.22	2101.75	14.45	32.63	13.61	0.43	35.36	22.64
2198.00	5.05	290.81	2196.51	8.00	34.49	7.10	2.18	35.22	11.64
2293.00	7.67	284.88	2290.92	-1.96	37.61	-2.93	2.85	37.72	355.54
2387.00	7.24	285.39	2384.12	-13.64	40.79	-14.71	0.46	43.36	340.17
2481.00	7.35	285.65	2477.36	-25.06	43.98	-26.21	0.12	51.20	329.21
2576.00	7.10	285.73	2571.60	-36.48	47.22	-37.72	0.27	60.43	321.38
2671.00	6.71	284.94	2665.92	-47.41	50.24	-48.73	0.42	69.99	315.87
2765.00	5.86	283.44	2759.35	-57.31	52.77	-58.70	0.92	78.93	311.95
2860.00	5.04	279.56	2853.92	-66.08	54.59	-67.53	0.95	86.83	308.95
2955.00	6.27	279.45	2948.46	-75.27	56.13	-76.76	1.30	95.09	306.18

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
3050.00	5.92	277.86	3042.92	-85.21	57.66	-86.74	0.41	104.15	303.61
3144.00	7.97	286.36	3136.23	-96.20	60.15	-97.80	2.43	114.82	301.60
3239.00	7.89	285.37	3230.32	-108.71	63.74	-110.40	0.16	127.48	300.00
3334.00	7.60	284.40	3324.45	-120.99	67.03	-122.78	0.34	139.88	298.63
3523.00	7.71	283.88	3511.77	-145.24	73.18	-147.19	0.07	164.38	296.43
3617.00	9.01	293.10	3604.77	-158.02	77.58	-160.09	1.98	177.90	295.85
3712.00	8.93	292.91	3698.61	-171.50	83.37	-173.73	0.09	192.70	295.64
3807.00	9.23	310.32	3792.43	-183.90	91.18	-186.34	2.90	207.45	296.07
3901.00	9.17	309.77	3885.22	-195.15	100.85	-197.84	0.12	222.06	297.01
3996.00	8.16	308.17	3979.14	-206.04	109.86	-208.96	1.09	236.08	297.73
4090.00	7.18	303.85	4072.30	-215.96	117.25	-219.09	1.22	248.49	298.15
4185.00	6.36	299.38	4166.63	-225.32	123.13	-228.60	1.02	259.65	298.31
4279.00	6.23	296.06	4260.07	-234.31	127.93	-237.72	0.41	269.95	298.29
4374.00	7.38	295.82	4354.40	-244.30	132.85	-247.84	1.21	281.20	298.19
4469.00	6.88	294.91	4448.66	-254.82	137.91	-258.49	0.54	292.98	298.08
4563.00	6.23	298.97	4542.05	-264.26	142.75	-268.06	0.85	303.70	298.04
4658.00	5.88	312.51	4636.52	-272.20	148.53	-276.16	1.54	313.57	298.27
4752.00	5.43	310.50	4730.06	-278.97	154.68	-283.09	0.52	322.59	298.65
4847.00	3.80	310.76	4824.75	-284.65	159.66	-288.90	1.71	330.08	298.93
5036.00	2.39	310.81	5013.47	-292.20	166.32	-296.62	0.75	340.07	299.28
5225.00	0.34	330.84	5202.41	-295.37	169.37	-299.87	1.10	344.40	299.46
5320.00	0.80	108.42	5297.41	-294.87	169.41	-299.38	1.13	343.98	299.50
5414.00	0.74	104.05	5391.40	-293.67	169.05	-298.17	0.09	342.76	299.55
5509.00	0.45	154.70	5486.39	-292.93	168.57	-297.42	0.60	341.86	299.54
5604.00	0.50	176.32	5581.39	-292.77	167.82	-297.23	0.19	341.33	299.45
5698.00	0.51	187.93	5675.39	-292.82	166.99	-297.26	0.11	340.96	299.33
5793.00	0.87	54.14	5770.38	-292.29	167.00	-296.73	1.34	340.50	299.37
5887.00	1.70	41.10	5864.36	-290.75	168.47	-295.24	0.93	339.92	299.71
5981.00	1.77	46.91	5958.32	-288.72	170.52	-293.26	0.20	339.23	300.18
6076.00	1.74	36.89	6053.27	-286.73	172.68	-291.31	0.32	338.65	300.66
6171.00	1.58	25.49	6148.23	-285.23	175.02	-289.88	0.39	338.62	301.12
6265.00	1.08	29.81	6242.21	-284.19	176.95	-288.88	0.54	338.77	301.49

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
6360.00	0.96	61.77	6337.19	-283.01	178.11	-287.74	0.60	338.40	301.76
6454.00	0.95	67.55	6431.18	-281.58	178.78	-286.32	0.10	337.55	301.98
6549.00	1.00	93.07	6526.17	-280.02	179.04	-284.77	0.45	336.37	302.16
