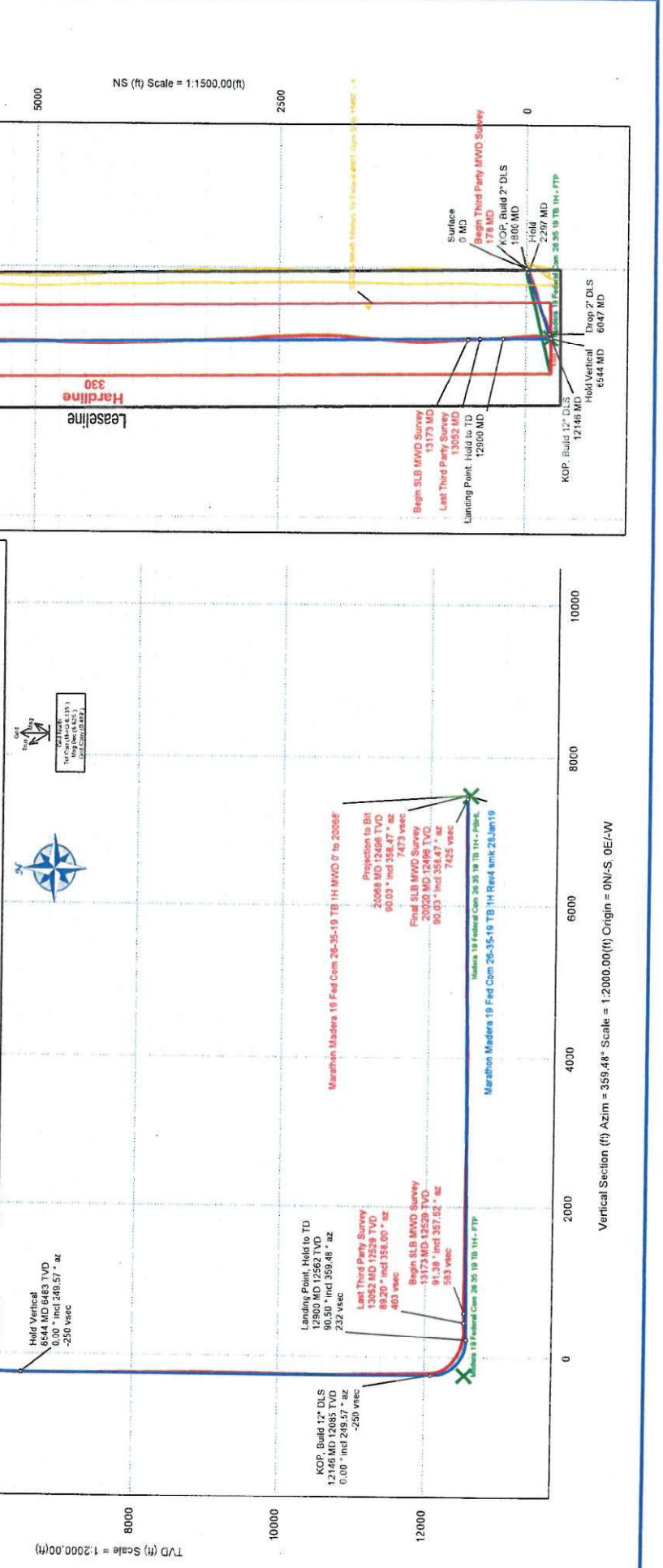


Borehole: Original Hole
Well: Madera 19 Federal Com 26 35 19 TB 1H
Field: NM Lea County (NAD 27)
Structure: Marathon Madera 19 Federal Com 26 35 19 (1-2-5-6)

Gravity & Magnetic Parameters
 Date: 17-Jan-2019
 Dip: 59.671°
 Model: HDGM 2019
 MagDec: 6.625°
 FS: 47896.877mT
 Gravity FS:
 988.455mgals (±0.00666 Gauss)
 Surface Location: NAD27 New Mexico State Plane, Eastern Zone, US Feet
 Lat: N 32 1 20.45
 Lon: W 103 24 36.88
 Northing: 373088.8710US
 Easting: 768068.7710US
 Grid Conv: 0.4895°
 Scale Fact: 1.00000284
 Miscellaneous:
 Slot: Madera 19 Federal Com 26-35-19 TB 1H MWD 0' to 2006F
 Plan: Marathon Madera 19 Fed Com 26-35-19 TB 1H MWD 0' to 2006F

EW (ft) Scale = 1:1500.00(ft)

Critical Point	MD	RCL	AZM	TVD	VSEC	R(Y)24-H	R(X)W(H)	DLS
Surface	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Third Party MWD Survey	174.00	0.00	761.00	977.56	0.73	0.75	1.22	0.45
End Third Party Survey	1353.00	49.20	351.00	12539.12	462.56	462.26	-456.28	4.56
Begin SLB MWD Survey	13171.00	91.38	357.52	9258.91	393.43	377.15	-701.00	1.64
Final SLB MWD Survey	20020.00	96.03	358.47	12796.17	7425.54	7418.55	-749.53	0.69
Projection to BH	20069.00	96.03	358.47	12796.17	7425.54	7418.55	-749.53	0.69
Drop 2' DLS	6047 MD 12085 TVD							
Hold Vertical	6544 MD 6483 TVD							
Hold Vertical	12146 MD 12085 TVD							
Drop 2' DLS	6047 MD 12085 TVD							





