

30-015-32594

Marathon Oil Company
IHU 37 "Y"

slot #1
Indian Basin
EDDY COUNTY, NM.

SURVEY LISTING

by
Baker Hughes INTEQ

Your ref : MWD
Our ref : svy2135
License :

Date printed : 23-Jan-2003
Date created : 6-Jan-2003
Last revised : 23-Jan-2003

Field is centred on n32 30 0.000,w104 30 0
Structure is centred on 443420.500,534335.300,999.00000,N

Slot location is n32 28 7.917,w104 31 0.446
Slot Grid coordinates are N 534335.300, E 443420.500
Slot local coordinates are 0.00 N 0.00 E

Projection type: mercator - New Mexico East (3001), Spheroid: Clarke - 1866

Reference North is Grid North



Marathon Oil Company
IHU 37 "Y", slot #1
Indian Basin, EDDY COUNTY, NM.

SURVEY LISTING Page 1
Your ref : MWD
Last revised : 23-Jan-2003

Measured Depth	Inclin Degrees	Azimuth Degrees	True Vert Depth	RECTANGULAR COORDINATES		Dogleg Deg/100ft	Vert Sect	GRID COORDS Easting Northing	
0.00	0.00	0.00	0.00	0.00N	0.00E	0.00	0.00	443420.50	534335.30
265.00	1.00	339.00	264.99	2.16N	0.83W	0.38	-1.31	443419.67	534337.46
573.00	0.50	326.00	572.96	5.78N	2.54W	0.17	-3.31	443417.96	534341.08
880.00	0.75	291.00	879.94	7.61N	5.17W	0.14	-3.33	443415.33	534342.91
1231.00	0.75	331.00	1230.91	10.45N	8.43W	0.15	-3.81	443412.07	534345.75
1550.00	0.75	29.00	1549.89	14.10N	8.43W	0.23	-6.81	443412.07	534349.40
1772.00	0.75	54.00	1771.87	16.22N	6.55W	0.15	-9.63	443413.95	534351.52
1842.00	0.26	123.40	1841.87	16.40N	6.04W	1.00	-10.07	443414.46	534351.70
1874.00	0.62	205.60	1873.87	16.21N	6.06W	2.00	-9.90	443414.44	534351.51
1905.00	1.49	206.40	1904.86	15.70N	6.31W	2.81	-9.33	443414.19	534351.00
1937.00	1.62	219.00	1936.85	14.97N	6.78W	1.14	-8.47	443413.72	534350.27
1968.00	2.20	219.60	1967.83	14.17N	7.43W	1.87	-7.44	443413.07	534349.47
2000.00	3.30	219.00	1999.80	12.98N	8.41W	3.44	-5.91	443412.09	534348.28
2032.00	3.90	223.20	2031.73	11.47N	9.73W	2.05	-3.91	443410.77	534346.77
2063.00	4.20	227.10	2062.66	9.93N	11.28W	1.31	-1.76	443409.22	534345.23
2094.00	5.40	232.00	2093.55	8.26N	13.26W	4.09	0.74	443407.24	534343.56
2126.00	6.20	239.10	2125.38	6.45N	15.93W	3.35	3.75	443404.57	534341.75
2158.00	7.50	242.60	2157.16	4.60N	19.27W	4.26	7.16	443401.23	534339.90
2190.00	8.00	243.30	2188.86	2.64N	23.11W	1.59	10.96	443397.39	534337.94
2222.00	9.30	242.90	2220.50	0.46N	27.41W	4.07	15.19	443393.09	534335.76