6644.00	0.92	89.33	6621.15	-278.43	179.00	-283.18	0.10	335.01	302.30
6740.00	0.86	59.66	6717.14	-277.02	179.38	-281.78	0.48	334.03	302.48
6834.00	0.36	52.54	6811.14	-276.16	179.91	-280.94	0.54	333.61	302.64
6929.00	1.27	172.27	6906.13	-275.80	179.05	-280.55	1.56	332.82	302.55
7024.00	1.65	157.36	7001.10	-275.19	176.75	-279.89	0.57	331.02	302.27
7119.00	1.28	157.61	7096.07	-274.32	174.50	-278.95	0.39	329.03	302.03
7213.00	1.08	148.32	7190.05	-273.50	172.77	-278.09	0.30	327.39	301.85
7308.00	0.58	127.49	7285.04	-272.68	171.72	-277.24	0.61	326.12	301.77
7403.00	1.95	2.50	7380.02	-272.20	173.05	-276.79	2.45	326.43	302.01
7498.00	1.42	342.87	7474.98	-272.40	175.78	-277.07	0.82	328.13	302.39
7593.00	1.21	338.23	7569.95	-273.07	177.84	-277.79	0.24	329.84	302.63
7688.00	1.07	341.56	7664.93	-273.67	179.62	-278.44	0.17	331.35	302.83
7782.00	1.61	342.47	7758.91	-274.30	181.71	-279.11	0.58	333.05	303.06
7877.00	1.01	338.75	7853.88	-274.95	183.76	-279.82	0.64	334.76	303.29
7972.00	1.60	355.73	7948.86	-275.29	185.86	-280.22	0.73	336.25	303.55
8067.00	0.80	32.76	8043.84	-274.99	187.73	-279.96	1.13	337.08	303.84
8162.00	1.22	206.50	8138.83	-275.09	187.38	-280.06	2.12	336.96	303.79
8257.00	1.79	236.87	8233.80	-276.83	185.66	-281.75	1.01	337.42	303.38
8351.00	1.29	249.99	8327.77	-279.08	184.50	-283.97	0.65	338.64	303.01
8446.00	0.29	230.41	8422.76	-280.28	183.98	-285.16	1.07	339.36	302.83
8541.00	2.05	90.25	8517.74	-278.77	183.82	-283.65	2.39	338.00	302.95
8572.00	5.08	89.32	8548.68	-276.85	183.84	-281.72	9.79	336.40	303.13
8635.00	11.70	90.05	8610.97	-267.66	183.86	-272.53	10.52	328.76	304.01
8682.00	18.05	92.09	8656.37	-255.62	183.59	-260.48	13.54	318.68	305.18
8730.00	23.28	90.65	8701.27	-238.71	183.21	-243.55	10.94	304.77	306.95
8777.00	27.95	91.20	8743.64	-218.41	182.88	-223.24	9.96	288.59	309.32
8825.00	32.87	92.21	8785.02	-194.16	182.14	-198.97	10.31	269.75	312.47
8872.00	38.16	89.71	8823.26	-166.90	181.72	-171.68	11.67	250.00	316.63
8919.00	42.57	86.79	8859.07	-136.47	182.69	-141.27	10.19	230.94	322.29

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
8966.00	48.29	86.01	8892.04	-103.03	184.80	-107.87	12.23	213.98	329.73
9014.00	53.62	88.10	8922.27	-65.78	186.69	-70.66	11.62	199.61	339.27
9068.00	58.87	89.74	8952.26	-20.90	187.51	-25.78	10.04	189.28	352.17
9141.00	64.87	87.75	8986.67	43.44	188.95	38.54	8.56	192.84	11.53
9173.00	64.33	89.82	9000.40	72.35	189.56	67.44	6.09	201.20	19.58
9204.00	64.84	89.27	9013.70	100.34	189.79	95.44	2.30	212.43	26.70
9236.00	67.67	88.47	9026.59	129.63	190.37	124.72	9.14	227.58	33.23
9267.00	69.29	88.46	9037.96	158.47	191.14	153.55	5.23	245.18	38.78
9298.00	70.42	87.93	9048.63	187.57	192.06	182.64	3.97	265.03	43.56
9329.00	71.12	87.03	9058.84	216.83	193.34	211.88	3.57	286.83	47.62
9360.00	72.39	87.17	9068.55	246.26	194.84	241.28	4.11	310.12	51.08
9391.00	74.70	86.38	9077.33	275.98	196.51	270.96	7.84	334.72	54.05
9422.00	77.56	85.25	9084.76	306.04	198.71	300.97	9.90	360.65	56.57
9454.00	80.78	86.14	9090.78	337.43	201.06	332.31	10.43	388.40	58.82
9516.00	84.46	89.00	9098.74	398.89	203.66	393.72	7.49	443.28	62.65
9547.00	83.91	87.71	9101.88	429.73	204.55	424.55	4.51	471.26	64.28