Marathon Madera 19 Fed Com 26-35-19 TB 1H MWD 0' to 20068' Survey Geodetic Report (Def Survey)



Report Date: January 31, 2019 - 04.04 PM
Client: Marathon Oil Corporation
Field: NM Lea County (NAD 27)
Structure / Slot: Marathon Madera 19 Federal Com 26 35 19 (1-2-5-6) / Madera 19 Federal Com 26 35 19 TB 1H
Well: Madera 19 Federal Com 26 35 19 TB 1H
Borehole: Original Hole
UWI / API#: Unknown / Unknown
Survey Name: Marathon Madera 19 Fed Com 26-35-19 TB 1H MWD 0' to 20068'
Survey Date: January 17, 2019
Tort / AHD / DDI / ERD Ratio: 258.176' / 8540.633 ft / 6.548 / 0.681
Coordinate Reference System: NAD27 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 1' 20.65258", W 103° 24' 36.87693"
Location Grid N/E Y/X: N 373098.870 ftUS, E 786088.770 ftUS
CRS Grid Convergence Angle: 0.4895 °
Grid Scale Factor: 1.0000284
Version / Patch: 2.10.753.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 359.480 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: KB 26.50 ft
TVD Reference Elevation: 3211.500 ft above
Seabed / Ground Elevation: 3185.000 ft above
Magnetic Declination: 6.625 °
Total Gravity Field Strength: 998.4547mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47690.877 nT
Magnetic Dip Angle: 59.671 °
Declination Date: January 17, 2019
Magnetic Declination Model: HDGM 2019
North Reference: Grid North
Grid Convergence Used: 0.4895 °
Total Corr Mag North->Grid North: 6.1354 °
Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azin Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S °'")	Longitude (E/W °'")
Surface		0.00	0.00	0.00	0.00	0.00	0.00	N/A	373098.87	786088.77	N 32	1 20.65 W 103 24 36.88
Begin Third Party MWD Survey	178.00	0.80	78.60	177.99	0.23	0.25	1.22	0.45	373099.12	786089.99	N 32	1 20.65 W 103 24 36.86
	239.00	0.90	84.60	238.99	0.36	0.37	2.11	0.22	373099.24	786090.88	N 32	1 20.65 W 103 24 36.85
	331.00	1.00	82.40	330.97	0.52	0.55	3.63	0.12	373099.42	786092.40	N 32	1 20.66 W 103 24 36.83
	422.00	0.70	106.00	421.97	0.46	0.50	4.95	0.50	373099.37	786093.72	N 32	1 20.66 W 103 24 36.82
	513.00	0.40	188.10	512.96	-0.02	0.03	5.44	0.83	373099.90	786094.21	N 32	1 20.65 W 103 24 36.81
	605.00	0.40	203.20	604.96	-0.63	-0.58	5.27	0.11	373099.29	786094.04	N 32	1 20.65 W 103 24 36.82
	696.00	0.50	196.00	695.96	-1.30	-1.25	5.03	0.11	373099.29	786094.04	N 32	1 20.65 W 103 24 36.82
	788.00	0.60	198.20	787.95	-2.14	-2.10	4.77	0.11	373099.62	786093.80	N 32	1 20.64 W 103 24 36.82
	879.00	0.50	199.30	878.95	-2.97	-2.92	4.49	0.11	373099.77	786093.54	N 32	1 20.63 W 103 24 36.82
	970.00	0.50	211.00	969.94	-3.68	-3.64	4.16	0.11	373099.23	786093.26	N 32	1 20.62 W 103 24 36.83
	1061.00	0.50	217.80	1060.94	-4.33	-4.29	3.71	0.07	373099.58	786092.48	N 32	1 20.61 W 103 24 36.83
	1121.00	0.50	225.10	1120.94	-4.72	-4.69	3.36	0.11	373099.18	786092.13	N 32	1 20.61 W 103 24 36.84
	1245.00	0.10	279.10	1244.94	-5.08	-5.05	2.87	0.36	373099.82	786091.54	N 32	1 20.60 W 103 24 36.84
	1337.00	0.00	358.50	1336.94	-5.06	-5.04	2.79	0.11	373099.83	786091.56	N 32	1 20.60 W 103 24 36.84
	1431.00	0.10	63.00	1430.94	-5.03	-5.00	2.87	0.11	373099.87	786091.54	N 32	1 20.60 W 103 24 36.84
	1526.00	0.10	132.10	1525.94	-5.05	-5.02	3.00	0.12	373099.85	786091.77	N 32	1 20.60 W 103 24 36.84
	1620.00	0.30	151.10	1619.94	-5.32	-5.29	3.18	0.22	373099.56	786091.95	N 32	1 20.60 W 103 24 36.84
	1715.00	0.10	159.60	1714.94	-5.61	-5.58	3.33	0.21	373099.29	786092.02	N 32	1 20.60 W 103 24 36.84
	1809.00	1.60	236.00	1808.92	-6.42	-6.39	2.27	1.68	373092.48	786091.04	N 32	1 20.59 W 103 24 36.85
	1904.00	3.50	233.40	1903.83	-8.85	-8.87	-1.16	2.00	373090.00	786087.61	N 32	1 20.59 W 103 24 36.85
	1998.00	5.30	206.70	1997.54	-12.90	-12.96	-7.09	1.33	373085.91	786081.68	N 32	1 20.56 W 103 24 36.89
	2093.00	6.60	243.30	2092.03	-17.68	-17.82	-15.64	1.54	373081.05	786073.13	N 32	1 20.48 W 103 24 37.06
	2187.00	8.80	249.80	2185.18	-22.49	-22.73	-27.21	2.51	373076.14	786061.56	N 32	1 20.43 W 103 24 37.20
	2282.00	9.20	250.10	2279.01	-27.45	-27.83	-41.17	0.42	373071.04	786047.60	N 32	1 20.38 W 103 24 37.36
	2376.00	8.90	249.50	2371.84	-32.43	-32.93	-55.05	0.33	373065.94	786033.72	N 32	1 20.33 W 103 24 37.52