2253.00	10.00	241.50	2251.06	1.97S	32.00W	2.38	19.80	443388.50	534333.33
2285.00	10.55	242.60	2282.55	4.64S	37.04W	1.82	24.86	443383.46	534330.66
2316.00	11.16	237.30	2312.99	7.57S	42.09W	3.77	30.14	443378.41	534327.73
2347.00	11.50	229.20	2343.39	11.21S	46.95W	5.24	35.90	443373.55	534324.09
2379.00	12.80	227.10	2374.67	15.70S	51.96W	4.29	42.45	443368.54	534319.60
2411.00	13.60	225.00	2405.83	20.78S	57.22W	2.91	49.61	443363.28	534314.52
2443.00	13.80	222.50	2436.92	26.25S	62.46W	1.95	57.09	443358.04	534309.05
2474.00	14.10	219.70	2467.00	31.88S	67.37W	2.38	64.51	443353.13	534303.42
2506.00	15.10	218.00	2497.97	38.17S	72.43W	3.40	72.56	443348.07	534297.13
2569.00	17.00	214.40	2558.51	52.23S	82.68W	3.40	89.96	443337.82	534283.07
2633.00	17.50	213.40	2619.63	67.99S	93.26W	0.91	108.94	443327.24	534267.31
2695.00	17.70	216.50	2678.73	83.35S	104.00W	1.55	127.68	443316.50	534251.95
2758.00	17.90	214.10	2738.72	99.06S	115.13W	1.21	146.93	443305.37	534236.24
2822.00	18.20	216.20	2799.57	115.27S	126.54W	1.12	166.76	443293.96	534220.03
2885.00	17.70	212.70	2859.50	131.27S	137.53W	1.89	186.16	443282.97	534204.03
2949.00	17.80	214.80	2920.46	147.49S	148.37W	1.01	205.67	443272.13	534187.81
3012.00	17.80	214.10	2980.44	163.37S	159.26W	0.34	224.93	443261.24	534171.93
3075.00	18.50	215.20	3040.31	179.51S	170.42W	1.24	244.55	443250.08	534155.79
3139.00	18.20	214.10	3101.05	196.09S	181.88W	0.72	264.70	443238.62	534139.21
3199.00	17.00	210.90	3158.24	211.37S	191.64W	2.57	282.82	443228.86	534123.93
3262.00	17.20	211.30	3218.46	227.24S	201.21W	0.37	301.31	443219.29	534108.06
3325.00	17.40	211.30	3278.61	243.24S	210.94W	0.32	320.02	443209.56	534092.06
3389.00	17.70	212.30	3339.63	259.64S	221.11W	0.66	339.29	443199.39	534075.66
3453.00	17.70	212.70	3400.60	276.05S	231.56W	0.19	358.73	443188.94	534059.25
3516.00	17.80	211.60	3460.60	292.31S	241.78W	0.56	377.92	443178.72	534042.99
3580.00	16.90	212.00	3521.69	308.54S	251.84W	1.42	396.98	443168.66	534026.76
3636.00	16.70	211.90	3575.30	322.27S	260.40W	0.36	413.15	443160.10	534013.03
3698.00	16.50	211.30	3634.72	337.36S	269.69W	0.42	430.84	443150.81	533997.94
3777.00	16.80	211.60	3710.40	356.67S	281.50W	0.40	453.44	443139.00	533978.63
3841.00	16.20	211.60	3771.77	372.15S	291.02W	0.94	471.59	443129.48	533963.15

