

Scientific Drilling International

Survey Report

Company: PHILLIPS PETROLEUM	Date: 5/30/2002	Time: 09:22:29	Page: 1
Field: Vacuum Glorietta East	Co-ordinate(NE) Reference:	Site: Lea County, NM, True North	
Site: Lea County, NM	Vertical (TVD) Reference:	SITE 0.0 above Mean Sea Level	
Well: VGEU #25-02	Section (VS) Reference:	Well (0.0E,0.0N,13.0Azi)	
Wellpath: VH - Job #32K0502145	Survey Calculation Method:	Minimum Curvature	

Survey: 5/2/02 KSRG 0'-4600'	Start Date: 5/8/2002
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Company: Scientific Drilling Internatio	Engineer: Gary DeSpain
Tool: Keeper	

Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	ClsD ft	ClsA deg	DLS deg/100ft
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.00	0.00
100.0	0.18	349.83	100.0	0.1	0.2	0.0	0.2	349.83	0.18
200.0	0.07	351.83	200.0	0.3	0.4	-0.1	0.4	350.16	0.11
300.0	0.11	17.79	300.0	0.5	0.5	0.0	0.5	355.23	0.06
400.0	0.12	9.08	400.0	0.7	0.7	0.0	0.7	0.19	0.02
500.0	0.13	344.36	500.0	0.9	0.9	0.0	0.9	359.28	0.05
600.0	0.14	1.35	600.0	1.1	1.2	0.0	1.2	358.05	0.04
700.0	0.19	31.14	700.0	1.4	1.4	0.0	1.4	1.98	0.10
800.0	0.25	356.32	800.0	1.8	1.8	0.1	1.8	3.88	0.14
900.0	0.22	346.54	900.0	2.1	2.2	0.1	2.2	1.63	0.05
1000.0	0.31	325.05	1000.0	2.5	2.6	-0.1	2.6	356.97	0.13
1100.0	0.13	347.04	1100.0	2.8	2.9	-0.3	2.9	353.81	0.20
1200.0	0.04	318.05	1200.0	2.9	3.1	-0.4	3.1	353.18	0.10
1300.0	0.07	337.66	1300.0	3.0	3.1	-0.4	3.2	352.52	0.03
1400.0	0.07	322.02	1400.0	3.1	3.3	-0.5	3.3	351.71	0.02
1500.0	0.16	276.43	1500.0	3.1	3.3	-0.7	3.4	348.91	0.12
1600.0	0.11	277.97	1600.0	3.1	3.3	-0.9	3.5	345.20	0.05
1700.0	0.81	304.90	1700.0	3.3	3.8	-1.6	4.1	337.50	0.71
1800.0	1.38	310.70	1800.0	4.1	5.0	-3.1	5.8	328.36	0.58
1900.0	2.06	325.93	1899.9	5.9	7.2	-5.0	8.8	325.48	0.81
2000.0	2.66	338.71	1999.8	9.1	10.9	-6.8	12.8	327.91	0.79
2100.0	2.74	342.31	2099.7	13.0	15.3	-8.4	17.5	331.29	0.19
2200.0	2.95	351.97	2199.6	17.5	20.1	-9.5	22.3	334.81	0.52
2300.0	3.35	5.23	2299.5	22.8	25.6	-9.6	27.3	339.51	0.83
2400.0	4.01	13.14	2399.3	29.2	31.9	-8.5	33.0	345.07	0.83
2500.0	4.26	15.10	2499.0	36.4	38.9	-6.7	39.5	350.16	0.29
2600.0	4.64	22.62	2598.7	44.1	46.2	-4.2	46.4	354.78	0.70
2700.0	4.60	24.80	2698.4	52.0	53.6	-1.0	53.6	358.95	0.18
2800.0	3.95	29.59	2798.1	59.2	60.2	2.4	60.3	2.28	0.74
2900.0	3.46	31.72	2897.9	65.4	65.8	5.7	66.0	4.94	0.51
3000.0	2.90	30.78	2997.7	70.7	70.5	8.6	71.1	6.93	0.56
3100.0	2.14	28.49	3097.6	74.9	74.4	10.8	75.1	8.23	0.77
3200.0	1.55	34.09	3197.6	77.9	77.1	12.4	78.1	9.14	0.62
3300.0	0.96	43.44	3297.5	79.9	78.8	13.7	80.0	9.88	0.62
3400.0	0.54	49.49	3397.5	81.0	79.8	14.7	81.1	10.42	0.43
3500.0	0.31	65.46	3497.5	81.6	80.2	15.3	81.6	10.79	0.26
3600.0	0.32	137.66	3597.5	81.6	80.1	15.7	81.6	11.10	0.37
3700.0	0.59	165.20	3697.5	80.9	79.4	16.0	81.0	11.42	0.34
3800.0	0.83	168.87	3797.5	79.8	78.2	16.3	79.8	11.78	0.24
3900.0	0.78	172.17	3897.5	78.5	76.8	16.5	78.5	12.15	0.07
4000.0	0.84	178.60	3997.5	77.2	75.4	16.6	77.2	12.45	0.11
4100.0	0.89	187.30	4097.5	75.7	73.9	16.6	75.7	12.64	0.14
4200.0	0.92	190.48	4197.5	74.1	72.3	16.3	74.1	12.72	0.06
4300.0	0.75	198.07	4297.5	72.7	70.9	16.0	72.7	12.69	0.20
4400.0	0.84	194.93	4397.5	71.3	69.6	15.6	71.3	12.62	0.10
4500.0	0.95	188.48	4497.4	69.7	68.0	15.3	69.7	12.64	0.15
4600.0	0.89	163.60	4597.4	68.2	66.5	15.4	68.2	13.01	0.40