	2470.00	8.80	249.30	2464.72	-37.40	-38.02	-68.59	0.11	373060.85	786020.18	N 32	1 20.28 W 103 24 37.68
	2565.00	8.50	249.50	2558.64	-42.30	-43.05	-81.96	0.32	373055.82	786006.81	N 32	1 20.23 W 103 24 37.83
	2659.00	8.10	248.70	2651.66	-47.02	-47.89	-94.64	0.44	373050.98	785994.13	N 32	1 20.19 W 103 24 37.98
	2754.00	8.60	249.70	2745.65	-51.80	-52.78	-107.53	0.55	373046.09	785981.24	N 32	1 20.14 W 103 24 38.13
	2848.00	9.00	249.40	2838.54	-56.71	-57.81	-121.01	0.43	373041.06	785967.76	N 32	1 20.09 W 103 24 38.29
	2942.00	8.60	249.40	2931.43	-61.64	-62.87	-134.47	0.43	373036.00	785954.30	N 32	1 20.04 W 103 24 38.44
	3037.00	8.90	250.00	3025.33	-66.53	-67.88	-148.02	0.33	373030.99	785940.75	N 32	1 19.99 W 103 24 38.60
	3131.00	10.30	250.60	3118.01	-71.68	-73.16	-162.78	1.49	373025.71	785925.99	N 32	1 19.94 W 103 24 38.77
	3226.00	10.20	249.80	3211.49	-77.26	-78.88	-176.69	0.18	373019.99	785910.08	N 32	1 19.89 W 103 24 38.96
	3320.00	9.70	251.00	3304.08	-82.57	-84.33	-193.99	0.58	373014.54	785894.78	N 32	1 19.83 W 103 24 39.14
	3414.00	8.70	251.90	3396.87	-87.23	-89.12	-208.23	1.07	373009.75	785880.54	N 32	1 19.79 W 103 24 39.30
	3509.00	8.40	248.90	3490.81	-91.84	-93.85	-221.54	0.57	373005.02	785867.23	N 32	1 19.74 W 103 24 39.46
	3603.00	9.80	250.30	3583.63	-96.88	-99.02	-235.47	1.51	372999.85	785853.30	N 32	1 19.69 W 103 24 39.62
	3698.00	9.20	253.10	3677.33	-101.68	-103.95	-250.35	0.80	372994.92	785838.42	N 32	1 19.65 W 103 24 39.79
	3792.00	9.70	252.30	3770.05	-106.14	-108.55	-265.09	0.55	372990.32	785823.68	N 32	1 19.60 W 103 24 39.97
	3887.00	10.60	252.30	3863.56	-111.08	-113.64	-281.04	0.95	372985.23	785807.73	N 32	1 19.55 W 103 24 40.15
	3981.00	11.40	253.10	3955.83	-116.25	-118.97	-298.16	0.87	372979.90	785790.61	N 32	1 19.50 W 103 24 40.35
	4076.00	11.20	253.30	4048.99	-121.47	-124.35	-315.98	0.21	372974.52	785772.79	N 32	1 19.45 W 103 24 40.56
	4170.00	9.70	256.80	4141.43	-125.76	-128.78	-332.44	1.73	372970.09	785756.33	N 32	1 19.41 W 103 24 40.75
	4264.00	10.10	257.30	4234.03	-129.23	-132.40	-348.19	0.44	372965.47	785740.58	N 32	1 19.37 W 103 24 40.93
	4359.00	11.50	254.20	4327.35	-133.49	-136.81	-365.43	1.59	372962.06	785723.34	N 32	1 19.33 W 103 24 41.13
	4453.00	11.40	251.90	4419.98	-138.76	-142.25	-383.27	0.50	372956.62	785705.50	N 32	1 19.28 W 103 24 41.34
	4547.00	10.60	254.10	4511.75	-143.86	-147.50	-400.42	0.96	372951.37	785688.35	N 32	1 19.23 W 103 24 41.54
	4642.00	10.30	250.90	4605.18	-148.88	-152.67	-416.85	0.69	372946.20	785671.92	N 32	1 19.18 W 103 24 41.73
	4736.00	10.40	247.00	4697.65	-154.81	-158.74	-432.60	0.75	372941.13	785655.17	N 32	1 19.12 W 103 24 41.92
	4831.00	9.50	247.50	4791.22	-161.02	-165.09	-447.73	0.95	372933.78	785641.04	N 32	1 19.06 W 103 24 42.09
	4925.00	8.70	244.50	4884.03	-166.92	-171.12	-461.32	0.99	372927.75	785627.45	N 32	1 19.00 W 103 24 42.25
	5020.00	8.50	242.90	4977.97	-173.10	-177.41	-474.05	0.33	372921.46	785614.72	N 32	1 18.94 W 103 24 42.40
	5114.00	9.60	244.00	5070.79	-179.59	-184.01	-487.28	1.18	372914.86	785601.49	N 32	1 18.87 W 103 24 42.55
	5209.00	10.10	245.30	5164.39	-186.40	-190.96	-501.97	0.58	372907.91	785586.80	N 32	1 18.81 W 103 24 42.73
	5303.00	9.30	246.50	5257.05	-192.74	-197.44	-516.42	0.88	372901.43	785572.35	N 32	1 18.74 W 103 24 42.89
	5397.00	8.80	246.40	5349.44	-195.76	-200.52	-531.49	1.02	372896.35	785558.28	N 32	1 18.71 W 103 24 42.98
	5493.00	8.30	246.80	5441.98	-203.33	-208.25	-546.36	0.38	372890.62	785544.41	N 32	1 18.64 W 103 24 43.19
	5578.00	9.70	250.60	5528.81	-208.57	-213.61	-555.22	1.60	372885.26	785530.55	N 32	1 18.59 W 103 24 43.35
	5673.00	10.40	249.20	5614.78	-215.87	-219.06	-570.96	0.95	372879.81	785517.81	N 32	1 18.53 W 103 24 43.53
	5767.00	10.10	249.40	5700.26	-223.33	-230.81	-587.00	0.40	372874.04	785501.77	N 32	1 18.48 W 103 24 43.72
	5862.00	9.80	249.90	5790.85	-230.84	-236.46	-602.81	0.32	372868.06	785485.96	N 32	1 18.42 W 103 24 43.90
	5956.00	9.60	250.80	5883.51	-238.03	-244.79	-618.04	0.33	372862.41	785470.73	N 32	1 18.36 W 103 24 44.08
	6050.00	9.70	249.40	5977.16	-241.79	-247.21	-632.95	0.27	372857.08	785455.32	N 32	1 18.31 W 103 24 44.25
	6145.00	9.70	249.40	6071								