All data in feet unless otherwise stated. Calculation uses minimum curvature method.
Coordinates from slot #1 and TVD from rotary table.
Bottom hole distance is 1752.76 on azimuth 214.75 degrees from wellhead.
Vertical section is from N 0.00 E 0.00 on azimuth 214.62 degrees.
Grid is mercator - New Mexico East (3001).
Grid coordinates in FEET and computed using the Clarke - 1866 spheroid
Presented by Baker Hughes INTEQ

Marathon Oil Company
IHU 37 "Y", slot #1
Indian Basin, EDDY COUNTY, NM.

SURVEY LISTING Page 2
Your ref : MND
Last revised : 23-Jan-2003

Measured Depth	Inclin Degrees	Azimuth Degrees	True Vert Depth	RECTANGULAR COORDINATES		Dogleg Deg/100ft	Vert Sect	GRID COORDS Easting Northing	
3872.00	16.10	211.60	3801.54	379.49S	295.54W	0.32	480.20	443124.96	533955.81
3935.00	16.90	211.30	3861.95	394.76S	304.87W	1.28	498.07	443115.63	533940.54
3998.00	16.90	211.60	3922.23	410.38S	314.43W	0.14	516.35	443106.07	533924.92
4061.00	16.90	211.60	3982.51	425.98S	324.03W	0.00	534.64	443096.47	533909.32
4125.00	16.60	210.20	4043.79	441.80S	333.50W	0.79	553.05	443087.00	533893.50
4188.00	16.20	210.60	4104.23	457.15S	342.50W	0.66	570.79	443078.00	533878.15
4251.00	15.90	208.00	4164.77	472.33S	351.02W	1.24	588.13	443069.48	533862.97
4315.00	15.70	206.40	4226.36	487.83S	358.99W	0.75	605.40	443061.51	533847.47
4378.00	16.20	207.10	4286.93	503.28S	366.78W	0.85	622.55	443053.72	533832.02
4441.00	15.20	205.70	4347.58	518.55S	374.37W	1.70	639.43	443046.13	533816.75
4504.00	14.20	207.40	4408.52	532.85S	381.51W	1.73	655.25	443038.99	533802.45
4565.00	14.00	213.70	4467.68	545.64S	389.04W	2.54	670.05	443031.46	533789.66
4628.00	13.30	215.50	4528.90	557.88S	397.48W	1.30	684.92	443023.02	533777.42
4690.00	13.90	215.50	4589.16	569.74S	405.95W	0.97	699.50	443014.55	533765.56
4752.00	14.90	214.10	4649.22	582.41S	414.74W	1.71	714.91	443005.76	533752.89
4816.00	15.40	211.30	4710.99	596.48S	423.77W	1.38	731.62	442996.73	533738.82
4879.00	14.20	215.50	4771.90	609.92S	432.60W	2.55	747.70	442987.90	533725.38
4941.00	14.00	215.50	4832.03	622.22S	441.37W	0.32	762.80	442979.13	533713.08
4972.00	14.30	214.10	4862.09	628.44S	445.70W	1.47	770.38	442974.80	533706.86
5036.00	12.90	214.80	4924.30	640.85S	454.21W	2.20	785.43	442966.29	533694.45
5099.00	13.80	214.40	4985.60	652.83S	462.47W	1.44	799.98	442958.03	533682.47