9641.00	84.38	85.66	9111.47	523.18	209.96	517.90	2.22	558.84	67.93
9735.00	85.24	85.01	9119.98	616.65	217.56	611.20	1.15	648.77	70.41
9830.00	88.96	84.36	9124.79	711.30	226.35	705.65	3.98	741.07	72.22
9924.00	89.77	87.74	9125.83	805.20	232.82	799.41	3.70	832.63	73.76
10018.00	88.18	87.66	9127.52	899.17	236.59	893.32	1.69	924.12	75.17
10113.00	88.66	89.47	9130.13	994.13	238.96	988.25	1.96	1016.73	76.41
10206.00	87.69	89.00	9133.10	1087.07	240.21	1081.19	1.16	1107.55	77.47
10300.00	87.68	88.12	9136.89	1180.99	242.57	1175.08	0.94	1199.86	78.34
10394.00	89.16	90.23	9139.48	1274.94	243.92	1269.03	2.75	1292.26	79.12
10488.00	90.74	87.35	9139.57	1368.93	245.90	1363.00	3.49	1385.00	79.77
10583.00	90.17	86.81	9138.82	1463.90	250.74	1457.87	0.83	1479.27	80.24
10677.00	90.97	89.32	9137.88	1557.88	253.91	1551.80	2.80	1572.44	80.71
10770.00	91.68	89.96	9135.73	1650.84	254.49	1644.78	1.03	1664.35	81.20
10864.00	89.09	89.79	9135.09	1744.80	254.69	1738.77	2.76	1757.32	81.67
10959.00	88.45	89.61	9137.13	1839.76	255.19	1833.74	0.70	1851.41	82.08
11052.00	87.82	89.48	9140.15	1932.69	255.92	1926.69	0.69	1943.61	82.43

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
11146.00	88.53	89.76	9143.14	2026.63	256.54	2020.64	0.80	2036.86	82.76
11241.00	87.98	87.99	9146.04	2121.58	258.40	2115.57	1.95	2131.29	83.04
11336.00	86.41	88.78	9150.68	2216.46	261.08	2210.42	1.85	2225.78	83.26
11431.00	89.53	86.77	9154.05	2311.37	264.76	2305.27	3.91	2320.42	83.45
11525.00	91.45	90.36	9153.24	2405.35	267.12	2399.22	4.33	2414.04	83.65
11620.00	91.74	90.97	9150.60	2500.25	266.02	2494.17	0.71	2508.32	83.91
11714.00	89.97	91.10	9149.20	2594.14	264.32	2588.14	1.90	2601.61	84.17
11808.00	88.56	90.66	9150.41	2688.05	262.88	2682.12	1.57	2694.97	84.40
11902.00	87.28	90.22	9153.82	2781.93	262.15	2776.05	1.44	2788.41	84.61
11997.00	88.52	88.18	9157.30	2876.86	263.47	2870.98	2.51	2883.04	84.76
12092.00	86.54	86.62	9161.39	2971.74	267.77	2965.78	2.65	2977.85	84.84
12185.00	86.51	86.87	9167.03	3064.53	273.04	3058.46	0.27	3070.62	84.90
12279.00	86.81	85.14	9172.50	3158.27	279.58	3152.07	1.86	3164.44	84.93
12373.00	86.71	85.14	9177.82	3251.96	287.52	3245.58	0.10	3258.29	84.94
12467.00	91.01	83.99	9179.69	3345.70	296.42	3339.12	4.73	3352.25	84.93
12562.00	91.94	86.09	9177.24	3440.49	304.63	3433.72	2.42	3447.21	84.93
12656.00	92.11	88.01	9173.92	3534.39	309.46	3527.54	2.05	3541.09	84.99
12751.00	91.01	88.15	9171.33	3629.35	312.64	3622.45	1.17	3635.91	85.07
12846.00	89.80	89.75	9170.66	3724.34	314.38	3717.42	2.11	3730.69	85.17
12940.00	89.20	90.05	9171.48	3818.31	314.55	3811.42	0.72	3824.38	85.28
13035.00	88.66	89.96	9173.26	3913.26	314.54	3906.40	0.57	3919.05	85.40
13129.00	89.50	89.42	9174.77	4007.23	315.05	4000.39	1.06	4012.77	85.50
13224.00	91.01	88.72	9174.36	4102.22	316.59	4095.37	1.75	4107.59	85.58
13319.00	89.93	89.00	9173.58	4197.21	318.48	4190.35	1.17	4202.43	85.65
13414.00	89.56	89.81	9173.99	4292.20	319.46	4285.34	0.94	4297.23	85.74
13510.00	87.36	89.83	9176.57	4388.13	319.77	4381.30	2.30	4392.95	85.83
13604.00	86.48	88.68	9181.63	4481.99	320.99	4475.15	1.53	4486.65	85.90
13663.00	86.99	87.59	9184.99	4540.89	322.91	4534.03	2.04	4545.51	85.93