Comments	MD (ft)	Incl (°)	Azin Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')
	7183.00	0.90	8.00	7122.64	-254.78	-261.93	-693.28	1.16	372837.79	785395.49	N 32	118.13 W 103 24 44.95
	7277.00	1.30	9.00	7216.63	-253.00	-259.30	-693.01	0.43	372838.57	785395.76	N 32	118.15 W 103 24 44.95
	7372.00	1.10	22.00	7311.60	-251.09	-257.39	-692.50	0.35	372841.48	785396.27	N 32	118.16 W 103 24 44.95
	7466.00	1.20	18.00	7405.59	-249.33	-255.62	-691.86	0.14	372843.25	785396.91	N 32	118.18 W 103 24 44.94
	7561.00	1.10	10.60	7500.57	-247.49	-253.77	-691.39	0.19	372845.10	785397.38	N 32	118.20 W 103 24 44.93
	7655.00	0.80	15.70	7594.55	-245.97	-252.26	-691.04	0.33	372846.61	785397.73	N 32	118.21 W 103 24 44.93
	7749.00	0.70	16.30	7688.54	-244.72	-250.99	-690.68	0.01	372848.88	785398.09	N 32	118.23 W 103 24 44.92
	7844.00	0.80	0.40	7783.54	-243.50	-249.78	-690.49	0.24	372849.09	785398.28	N 32	118.24 W 103 24 44.92
	7938.00	0.80	343.60	7877.53	-242.29	-248.57	-690.67	0.26	372850.30	785398.10	N 32	118.25 W 103 24 44.92
	8032.00	0.60	342.30	7971.52	-241.19	-247.48	-691.01	0.21	372851.39	785397.76	N 32	118.26 W 103 24 44.93
	8127.00	0.40	354.90	8066.52	-240.39	-246.67	-691.19	0.24	372852.20	785397.58	N 32	118.27 W 103 24 44.93
	8221.00	0.40	6.30	8160.52	-239.73	-246.02	-691.18	0.08	372852.85	785397.59	N 32	118.28 W 103 24 44.93
	8316.00	0.60	1.60	8255.51	-238.91	-245.19	-691.13	0.21	372853.68	785397.64	N 32	118.28 W 103 24 44.93
	8410.00	0.50	13.20	8349.51	-238.02	-244.30	-691.02	0.16	372854.57	785397.75	N 32	118.29 W 103 24 44.93
	8505.00	0.80	16.30	8444.50	-236.98	-243.26	-690.74	0.32	372855.61	785398.03	N 32	118.30 W 103 24 44.92
	8600.00	0.70	17.00	8539.49	-235.79	-242.07	-690.39	0.11	372856.80	785398.38	N 32	118.32 W 103 24 44.92
	8694.00	0.80	17.70	8633.48	-234.62	-240.89	-690.02	0.11	372857.98	785398.75	N 32	118.33 W 103 24 44.91
	8789.00	0.60	15.40	8728.48	-233.51	-239.78	-689.69	0.21	372859.09	785399.08	N 32	118.34 W 103 24 44.91
	8883.00	0.60	15.60	8822.47	-232.57	-238.83	-689.42	0.00	372860.04	785399.35	N 32	118.35 W 103 24 44.91
	8978.00	0.30	273.50	8917.47	-232.07	-238.34	-689.54	0.76	372860.53	785399.23	N 32	118.35 W 103 24 44.91
	9072.00	0.60	239.90	9011.47	-232.30	-238.57	-690.21	0.41	372860.30	785399.56	N 32	118.35 W 103 24 44.92
	9166.00	0.60	240.30	9105.46	-232.78	-239.06	-691.06	0.00	372859.81	785397.71	N 32	118.35 W 103 24 44.93
	9261.00	0.50	239.50	9200.46	-233.23	-239.52	-691.85	0.11	372859.35	785396.92	N 32	118.34 W 103 24 44.94
	9355.00	0.30	230.20	9294.46	-233.59	-239.88	-692.39	0.22	372858.99	785398.38	N 32	118.34 W 103 24 44.94
	9449.00	0.20	144.90	9388.46	-233.88	-240.18	-692.49	0.37	372858.69	785398.28	N 32	118.33 W 103 24 44.94
	9544.00	0.10	215.90	9483.45	-234.09	-240.38	-692.44	0.20	372858.49	785398.33	N 32	118.33 W 103 24 44.94
