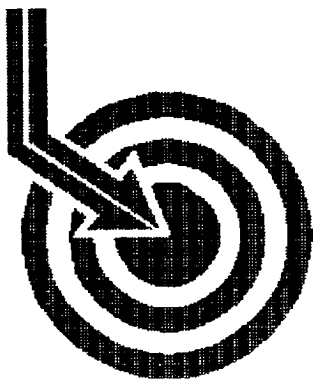




Scientific Drilling



PHILLIPS PETROLEUM

Field: Vacuum Glorietta East
Site: Lea County, NM
Well: EVGSAU #0524-036
Wellpath: HH - Job #32D0401219
Survey: 4/16/01-4/24/01

SUR: C-5-18s-35e
660/W & 1980/W
30-025-03058

BHL: D-5-18s-35e
660/W & 360/W

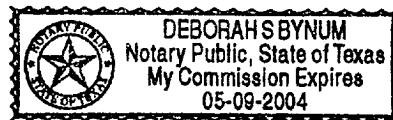
This survey is correct to the best of my knowledge
and is supported by actual field data.

[Signature]Company Representative

Notorized this date 24th of May, 2001.

Deborah Sue Bynum

Notary Signature
County of Midland
State of Texas



Scientific Drilling International

Survey Report

Company: PHILLIPS PETROLEUM	Date: 5/23/2001	Time: 17:50:30	Page: 1
Field: Vacuum Gionetta 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: EVGSAU #0524-036	Section (VS) Reference:	Well (0.0E, 0.0N, 85.4Az)	
Wellpath: VH - Job #32K0401224	Survey Calculation Method:	Minimum Curvature	

Survey: 4/17/01 KSRG 0'-4327'	Start Date: 5/23/2001
Company: Scientific Drilling International	Engineer: Jeff Cossey
Tool: Keeper	

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	0.28	11.30	100.0	0.1	0.2	0.0	0.2	11.30
200.0	0.48	338.33	200.0	0.0	0.9	-0.1	0.9	356.12
300.0	0.36	331.75	300.0	-0.2	1.5	-0.4	1.6	346.72
400.0	0.48	330.71	400.0	-0.5	2.2	-0.7	2.3	341.79
500.0	0.44	318.10	500.0	-0.9	2.8	-1.2	3.1	337.40
600.0	0.25	263.29	600.0	-1.4	3.1	-1.7	3.5	331.88
700.0	0.30	234.77	700.0	-1.8	2.9	-2.1	3.6	324.45
800.0	0.30	243.27	800.0	-2.3	2.6	-2.5	3.7	316.26
900.0	0.34	221.93	900.0	-2.8	2.3	-3.0	3.8	307.89
1000.0	0.29	176.22	1000.0	-3.0	1.8	-3.1	3.6	300.23
1100.0	0.24	172.39	1100.0	-3.0	1.4	-3.1	3.4	293.87
1200.0	0.59	200.59	1200.0	-3.2	0.7	-3.3	3.3	281.83
1300.0	0.68	202.97	1300.0	-3.7	-0.3	-3.7	3.7	264.59
1400.0	0.58	208.46	1400.0	-4.2	-1.3	-4.1	4.3	252.07
1500.0	0.49	217.36	1500.0	-4.8	-2.1	-4.6	5.1	245.40
1600.0	0.17	274.57	1600.0	-5.2	-2.5	-5.0	5.6	244.08
1700.0	0.18	284.88	1700.0	-5.5	-2.4	-5.3	5.9	245.82
1800.0	0.15	274.92	1800.0	-5.8	-2.3	-5.6	6.1	247.35
1900.0	0.05	201.07	1900.0	-5.9	-2.4	-5.8	6.2	247.62
2000.0	0.18	29.93	2000.0	-5.9	-2.3	-5.7	6.1	248.22
2100.0	0.02	194.16	2100.0	-5.8	-2.2	-5.6	6.0	249.01
2200.0	0.18	125.18	2200.0	-5.7	-2.3	-5.5	6.0	247.62
2300.0	0.13	133.15	2300.0	-5.5	-2.4	-5.3	5.8	245.30
2400.0	0.09	125.18	2400.0	-5.3	-2.6	-5.2	5.8	243.58
2500.0	0.38	118.37	2500.0	-5.0	-2.8	-4.8	5.5	240.06
2600.0	0.51	118.61	2600.0	-4.4	-3.1	-4.1	5.2	232.71
2700.0	0.70	89.80	2699.9	-3.4	-3.3	-3.1	4.6	222.95
2800.0	0.73	89.50	2799.9	-2.1	-3.3	-1.9	3.8	209.21
2900.0	0.58	82.82	2899.9	-1.0	-3.3	-0.7	3.3	192.53
3000.0	0.55	70.16	2999.9	0.0	-3.0	0.2	3.1	175.73
3100.0	0.46	58.52	3099.9	0.8	-2.7	1.0	2.9	159.08
3200.0	0.39	29.71	3199.9	1.4	-2.2	1.5	2.7	144.72
3300.0	0.32	345.32	3299.9	1.5	-1.6	1.6	2.3	134.45
3400.0	0.23	344.33	3399.9	1.4	-1.1	1.5	1.9	127.04
3500.0	0.21	4.75	3499.9	1.4	-0.8	1.5	1.7	117.40
3600.0	0.37	336.50	3599.9	1.3	-0.3	1.4	1.4	101.74
3700.0	0.48	342.53	3699.9	1.1	0.4	1.1	1.2	69.31
3800.0	0.49	348.72	3799.9	1.0	1.2	0.9	1.5	35.76
3900.0	0.45	357.23	3899.9	0.9	2.0	0.8	2.2	21.02
4000.0	0.51	3.88	3999.9	1.0	2.9	0.8	3.0	15.46
4100.0	0.50	9.32	4099.9	1.2	3.8	0.9	3.9	13.44
4200.0	0.98	340.28	4199.9	1.1	5.0	0.7	5.0	7.76
4300.0	0.89	328.96	4299.9	0.5	6.5	0.0	6.5	359.92
4327.0	0.55	332.98	4326.9	0.4	6.8	-0.2	6.8	358.51