5163.00	14.60	215.50	5047.64	665.69S	471.46W	1.32	815.68	442949.04	533669.61
5226.00	14.70	214.80	5108.59	678.72S	480.63W	0.32	831.61	442939.87	533656.58
5288.00	14.90	215.20	5168.53	691.69S	489.72W	0.36	847.45	442930.78	533643.61
5350.00	14.30	214.50	5228.53	704.52S	498.65W	1.01	863.07	442921.85	533630.78
5412.00	14.30	214.80	5288.61	717.12S	507.36W	0.12	878.39	442913.14	533618.18
5444.00	14.60	213.80	5319.60	723.71S	511.86W	1.22	886.37	442908.64	533611.59
5506.00	14.30	212.30	5379.64	736.68S	520.30W	0.77	901.84	442900.20	533598.62
5568.00	14.30	210.90	5439.72	749.72S	528.32W	0.56	917.13	442892.18	533585.58
5632.00	15.20	215.50	5501.61	763.33S	537.25W	2.31	933.41	442883.25	533571.97
5695.00	14.90	215.60	5562.45	776.64S	546.76W	0.48	949.76	442873.74	533558.66
5758.00	15.10	218.00	5623.30	789.70S	556.53W	1.04	966.05	442863.97	533545.60
5790.00	15.50	217.60	5654.17	796.37S	561.70W	1.29	974.48	442858.80	533538.93
5822.00	14.80	217.60	5685.06	802.99S	566.81W	2.19	982.83	442853.69	533532.31
5884.00	13.50	219.00	5745.17	814.89S	576.19W	2.17	997.96	442844.31	533520.41
5947.00	12.60	220.40	5806.55	825.84S	585.27W	1.51	1012.13	442835.23	533509.46
5979.00	12.30	221.50	5837.79	831.05S	589.79W	1.19	1018.98	442830.71	533504.25
6011.00	12.80	222.90	5869.03	836.20S	594.47W	1.83	1025.88	442826.03	533499.10
6043.00	13.40	224.60	5900.20	841.44S	599.48W	2.23	1033.04	442821.02	533493.86
6075.00	13.90	224.60	5931.29	846.81S	604.79W	1.56	1040.47	442815.71	533488.49
6106.00	14.80	224.30	5961.32	852.30S	610.17W	2.91	1048.04	442810.33	533483.00
6138.00	15.20	223.60	5992.23	858.26S	615.91W	1.37	1056.22	442804.59	533477.04
6201.00	15.10	223.20	6053.04	870.23S	627.23W	0.23	1072.49	442793.27	533465.07
6265.00	15.60	219.00	6114.76	882.99S	638.35W	1.90	1089.31	442782.15	533452.31
6327.00	15.80	216.20	6174.45	896.28S	648.58W	1.26	1106.06	442771.92	533439.02
6390.00	15.80	212.70	6235.07	910.42S	658.28W	1.51	1123.21	442762.22	533424.88
6453.00	15.90	212.30	6295.68	924.93S	667.52W	0.24	1140.40	442752.98	533410.37
6518.00	15.50	212.70	6358.25	939.77S	676.97W	0.64	1157.98	442743.53	533395.53
6582.00	16.60	213.00	6419.76	954.63S	686.57W	1.72	1175.67	442733.93	533380.67
6644.00	15.80	210.60	6479.29	969.32S	695.69W	1.68	1192.94	442724.81	533365.98