	9638.00	0.60	241.10	9577.45	-234.39	-240.68	-692.92	0.54	372858.19	785398.55	N 32	118.33 W 103 24 44.95
	9732.00	0.90	214.20	9671.45	-235.23	-241.53	-693.77	0.48	372857.34	785395.80	N 32	118.32 W 103 24 44.96
	9826.00	1.30	187.60	9765.43	-236.89	-243.20	-694.32	0.68	372855.67	785394.45	N 32	118.30 W 103 24 44.97
	9921.00	0.90	186.20	9860.41	-238.70	-245.01	-694.55	0.42	372853.86	785394.22	N 32	118.29 W 103 24 44.97
	10015.00	0.90	185.50	9954.40	-240.16	-246.48	-694.70	0.01	372852.39	785394.07	N 32	118.27 W 103 24 44.97
	10110.00	0.80	180.90	10049.39	-241.57	-247.88	-694.78	0.13	372850.99	785393.99	N 32	118.26 W 103 24 44.97
	10204.00	1.00	173.10	10143.38	-243.04	-249.35	-694.69	0.25	372849.52	785394.08	N 32	118.24 W 103 24 44.97
	10299.00	0.80	165.10	10238.37	-244.51	-250.82	-694.42	0.25	372848.05	785394.35	N 32	118.23 W 103 24 44.97
	10393.00	0.80	134.00	10332.36	-245.60	-251.91	-693.78	0.46	372846.96	785394.99	N 32	118.22 W 103 24 44.96
	10488.00	1.30	118.60	10427.34	-246.59	-252.89	-692.36	0.60	372845.98	785396.41	N 32	118.21 W 103 24 44.94
	10582.00	1.70	116.30	10521.31	-247.74	-254.01	-690.17	0.43	372844.86	785398.60	N 32	118.20 W 103 24 44.92
	10677.00	2.50	96.30	10616.24	-248.62	-254.86	-688.85	1.13	372844.00	785401.92	N 32	118.19 W 103 24 44.88
	10771.00	1.50	54.30	10710.19	-248.16	-254.37	-683.81	1.82	372844.50	785404.96	N 32	118.19 W 103 24 44.84
	10866.00	1.90	34.70	10805.15	-246.15	-252.35	-681.90	0.74	372846.52	785406.87	N 32	118.21 W 103 24 44.82
	10960.00	2.20	27.00	10899.09	-243.28	-249.46	-680.20	0.43	372849.41	785408.57	N 32	118.24 W 103 24 44.80
	11054.00	2.40	35.30	10993.01	-240.08	-246.25	-678.24	0.41	372852.62	785410.53	N 32	118.27 W 103 24 44.78
	11149.00	1.70	38.50	11087.95	-237.38	-243.52	-676.21	0.75	372855.35	785412.56	N 32	118.30 W 103 24 44.75
	11243.00	1.60	50.20	11181.91	-235.46	-241.59	-674.34	0.37	372857.28	785414.43	N 32	118.32 W 103 24 44.73
	11337.00	1.30	53.10	11275.88	-234.00	-240.11	-672.48	0.33	372858.76	785416.29	N 32	118.33 W 103 24 44.71
	11432.00	1.00	25.10	11370.87	-232.61	-238.71	-671.26	0.66	372860.16	785417.51	N 32	118.35 W 103 24 44.70
	11526.00	1.20	6.90	11464.85	-230.90	-236.99	-670.80	0.43	372861.88	785417.97	N 32	118.36 W 103 24 44.69
	11620.00	1.60	357.30	11558.82	-228.69	-234.79	-670.74	0.40	372864.08	785418.03	N 32	118.39 W 103 24 44.69
	11715.00	1.30	354.60	11653.79	-226.37	-232.47	-670.90	0.22	372866.40	785417.87	N 32	118.41 W 103 24 44.69
	11809.00	1.00	343.30	11747.77	-224.52	-230.63	-671.23	0.40	372868.24	785417.54	N 32	118.43 W 103 24 44.70
	11873.00	1.10	348.20	11841.76	-223.39	-229.49	-671.52	0.21	372869.38	785417.25	N 32	118.44 W 103 24 44.70
	11949.00	1.30	343.80	11887.75	-221.84	-227.95	-671.91	0.29	372870.92	785416.86	N 32	118.45 W 103 24 44.70