Scientific Drilling International

Survey Report

Company: PHILLIPS PETROLEUM	Date: 5/23/2001	Time: 18:0121	Page: 1
Field: Vacuum Gionetta East	Co-ordinate(NE) Reference:	Site: Lea County, NM, True North	
Site: Lea County, NM	Vertical (TYD) Reference:	SITE 0.0 above Mean Sea Level	
Well: EVGSAU #0524-036	Section (VS) Reference:	Well (0.0E, 0.0N, 270.0Az)	
Wellpath: HH - Job #32D0401219	Survey Calculation Method:	Minimum Curvature	

Survey: 4/16/01-4/24/01 MWD 4346'-6097'	Start Date: 5/23/2001
Company: SDI w/Ryan	Engineer: Leonard/Brussard
Tool: MWD	

Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	ClsD ft	ClsA deg
4327.0	0.55	332.98	4326.9	0.2	6.8	-0.2	6.8	358.51
4346.0	2.10	284.60	4345.9	0.6	6.9	-0.6	6.9	355.42
4377.0	9.90	271.20	4376.7	3.8	7.1	-3.8	8.1	332.09
4408.0	17.80	270.90	4406.8	11.2	7.3	-11.2	13.3	302.97
4438.0	25.60	274.70	4434.6	22.2	7.9	-22.2	23.6	289.46
4468.0	33.50	274.00	4460.7	37.0	9.0	-37.0	38.1	283.63
4498.0	41.00	272.60	4484.5	55.1	10.0	-55.1	56.0	280.28
4528.0	48.40	271.20	4505.9	76.2	10.7	-76.2	76.9	277.98
4550.0	53.80	270.90	4519.7	93.3	11.0	-93.3	93.9	276.72
4562.0	56.10	270.10	4526.6	103.1	11.1	-103.1	103.7	276.13
4593.0	63.10	270.90	4542.2	129.8	11.3	-129.8	130.3	274.98
4624.0	66.30	270.90	4555.5	157.9	11.8	-157.9	158.3	274.26
4654.0	69.40	271.20	4566.8	185.6	12.3	-185.6	186.0	273.78
4685.0	72.90	271.90	4576.8	215.0	13.1	-215.0	215.4	273.48
4716.0	75.70	271.60	4585.2	244.8	14.0	-244.8	245.2	273.27
4747.0	78.60	270.50	4592.1	275.0	14.5	-275.0	275.4	273.02
4777.0	81.50	270.50	4597.3	304.5	14.8	-304.5	304.9	272.78
4807.0	82.50	270.50	4601.4	334.2	15.0	-334.2	334.6	272.58
4838.0	84.30	270.50	4605.0	365.0	15.3	-365.0	365.4	272.40
4869.0	86.80	269.80	4607.4	395.9	15.4	-395.9	396.2	272.23
4900.0	87.80	270.10	4608.9	426.9	15.4	-426.9	427.2	272.06
4931.0	88.30	269.80	4609.9	457.9	15.3	-457.9	458.1	271.92
4961.0	88.10	270.50	4610.9	487.9	15.4	-487.9	488.1	271.81
4992.0	88.00	269.00	4611.9	518.9	15.3	-518.9	519.1	271.69
5024.0	86.70	269.50	4613.4	550.8	14.9	-550.8	551.0	271.55
5055.0	87.10	269.50	4615.1	581.8	14.6	-581.8	582.0	271.44
5086.0	86.10	269.10	4616.9	612.7	14.2	-612.7	612.9	271.33
5116.0	85.70	268.40	4619.1	642.6	13.6	-642.6	642.8	271.21
5146.0	86.60	268.70	4621.1	672.6	12.8	-672.6	672.7	271.09