All data in feet unless otherwise stated. Calculation uses minimum curvature method.

Coordinates from slot #1 and TVD from rotary table.

Bottom hole distance is 1752.76 on azimuth 214.75 degrees from wellhead.

Vertical section is from N 0.00 E 0.00 on azimuth 214.62 degrees.

Grid is mercator - New Mexico East (3001).

Grid coordinates in FEET and computed using the Clarke - 1866 spheroid

Presented by Baker Hughes INTEQ

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	G R I D C O O R D S Easting Northing	
6708.00	15.60	206.40	6540.91	984.53S	703.96W	1.80	1210.15	442716.54	533350.77
6772.00	16.70	205.30	6602.38	1000.55S	711.71W	1.78	1227.74	442708.79	533334.75
6836.00	17.00	205.00	6663.63	1017.35S	719.60W	0.49	1246.04	442700.90	533317.95
6900.00	16.20	205.30	6724.97	1033.90S	727.37W	1.26	1264.07	442693.13	533301.40
6963.00	16.60	204.30	6785.40	1050.04S	734.82W	0.78	1281.60	442685.68	533285.26
7026.00	17.50	204.30	6845.63	1066.88S	742.43W	1.43	1299.77	442678.07	533268.42
7090.00	17.50	204.30	6906.67	1084.42S	750.35W	0.00	1318.71	442670.15	533250.88
7152.00	17.00	204.60	6965.88	1101.16S	757.95W	0.82	1336.80	442662.55	533234.14
7216.00	17.60	204.30	7026.99	1118.48S	765.83W	0.95	1355.53	442654.67	533216.82
7280.00	17.30	201.40	7088.04	1136.16S	773.28W	1.44	1374.32	442647.22	533199.14
7343.00	16.30	196.90	7148.36	1153.34S	779.27W	2.60	1391.86	442641.23	533181.96
7375.00	16.10	195.50	7179.09	1161.92S	781.76W	1.37	1400.33	442638.74	533173.38
7407.00	15.80	195.50	7209.85	1170.39S	784.11W	0.94	1408.64	442636.39	533164.91
7471.00	14.80	194.40	7271.58	1186.70S	788.48W	1.63	1424.54	442632.02	533148.60
7501.00	13.70	194.70	7300.66	1193.85S	790.33W	3.67	1431.48	442630.17	533141.45
7533.00	13.50	196.20	7331.76	1201.10S	792.33W	1.27	1438.58	442628.17	533134.20
7565.00	13.60	198.90	7362.87	1208.25S	794.59W	2.00	1445.75	442625.91	533127.05
7596.00	13.50	203.20	7393.01	1215.02S	797.20W	3.27	1452.80	442623.30	533120.28
7627.00	14.40	206.70	7423.10	1221.79S	800.36W	3.98	1460.17	442620.14	533113.51
7659.00	15.60	211.00	7454.01	1229.04S	804.36W	5.11	1468.40	442616.14	533106.26
7691.00	16.60	214.10	7484.75	1236.51S	809.14W	4.12	1477.27	442611.36	533098.79
7723.00	16.60	217.30	7515.42	1243.93S	814.47W	2.86	1486.41	442606.03	533091.37
7755.00	15.70	219.70	7546.16	1250.90S	820.01W	3.50	1495.29	442600.49	533084.40
7786.00	15.10	219.70	7576.04	1257.23S	825.27W	1.94	1503.49	442595.23	533078.07
7818.00	13.80	223.60	7607.03	1263.20S	830.56W	5.07	1511.41	442589.94	533072.10
7882.00	14.00	228.90	7669.16	1273.82S	841.66W	2.01	1526.45	442578.84	533061.48
7946.00	14.10	226.80	7731.25	1284.25S	853.18W	0.81	1541.57	442567.32	533051.05
8009.00	13.50	226.80	7792.43	1294.53S	864.13W	0.95	1556.26	442556.37	533040.77
8073.00	12.80	227.10	7854.75	1304.47S	874.77W	1.10	1570.49	442545.73	533030.83
8137.00	13.80	224.30	7917.03	1314.76S	885.30W	1.86	1584.93	442535.20	533020.54
8168.00	14.10	223.60	7947.12	1320.14S	890.48W	1.11	1592.31	442530.02	533015.16
8232.00	14.20	222.50	8009.18	1331.58S	901.16W	0.45	1607.78	442519.34	533003.72
8296.00	13.90	221.50	8071.26	1343.12S	911.56W	0.60	1623.19	442508.94	532992.18
8357.00	14.40	220.40	8130.41	1354.39S	921.33W	0.93	1638.01	442499.17	532980.91
8420.00	14.70	220.40	8191.39	1366.44S	931.59W	0.48	1653.76	442488.91	532968.86
8483.00	14.40	221.50	8252.37	1378.39S	941.96W	0.65	1669.49	442478.54	532956.91
8546.00	14.60	222.20	8313.36	1390.14S	952.48W	0.42	1685.14	442468.02	532945.16
8641.00	14.50	222.90	8405.32	1407.72S	968.62W	0.21	1708.78	442451.88	532927.58
8737.00	14.50	223.40	8498.26	1425.26S	985.06W	0.13	1732.55	442435.44	532910.04
8770.00	14.20	223.20	8530.23	1431.21S	990.67W	0.92	1740.63	442429.83	532904.09
8820.00	14.20	223.20	8578.70	1440.15S	999.07W	0.00	1752.76	442421.43	532895.15