	12012.00	1.00	338.30	11950.73	-220.64	-226.75	-672.31	0.51	372872.12	785416.46	N 32	118.47 W 103 24 44.71
	12107.00	0.80	332.90	12045.72	-219.33	-225.45	-673.02	0.33	372873.42	785415.75	N 32	118.48 W 103 24 44.72
	12201.00	10.60	9.30	12139.16	-210.26	-216.37	-672.01	10.71	372882.50	785416.76	N 32	118.57 W 103 24 44.70
	12295.00	23.90	4.50	12228.73	-182.65	-188.73	-669.11	14.22	372910.14	785419.66	N 32	118.84 W 103 24 44.67
	12390.00	38.30	2.20	12309.87	-133.82	-139.87	-666.46	15.21	372959.00	785422.31	N 32	119.32 W 103 24 44.63
	12484.00	52.00	39.70	12376.01	-67.36	-73.40	-665.53	14.69	373025.47	785423.24	N 32	119.98 W 103 24 44.61
	12578.00	56.60	355.50	12431.44	9.69	3.62	-668.84	6.03	373102.49	785419.93	N 32	120.74 W 103 24 44.64
	12674.00	67.30	315.50	12476.05	93.21	87.09	-675.41	11.26	373185.96	785413.36	N 32	121.57 W 103 24 44.71
	12768.00	75.20	315.10	12506.24	181.91	175.73	-682.70	8.41	373274.60	785406.07	N 32	122.45 W 103 24 44.79
	12863.00	78.60	366.20	12527.77	274.22	267.97	-689.71	3.75	373366.84	785399.06	N 32	123.36 W 103 24 44.86
	12958.00	95.30	318.90	12532.81	368.69	362.41	-693.73	17.80	373461.28	785395.04	N 32	124.30 W 103 24 44.90
Last Third Party Survey Begun SLB MWD Survey	13052.00	89.20	318.00	12529.12	462.56	456.26	-696.28	6.56	373555.13	785392.49	N 32	125.23 W 103 24 44.92
	13173.00	91.38	317.52	12528.51	583.49	577.15	-701.00	1.84	373676.02	785387.77	N 32	126.42 W 103 24 44.96
	13268.00	90.96	317.76	12526.57	678.42	672.05	-704.92	0.51	373770.92	785383.85	N 32	127.36 W 103 24 45.00
	13362.00	89.28	316.19	12526.37	772.33	765.92	-709.88	2.45	373864.79	785378.89	N 32	128.29 W 103 24 45.05
	13457.00	89.35	316.02	12527.51	867.16	860.69	-716.33	0.19	373959.56	785372.44	N 32	129.23 W 103 24 45.11
	13552.00	89.35	317.03	12528.59	962.02	955.51	-722.09	1.06	374054.38	785366.68	N 32	130.17 W 103 24 45.17
	13646.00	89.21	319.85	12529.77	1055.99	1049.46	-727.54	3.00	374148.33	785364.12	N 32	131.10 W 103 24 45.19
	13741.00	89.62	3.60	12530.74	1150.89	1144.39	-731.79	3.97	374243.26	785366.98	N 32	132.04 W 103 24 45.15
	13836.00	90.38	3.52	12530.74	1245.65	1239.21	-735.89	0.80	374338.08	785372.88	N 32	132.98 W 103 24 45.07
	13930.00	89.11	3.18	12531.16	1339.44	1333.04	-740.32	1.40	374431.91	785378.38	N 32	133.80 W 103 24 45.00
	14025.00	90.24	4.15	12531.70	1434.18	1427.84	-745.04	1.57	374526.72	785384.45	N 32	134.84 W 103 24 44.92
	14119.00	89.83	3.51	12531.64	1527.91	1521.63	-749.04	0.81	374620.51	785390.73	N 32	135.77 W 103 24 44.83
	14214.00	89.66	2.32	12532.06	1622.73	1616.51	-753.09	1.27	374715.38	785395.56	N 32	136.71 W 103 24 44.77
	14309.00	91.20	5.92	12531.35	1717.40	1711.24	-757.19	4.12	374810.11	785402.38	N 32	137.64 W 103 24 44.88
	14403.00	90.86	5.05	12529.66	1810.87	1804.80	-761.29	0.99				