5177.0	85.60	268.40	4623.2	703.5	12.0	-703.5	703.6	270.98
5208.0	83.80	268.70	4626.1	734.3	11.2	-734.3	734.4	270.88
5239.0	84.30	268.00	4629.3	765.1	10.3	-765.1	765.2	270.77
5270.0	85.10	267.70	4632.1	796.0	9.2	-796.0	796.0	270.66
5301.0	83.80	268.00	4635.1	826.8	8.0	-826.8	826.9	270.56
5332.0	84.10	268.00	4638.4	857.6	7.0	-857.6	857.7	270.46
5363.0	83.50	267.00	4641.7	888.4	5.6	-888.4	888.4	270.36
5394.0	84.20	266.60	4645.1	919.2	3.9	-919.2	919.2	270.24
5425.0	84.50	266.00	4648.1	950.0	1.9	-950.0	950.0	270.11
5456.0	83.70	267.70	4651.3	980.8	0.2	-980.8	980.8	270.01
5487.0	84.20	268.40	4654.6	1011.6	-0.8	-1011.6	1011.6	269.95
5517.0	85.10	269.10	4657.4	1041.4	-1.5	-1041.4	1041.4	269.92
5548.0	85.80	269.10	4659.8	1072.3	-2.0	-1072.3	1072.3	269.89
5579.0	86.40	268.40	4661.9	1103.3	-2.7	-1103.3	1103.3	269.86
5610.0	87.40	269.50	4663.6	1134.2	-3.2	-1134.2	1134.2	269.84
5641.0	85.90	270.90	4665.4	1165.2	-3.1	-1165.2	1165.2	269.85
5672.0	86.60	271.60	4667.4	1196.1	-2.4	-1196.1	1196.1	269.88
5703.0	87.60	271.90	4669.0	1227.0	-1.5	-1227.0	1227.0	269.93
5718.0	86.50	271.90	4669.8	1242.0	-1.0	-1242.0	1242.0	269.95

Scientific Drilling International

Survey Report

Company: PHILLIPS PETROLEUM	Date: 5/23/2001	Time: 18:01:21	Page: 2
Field: Vacuum Gionetta 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: EVGSAU #0524-036	Section (VS) Reference:	Well (0.0E, 0.0N, 270.0Az)	
Wellpath: HH - Job #32D0401219	Survey Calculation Method:	Minimum Curvature	

Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	ClsD ft	ClsA deg
5734.0	86.20	271.20	4670.8	1258.0	-0.6	-1258.0	1258.0	269.97
5764.0	86.00	270.50	4672.8	1287.9	-0.1	-1287.9	1287.9	269.99
5796.0	84.80	269.80	4675.4	1319.8	0.0	-1319.8	1319.8	270.00
5827.0	84.90	269.10	4678.2	1350.7	-0.3	-1350.7	1350.7	269.99
5858.0	85.70	268.70	4680.7	1381.5	-0.9	-1381.5	1381.5	269.96
5889.0	86.30	269.10	4682.9	1412.5	-1.5	-1412.5	1412.5	269.94
5920.0	87.10	268.70	4684.7	1443.4	-2.1	-1443.4	1443.4	269.92
5951.0	85.30	268.70	4686.7	1474.3	-2.8	-1474.3	1474.3	269.89
5982.0	86.00	269.00	4689.1	1505.2	-3.4	-1505.2	1505.2	269.87
6013.0	86.60	268.40	4691.1	1536.2	-4.1	-1536.2	1536.2	269.85
6045.0	86.40	269.20	4693.0	1568.1	-4.8	-1568.1	1568.1	269.82
6097.0	87.40	268.40	4695.9	1620.0	-5.9	-1620.0	1620.0	269.79