All data in feet unless otherwise stated. Calculation uses minimum curvature method.

Coordinates from slot #1 and TVD from rotary table.

Bottom hole distance is 1752.76 on azimuth 214.75 degrees from wellhead.

Vertical section is from N 0.00 E 0.00 on azimuth 214.62 degrees.

Grid is mercator - New Mexico East (3001).

Grid coordinates in FEET and computed using the Clarke - 1866 spheroid

Presented by Baker Hughes INTEQ

Marathon Oil Company
IHU 37 "Y", slot #1
Indian Basin, EDDY COUNTY, NM.

SURVEY LISTING Page 4
Your ref : MWD
Last revised : 23-Jan-2003

<u>Comments in wellpath</u>			
MD	TVD	Rectangular Coords.	Comment
265.00	264.99	2.16N	0.83W SS
573.00	572.96	5.78N	2.54W SS
880.00	879.94	7.61N	5.17W SS
1231.00	1230.91	10.45N	8.43W SS
1550.00	1549.89	14.10N	8.43W SS
1772.00	1771.87	16.22N	6.55W SS

NO PROPOSAL

Marathon Oil Company

Structure : IHU 37 Y

Slot : slot #1

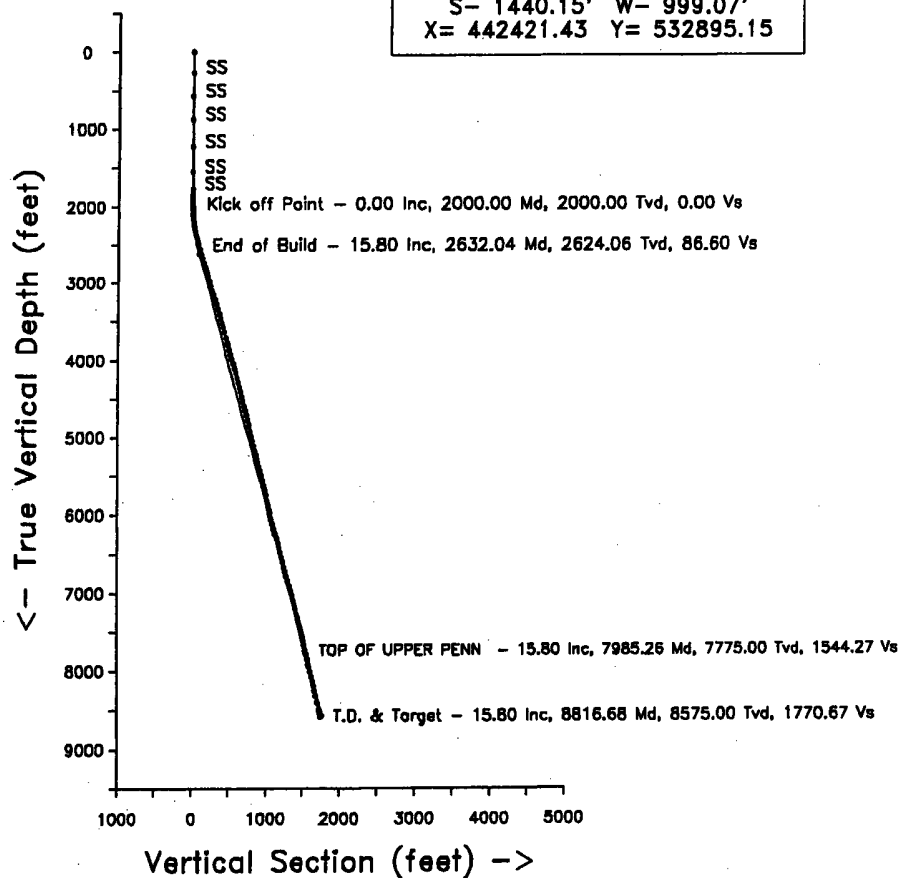
Field : Indian Basin

Location : EDDY COUNTY, NM.

