

Marathon Oil Company
Indian Hills Unit No. 30, #30 ST2
Indian Basin, EDDY COUNTY, NM.

SURVEY LISTING Page 1
Your ref : ST2 BHI MWD 4200'-10696'
Last revised : 23-Aug-2001

Measured Depth	Inclin. Degrees	Azimuth Degrees	True Vert Depth	R E C T A N G U L A R C O O R D I N A T E S		Dogleg Deg/100ft	Vert Sect	
0.00	0.00	0.00	0.00	0.00 N	0.00 E	0.00	0.00	
100.00	0.40	301.14	100.00	0.18 N	0.30 W	0.40	0.09	GYRODATA GYRO SURVEY 0'-7025'
200.00	0.30	266.90	200.00	0.35 N	0.86 W	0.23	0.09	Date Ran: 06.07.01
300.00	0.34	276.86	300.00	0.37 N	1.41 W	0.07	-0.04	Surveyor: John Zugg
400.00	0.22	203.21	399.99	0.23 N	1.79 W	0.35	-0.28	
500.00	0.39	155.07	499.99	0.26 S	1.72 W	0.29	-0.73	
600.00	0.46	163.42	599.99	0.95 S	1.46 W	0.09	-1.32	
700.00	0.12	190.51	699.99	1.44 S	1.36 W	0.36	-1.76	
800.00	0.41	118.15	799.99	1.71 S	1.07 W	0.39	-1.94	
900.00	0.45	121.63	899.99	2.09 S	0.42 W	0.05	-2.12	
1000.00	0.71	130.16	999.98	2.69 S	0.39 E	0.27	-2.48	
1100.00	1.07	150.07	1099.97	3.90 S	1.33 E	0.47	-3.37	
1200.00	1.09	148.90	1199.95	5.52 S	2.29 E	0.03	-4.67	TIED TO GYRODATA SURVEY AT MD:1200'
1318.00	1.40	151.70	1317.92	7.75 S	3.55 E	0.27	-6.45	OH BHI MWD 1318'-7555'
1385.00	1.10	134.00	1384.91	8.92 S	4.40 E	0.72	-7.34	
1433.00	1.50	62.40	1432.90	8.95 S	5.29 E	3.24	-7.12	
1483.00	2.50	50.80	1482.87	7.96 S	6.71 E	2.15	-5.77	
1572.00	4.80	38.80	1571.68	3.83 S	10.55 E	2.71	-0.73	
1635.00	6.40	31.10	1634.38	1.23 N	14.02 E	2.80	5.10	
1696.00	8.00	25.80	1694.90	7.97 N	17.62 E	2.84	12.57	
1759.00	9.40	23.70	1757.17	16.62 N	21.60 E	2.28	21.99	
1822.00	10.60	21.90	1819.21	26.71 N	25.83 E	1.97	32.86	
1879.00	11.70	20.50	1875.14	36.99 N	29.81 E	1.99	43.84	
1942.00	12.90	19.50	1936.69	49.60 N	34.39 E	1.93	57.23	
2004.00	14.30	19.10	1996.95	63.36 N	39.21 E	2.26	71.79	
2086.00	15.60	19.10	2076.17	83.35 N	46.13 E	1.59	92.92	
2149.00	15.80	19.10	2136.82	99.46 N	51.71 E	0.32	109.94	
2211.00	16.40	19.80	2196.39	115.67 N	57.43 E	1.02	127.11	
2274.00	16.60	19.80	2256.79	132.51 N	63.49 E	0.32	144.97	
2365.00	16.70	20.20	2343.98	157.01 N	72.41 E	0.17	170.98	
2459.00	16.60	20.90	2434.04	182.23 N	81.87 E	0.24	197.84	
2522.00	16.30	21.20	2494.46	198.88 N	88.27 E	0.49	215.61	
2585.00	16.20	21.60	2554.94	215.29 N	94.71 E	0.24	233.17	
2679.00	16.90	20.90	2645.05	240.25 N	104.41 E	0.77	259.84	
2742.00	17.10	20.90	2705.30	257.46 N	110.98 E	0.32	278.20	
2804.00	17.10	21.20	2764.55	274.47 N	117.53 E	0.14	296.37	
2897.00	17.30	21.20	2853.40	300.11 N	127.47 E	0.22	323.76	
2992.00	17.90	18.80	2943.95	327.10 N	137.28 E	0.99	352.42	
3061.00	18.20	17.00	3009.55	347.44 N	143.85 E	0.92	373.79	
3154.00	16.70	16.70	3098.27	374.13 N	151.94 E	1.62	401.67	
3247.00	15.60	16.70	3187.60	398.91 N	159.37 E	1.18	427.54	
3339.00	15.10	16.30	3276.32	422.26 N	166.29 E	0.56	451.89	
3433.00	15.30	17.00	3367.03	445.87 N	173.35 E	0.29	476.54	
3525.00	15.50	18.80	3455.73	469.12 N	180.86 E	0.56	500.96	
3589.00	16.20	20.50	3517.29	485.57 N	186.75 E	1.31	518.40	
3651.00	16.70	21.60	3576.76	501.96 N	193.05 E	0.95	535.89	
3713.00	16.10	21.20	3636.23	518.25 N	199.44 E	0.98	553.33	
3774.00	15.80	20.50	3694.88	533.92 N	205.41 E	0.58	570.04	
3836.00	15.80	20.20	3754.54	549.75 N	211.28 E	0.13	586.87	
3899.00	15.60	19.80	3815.19	565.77 N	217.11 E	0.36	603.88	

All data is in feet unless otherwise stated.
Coordinates from slot #1 and TVD from rotary table.
Bottom hole distance is 2648.20 on azimuth 16.86 degrees from wellhead.
Vertical section is from wellhead on azimuth 16.21 degrees.
Calculation uses the minimum curvature method.
Presented by Baker Hughes INTEQ