Comments	MD	Incl	Azimuth	MD From	MD To	EOU Feet	Hole Size Casing Diameter (in)	Survey Tool Type	Borehole / Survey
1729.00	91.55	2.04	12519.33	4644.80	4644.80	4644.80	-738.92	31773.16	78539.85
1733.00	91.38	2.42	12516.92	4738.66	4738.66	4738.66	-735.26	31783.05	78533.51
1742.00	90.24	1.44	12515.58	4833.56	4833.56	4833.56	-732.06	31792.99	78536.70
1752.00	91.14	0.03	12514.51	4927.53	4927.53	4927.53	-730.67	31801.97	78538.00
1761.00	90.38	0.03	12513.31	5022.51	5022.51	5022.51	-729.63	31810.95	78539.30
1771.00	90.27	0.14	12512.77	5116.51	5116.51	5116.51	-729.49	31819.93	78540.60
1780.00	90.45	0.49	12512.18	5210.49	5210.49	5210.49	-729.97	31828.91	78541.90
1790.00	90.65	0.65	12511.27	5305.47	5305.47	5305.47	-729.03	31837.89	78543.20
1799.00	90.41	3.99	12510.40	5399.46	5399.46	5399.46	-728.53	31846.87	78544.50
1808.00	90.24	3.99	12509.87	5493.45	5493.45	5493.45	-728.76	31855.84	78545.80
1818.00	90.41	3.99	12509.33	5587.44	5587.44	5587.44	-729.14	31864.82	78547.10
1827.00	90.56	0.56	12508.56	5681.44	5681.44	5681.44	-728.86	31873.80	78548.40
1837.00	90.55	0.73	12507.68	5775.42	5775.42	5775.42	-728.80	31882.78	78549.70
1847.00	91.13	0.46	12506.29	5870.00	5870.00	5870.00	-728.81	31891.76	78551.00
1856.00	90.03	3.99	12505.33	5964.98	5964.98	5964.98	-728.02	31900.74	78552.30
1865.00	90.69	0.24	12504.74	6059.97	6059.97	6059.97	-727.82	31909.72	78553.60
1875.00	90.90	3.99	12503.43	6154.96	6154.96	6154.96	-727.68	31918.70	78554.90
1884.00	90.55	0.03	12502.24	6249.95	6249.95	6249.95	-727.71	31927.68	78556.20
1893.00	91.38	3.99	12501.64	6344.93	6344.93	6344.93	-728.18	31936.66	78557.50
1903.00	90.62	3.98	12499.00	6439.91	6439.91	6439.91	-730.06	31945.64	78558.80
1912.00	90.00	3.98	12496.50	6534.89	6534.89	6534.89	-733.05	31954.62	78560.10
1922.00	90.93	3.99	12494.55	6629.87	6629.87	6629.87	-733.05	31963.60	78561.40
1931.00	91.17	0.90	12492.65	6724.85	6724.85	6724.85	-735.46	31972.58	78562.70
1941.00	91.27	0.90	12490.65	6819.83	6819.83	6819.83	-733.98	31981.56	78564.00
1950.00	89.59	3.99	12494.94	6914.81	6914.81	6914.81	-733.38	31990.54	78565.30
1959.00	89.86	3.98	12495.65	7009.79	7009.79	7009.79	-734.96	31999.52	78566.60
1969.00	89.93	3.97	12495.57	7094.77	7094.77	7094.77	-738.19	32008.50	78567.90
1978.00	89.86	3.97	12495.74	7189.75	7189.75	7189.75	-741.68	32017.48	78569.20
1987.00	89.86	3.97	12495.98	7284.73	7284.73	7284.73	-745.11	32026.46	78570.50
1997.00	89.93	3.98	12496.15	7379.71	7379.71	7379.71	-748.28	32035.44	78571.80
2000.00	90.03	3.98	12496.17	7474.69	7474.69	7474.69	-749.53	32044.42	78573.10
20068.00	90.03	3.98	12496.14	7473.03	7466.53	7466.53	-750.81	32053.40	78574.40
Projection to Bit	20068.00	90.03	12496.14	7473.03	7466.53	7466.53	-750.81	32053.40	78574.40
Final SLB MWD	20020.00	90.03	12496.17	7425.04	7418.55	7418.55	-749.53	32057.42	78575.70
Survey Error Model:	ISOWSA Rev 0 ... 3-D 95.000% Confidence 2.7955 sigma								
Survey Type:	Non Def Survey								
Description	Part	MD From	MD To	EOU Feet	Hole Size Casing Diameter (in)	Survey Tool Type	Borehole / Survey		
1	0.000	26.500	1/98.425	30.000	30.000	NAL_MWD-NON_SLR-Depth Only	Original Hole / Marathon Madera 19 Fed Com 26-35-19 TB 1H MWD 0' to 20068		
1	26.500	26.500		30.000	30.000	NAL_MWD-NON_SLR-Depth Only	Original Hole / Marathon Madera 19 Fed Com 26-35-19 TB 1H MWD 0' to 20068		
1	26.500	11873.000		30.000	30.000	NAL_MWD-NON_SLR	Original Hole / Marathon Madera 19 Fed Com 26-35-19 TB 1H MWD 0' to 20068		
1	11873.000	20068.000		30.000	30.000	NAL_MWD_1.0_DEG	Original Hole / Marathon Madera 19 Fed Com 26-35-19 TB 1H MWD 0' to 20068		

