

Scientific Drilling International

Survey Report

Company: MARATHON OIL COMPANY
Field: Indian Basin
Site: Eddy County, NM
Well: Indian Basin "A" #4
Wellpath: VH - Job #32K0801457

Date: 8/30/2001
Co-ordinate(NE) Reference:
Vertical (TVD) Reference:
Section (VS) Reference:
Survey Calculation Method:

Time: 14:31:26
Site: Eddy County, NM, True North
SITE 0.0 above Mean Sea Level
Well (0.0E, 0.0N, 293.3Azi)
Minimum Curvature

Page: 1

Survey: 8/7/01
 KSRG 0'-9400'

Start Date: 8/8/2001

Company: Scientific Drilling International
Tool: Keeper

Engineer: Gary DeSpain

Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	ClsD ft	ClsA deg
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.00
100.0	0.08	10.45	100.0	0.0	0.1	0.0	0.1	10.45
200.0	0.22	38.95	200.0	0.0	0.3	0.1	0.3	27.00
300.0	0.28	356.11	300.0	0.0	0.7	0.3	0.7	20.20
400.0	0.45	349.36	400.0	0.4	1.3	0.2	1.3	7.01
500.0	0.82	352.41	500.0	1.0	2.4	0.0	2.4	359.86
600.0	1.08	353.87	600.0	1.8	4.1	-0.2	4.1	357.16
700.0	1.49	6.19	700.0	2.6	6.3	-0.2	6.3	358.53
800.0	1.89	17.36	799.9	3.2	9.1	0.5	9.2	2.95
900.0	1.94	28.25	899.9	3.2	12.2	1.8	12.3	8.22
1000.0	1.90	31.10	999.8	2.8	15.1	3.4	15.5	12.75
1100.0	1.70	33.67	1099.7	2.3	17.8	5.1	18.5	16.01
1200.0	1.57	33.22	1199.7	1.8	20.2	6.7	21.2	18.32
1300.0	1.47	31.69	1299.7	1.4	22.4	8.1	23.8	19.88
1400.0	1.49	31.01	1399.6	1.0	24.6	9.4	26.3	21.00
1500.0	1.53	33.27	1499.6	0.6	26.8	10.8	28.9	22.00
1600.0	1.48	38.16	1599.6	0.1	29.0	12.4	31.5	23.13
1700.0	1.48	43.75	1699.5	-0.7	30.9	14.1	34.0	24.47
1800.0	1.43	45.56	1799.5	-1.6	32.7	15.8	36.4	25.85
1900.0	1.45	47.16	1899.5	-2.6	34.5	17.7	38.7	27.15
2000.0	1.45	46.23	1999.4	-3.6	36.2	19.5	41.1	28.33
2100.0	1.47	44.63	2099.4	-4.6	38.0	21.3	43.6	29.31
2200.0	1.54	43.26	2199.4	-5.5	39.9	23.1	46.1	30.14
2300.0	1.58	46.36	2299.3	-6.5	41.8	25.1	48.7	30.95
2400.0	1.58	42.95	2399.3	-7.5	43.8	27.0	51.4	31.68
2500.0	1.55	45.27	2499.3	-8.5	45.7	28.9	54.1	32.30
2600.0	1.60	47.79	2599.2	-9.6	47.6	30.9	56.8	32.98
2700.0	1.64	49.06	2699.2	-10.8	49.5	33.0	59.5	33.71
2800.0	1.63	45.50	2799.1	-12.0	51.4	35.1	62.3	34.32
2900.0	1.66	44.57	2899.1	-13.0	53.4	37.1	65.1	34.79
3000.0	1.70	39.81	2999.1	-14.0	55.6	39.1	68.0	35.11
3100.0	1.71	36.06	3099.0	-14.7	58.0	40.9	71.0	35.23
3200.0	1.73	36.57	3199.0	-15.4	60.4	42.7	74.0	35.27
3300.0	1.74	34.82	3298.9	-16.0	62.8	44.5	77.0	35.29
3400.0	1.71	36.29	3398.9	-16.7	65.3	46.2	80.0	35.30
3500.0	1.46	36.28	3498.8	-17.3	67.5	47.9	82.8	35.33
3600.0	1.35	30.80	3598.8	-17.8	69.6	49.2	85.2	35.28
3700.0	1.28	23.78	3698.8	-17.9	71.6	50.3	87.5	35.08
3800.0	1.30	25.06	3798.8	-18.0	73.6	51.2	89.7	34.81
3900.0	1.22	20.81	3898.7	-18.0	75.7	52.1	91.8	34.53
4000.0	1.08	15.27	3998.7	-17.8	77.6	52.7	93.8	34.19
4100.0	0.84	341.43	4098.7	-17.2	79.2	52.7	95.1	33.65
4200.0	0.97	301.09	4198.7	-15.8	80.3	51.7	95.5	32.80
4300.0	1.25	280.64	4298.7	-13.9	80.9	49.9	95.1	31.68
4400.0	1.54	276.48	4398.6	-11.6	81.3	47.5	94.2	30.32
4500.0	1.88	265.76	4498.6	-8.8	81.3	44.6	92.7	28.72
4600.0	2.40	255.22	4598.5	-5.7	80.7	40.9	90.5	26.89
4700.0	2.91	253.21	4698.4	-2.1	79.4	36.5	87.4	24.66