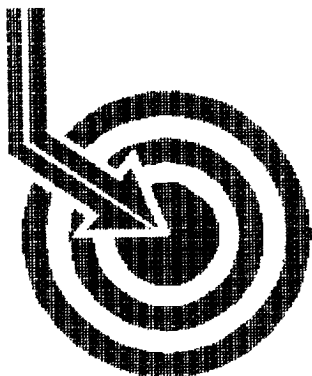




Scientific Drilling

PHILLIPS PETROLEUM

Field: Vacuum Glorietta East
Site: Lea County, NM
Well: EVGSAU #3333-004
Wellpath: VH - Job #32K0402134
Survey: 4/20/02

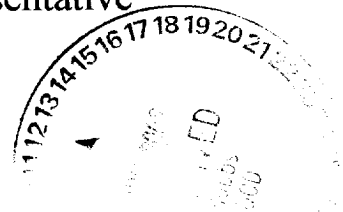
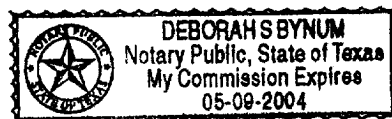
This survey is correct to the best of my knowledge
and is supported by actual field data.

Scott Mady.....Company Representative

Notorized this date 7th of May, 2002.

Deborah Sue Bynum

Notary Signature
County of Midland
State of Texas



Scientific Drilling International Survey Report

Company: PHILLIPS PETROLEUM
Field: Vacuum Giorietta East
Site: Lea County, NM
Well: EVGSAU #3333-004
Wellpath: VH - Job #32K0402134

Date: 5/2/2002
Co-ordinate(NE) Reference: Site: Lea County, NM, True North
Vertical (TVD) Reference: SITE 0.0 above Mean Sea Level
Section (VS) Reference: Well (0.0E,0.0N,240.0Azi)
Survey Calculation Method: Minimum Curvature

Page: 1

Survey: 4/20/02
KSRG 0'-4206'

Start Date: 5/2/2002

Company: Scientific Drilling International
Tool: Keeper

Engineer: Angel Guebara

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	0.30	146.77	100.0	0.0	-0.2	0.1	0.3	146.77	0.30
200.0	0.32	155.99	200.0	0.0	-0.7	0.4	0.8	149.97	0.05
300.0	0.43	157.00	300.0	0.1	-1.3	0.7	1.5	152.94	0.11
400.0	0.83	156.77	400.0	0.2	-2.3	1.1	2.6	154.62	0.40
500.0	0.50	157.89	500.0	0.4	-3.4	1.5	3.7	155.43	0.33
600.0	0.37	159.25	600.0	0.5	-4.1	1.8	4.5	155.95	0.13
700.0	0.62	159.16	700.0	0.6	-4.9	2.1	5.3	156.47	0.25
800.0	0.44	159.71	800.0	0.8	-5.8	2.5	6.3	156.90	0.18
900.0	0.46	160.73	900.0	0.9	-6.5	2.7	7.0	157.27	0.02
1000.0	0.46	162.73	1000.0	1.1	-7.3	3.0	7.8	157.73	0.02
1100.0	0.52	163.80	1100.0	1.3	-8.1	3.2	8.7	158.27	0.06
1200.0	0.52	166.45	1200.0	1.5	-8.9	3.4	9.6	158.92	0.02
1300.0	0.54	168.94	1300.0	1.8	-9.9	3.6	10.5	159.69	0.03
1400.0	0.57	169.29	1399.9	2.1	-10.8	3.8	11.5	160.49	0.02
1500.0	0.63	172.11	1499.9	2.5	-11.8	4.0	12.5	161.35	0.07
1600.0	0.64	174.30	1599.9	2.9	-13.0	4.1	13.6	162.31	0.03
1700.0	0.74	173.42	1699.9	3.4	-14.1	4.3	14.8	163.24	0.10
1800.0	0.81	172.14	1799.9	3.9	-15.5	4.4	16.1	164.04	0.07
1900.0	0.87	162.06	1899.9	4.3	-16.9	4.8	17.6	164.28	0.16
2000.0	0.90	157.06	1999.9	4.6	-18.4	5.3	19.1	163.89	0.08
2100.0	1.01	154.06	2099.9	4.7	-19.9	6.0	20.8	163.22	0.12
2200.0	1.18	153.29	2199.9	4.9	-21.6	6.8	22.6	162.42	0.18
2300.0	1.28	151.05	2299.8	4.9	-23.5	7.8	24.8	161.53	0.11
2400.0	1.32	139.38	2399.8	4.8	-25.3	9.1	26.9	160.17	0.27
2500.0	1.49	131.41	2499.8	4.1	-27.1	10.9	29.2	158.14	0.26
2600.0	1.44	122.08	2599.8	3.1	-28.6	12.9	31.4	155.72	0.24
2700.0	1.40	115.43	2699.7	1.8	-29.8	15.1	33.4	153.17	0.17
2800.0	1.29	108.88	2799.7	0.4	-30.7	17.2	35.2	150.67	0.19
2900.0	1.29	107.08	2899.7	-1.1	-31.4	19.4	36.9	148.30	0.04
3000.0	1.19	105.04	2999.6	-2.6	-32.0	21.4	38.5	146.14	0.11
3100.0	1.05	99.83	3099.6	-4.0	-32.4	23.4	39.9	144.21	0.17
3200.0	1.00	94.10	3199.6	-5.5	-32.6	25.1	41.2	142.38	0.11
3300.0	0.93	91.09	3299.6	-6.9	-32.7	26.8	42.3	140.64	0.08
3400.0	0.89	79.83	3399.6	-8.3	-32.6	28.4	43.2	138.91	0.18
3500.0	0.92	65.86	3499.6	-9.8	-32.1	29.9	43.9	137.03	0.22
3600.0	1.04	49.18	3599.6	-11.5	-31.2	31.3	44.2	134.87	0.31
3700.0	1.04	42.96	3699.5	-13.3	-29.9	32.6	44.3	132.53	0.11
3800.0	1.19	34.51	3799.5	-15.1	-28.4	33.8	44.2	130.02	0.22
3900.0	1.33	27.12	3899.5	-17.0	-26.5	34.9	43.9	127.20	0.22
4000.0	1.49	25.03	3999.5	-19.0	-24.3	36.0	43.5	124.02	0.17
4100.0	1.34	22.25	4099.4	-21.0	-22.0	37.0	43.1	120.78	0.16
4200.0	1.75	23.53	4199.4	-23.2	-19.6	38.1	42.8	117.20	0.40
4206.0	1.65	21.94	4205.4	-23.3	-19.4	38.1	42.8	116.96	1.81