Phone: (505) 393-6161 Fax: (505) 393-0720
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 Phone: (505) 748-1283 Fax: (505) 748-9720
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 1000 Rio Brazos Road, Aztec, NM 87410
 Phone: (505) 334-6178 Fax: (505) 334-6170
 District IV
 1220 S. St. Francis Dr., Santa Fe, NM 87505
 Phone: (505) 476-3460 Fax: (505) 476-3462

Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
 1220 South St. Francis Dr.
 Santa Fe, NM 87505

Revised August 1, 2011
 Submit one copy to appropriate
 District Office

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-44899	² Pool Code 96672	³ Pool Name WC-025 G-08 S263412K; BONE SPRING
⁴ Property Code	⁵ Property Name MADERA 19 TB FEDERAL	⁶ Well Number 1H
⁷ OGRID No. 372098	⁸ Operator Name MARATHON OIL PERMIAN LLC	⁹ Elevation 3185'

10 Surface Location

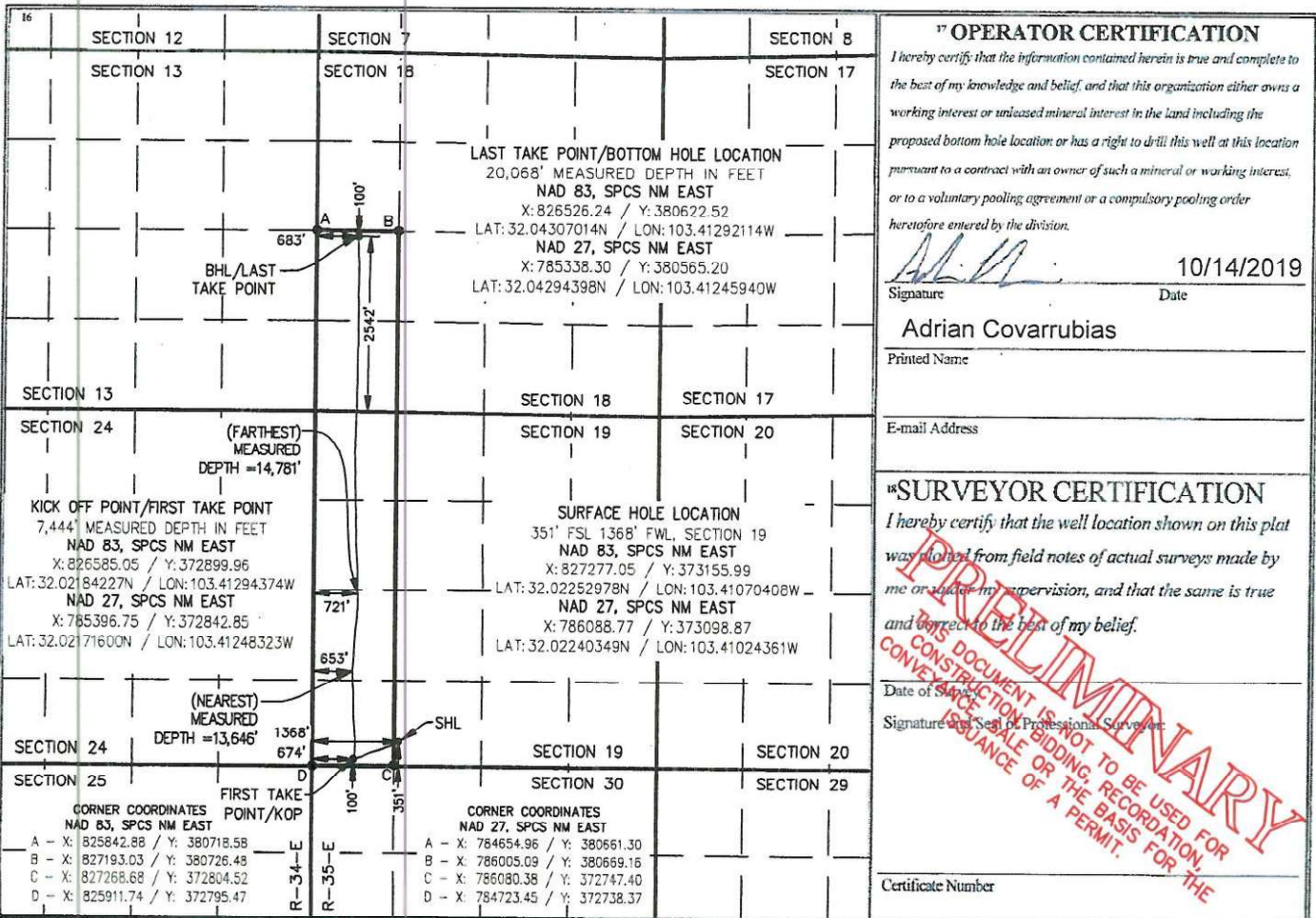
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	19	T26S	R35E		351'	SOUTH	1368'	WEST	LEA

11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L (LOT 3)	18	T26S	R35E		2542'	SOUTH	683'	WEST	LEA

¹² Dedicated Acres 245.60	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



DISTANCES/AREAS RELATIVE TO NAD83 COMBINED SCALE FACTOR: 0.99985482
 CONVERGENCE: 0.49063811; NOTE: ALL DIMENSIONS IN U.S. FEET

1	2/21/19	DEF
REV.	DATE	BY