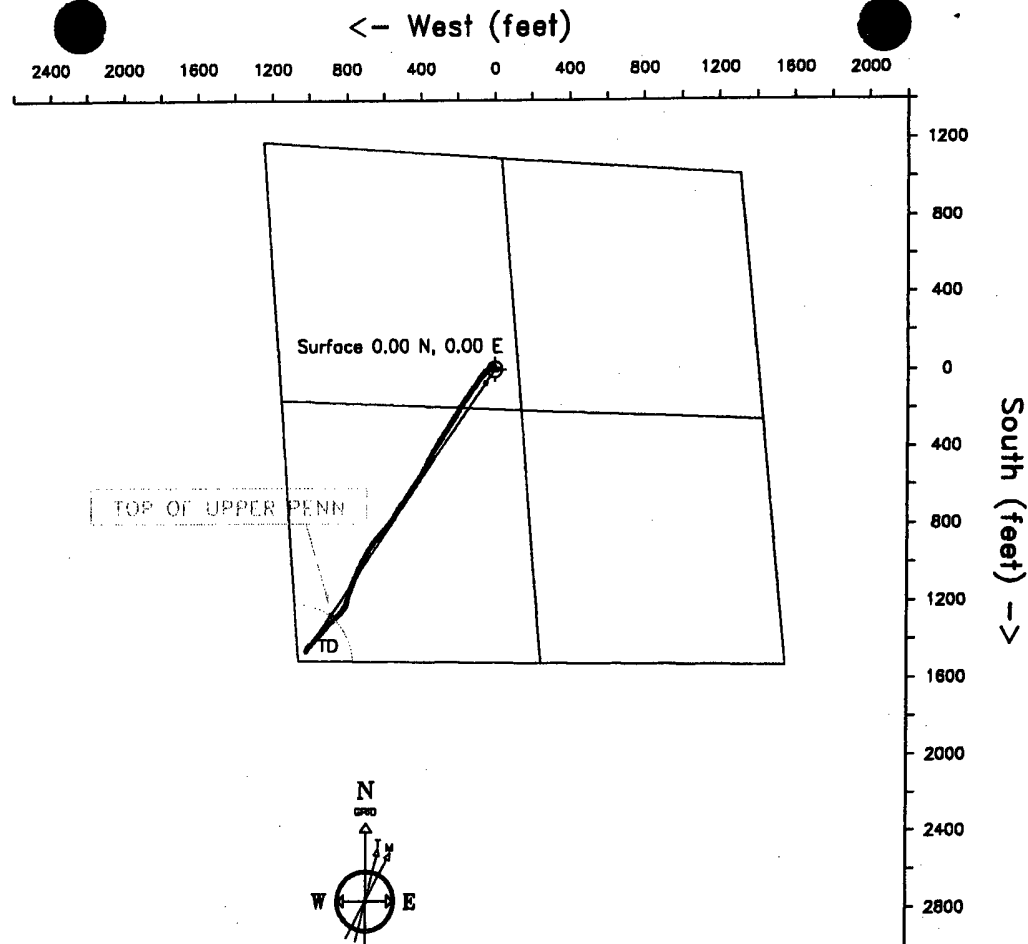
WELL PROFILE DATA

Point	MD	Inc	Dir	TVD	North	East	V. Sect	Dep/100
File on	0.00	0.00	214.82	0.00	0.00	0.00	0.00	0.00
KOP	2000.00	0.00	214.82	2000.00	0.00	0.00	0.00	0.00
End of Build	2432.04	15.80	214.82	2624.06	-71.27	-48.20	88.80	2.50
T.D. & Target TD	8816.68	15.80	214.82	8576.00	-1457.20	-1005.90	1770.67	0.00

BOTTOM HOLE LOCATION
1752.76' ON AZI 214.75 DEGS
FROM SURFACE LOCATION
M.D: 8820.00' T.V.D: 8578.70'
S- 1440.15' W- 999.07'
X= 442421.43 Y= 532895.15



Azimuth 214.62 with reference 0.00 N, 0.00 E from slot #1



6-Jan-2008 (source: BGGM)
Magnetic North is 8.01 degrees East of True North
GRID North is 0.10 degrees West of True North
To correct azimuth from True to GRID add 0.10 deg
To correct azimuth from Magnetic to GRID add 8.11 deg



**BAKER
HUGHES**

INTEQ

Created By kellym
Date plotted : 23-Jan-2003
Plot Reference is PD 2DJ DH .
Coordinates are in feet reference slot #1.
True Vertical Depths are reference rotary table.
37yil
--- Baker Hughes INTEQ ---

Well Name and Number: Indian Hills Unit #37

Location: Sec. 20, T21S, R24E, Eddy County, NM

Operator: Marathon Oil Company

Drilling Contractor: McVay Drilling Company

The undersigned certifies that he is an authorized representative of the drilling contractor who drilled the above described well and that he has conducted deviation tests and obtained the following results:

Degrees @ Depth		Degrees @ Depth		Degrees @ Depth	
1/4	235	16	3580	15 1/2	6518
1/4	483	16 3/4	3777	15 3/4	6644
1	265	16	3872	15 1/2	6708
1/2	573	17	4061	17	6836
3/4	880	16 1/2	4125	17 1/2	7026
3/4	1231	15 3/4	4251	17 1/2	7216
3/4	1550	16 1/4	4378	16 1/4	7343
3/4	1772	13 1/2	4628	14 3/4	7471
3	1845	15 1/2	4816	15 3/4	7659
1 1/2	1905	14 1/4	4972	15	7786
2 1/4	1968	14 1/2	5163	14	7882
8	2190	14 3/4	5288	13 1/2	8009
12 3/4	2379	14 1/2	5444	13 3/4	8137
14	2474	15 3/4	5695	13 3/4	8296
18	2758	14 3/4	5822	14 1/2	8483
17 3/4	3012	12 3/4	6011	14 1/2	8641
18 1/4	3139	15	6201	14 1/2	8737
17 3/4	3389	15 3/4	6390	14 1/4	8765



Drilling Contractor: McVay Drilling Company

By: Tina Fleming

Subscribed and sworn to before me this 22nd day of January, 2003

Tina Fleming
Notary Public

My Commission Expires: 8-16-05

Lea County, New Mexico