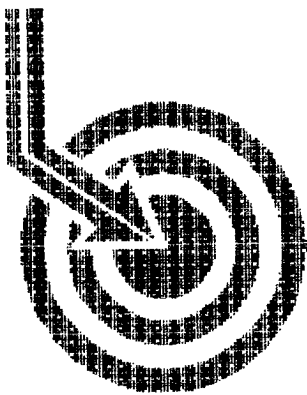




Scientific Drilling



TEXACO E & P INC.

Field: Strawn
Site: Lea County, NM
Well: State "P" #14
Wellpath: VH - Job #32K1001534
Survey: 10/9/01

32-16-37
30-025-30502

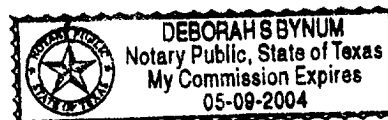
This survey is correct to the best of my knowledge
and is supported by actual field data.

David Hardy Company Representative

Notorized this date 7th of November, 2001.

Deborah Sue Bynum

Notary Signature
County of Midland
State of Texas



Scientific Drilling International

Survey Report

Company: TEXACO E & P INC.
Field: Strawn
Site: Lea County, NM
Well: State "P" #14
Wellpath: VH - Job #32K1001534

Date: 11/6/2001 **Time:** 09:32:19 **Page:** 1
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,258.9Azi)
Survey Calculation Method: Minimum Curvature

Survey: 10/9/01
 KSRG 0-11217

Start Date: 11/6/2001

Company: Scientific Drilling Internatio
Tool: Keeper

Engineer: Jeff Cossey

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	0.04	108.61	100.0	0.0	0.0	0.0	0.0	108.61
200.0	0.03	107.09	200.0	0.0	0.0	0.1	0.1	108.20
300.0	0.09	50.86	300.0	0.0	0.0	0.2	0.2	86.15
400.0	0.55	54.00	400.0	0.3	0.3	0.6	0.7	61.25
500.0	0.10	85.62	500.0	0.6	0.6	1.1	1.3	60.14
600.0	0.20	109.94	600.0	0.6	0.6	1.4	1.5	66.81
700.0	0.38	110.43	700.0	0.4	0.4	1.8	1.9	77.53
800.0	0.39	108.37	800.0	0.2	0.2	2.5	2.5	85.79
900.0	0.36	132.63	900.0	-0.1	-0.1	3.0	3.0	92.64
1000.0	0.51	153.92	1000.0	-0.8	-0.8	3.4	3.5	102.31
1100.0	0.58	161.94	1100.0	-1.6	-1.6	3.8	4.1	113.27
1200.0	0.84	177.63	1200.0	-2.8	-2.8	4.0	4.9	125.55
1300.0	1.26	174.95	1300.0	-4.7	-4.7	4.1	6.2	138.68
1400.0	1.28	179.92	1399.9	-6.9	-6.9	4.2	8.1	148.57
1500.0	1.43	178.30	1499.9	-9.2	-9.2	4.2	10.2	155.34
1600.0	1.48	181.39	1599.9	-11.8	-11.8	4.3	12.5	160.17
1700.0	1.23	191.37	1699.8	-14.1	-14.1	4.0	14.7	164.16
1800.0	0.89	197.28	1799.8	-15.9	-15.9	3.6	16.3	167.38
1900.0	0.69	222.18	1899.8	-17.1	-17.1	2.9	17.4	170.28
2000.0	0.84	272.26	1999.8	-17.5	-17.5	1.8	17.6	174.15
2100.0	0.72	271.28	2099.8	-17.5	-17.5	0.4	17.5	178.58
2200.0	0.45	267.10	2199.8	-17.5	-17.5	-0.6	17.5	181.92
2300.0	0.37	268.02	2299.8	-17.5	-17.5	-1.3	17.6	184.25
2400.0	0.28	277.32	2399.8	-17.5	-17.5	-1.9	17.6	186.09
2500.0	0.34	274.10	2499.8	-17.5	-17.5	-2.4	17.6	187.84
2600.0	0.22	289.46	2599.8	-17.4	-17.4	-2.9	17.6	189.42
2700.0	0.36	12.49	2699.8	-17.0	-17.0	-3.0	17.3	189.99
2800.0	0.53	24.81	2799.8	-16.3	-16.3	-2.7	16.5	189.53
2900.0	0.71	24.33	2899.8	-15.3	-15.3	-2.3	15.5	188.50
3000.0	0.62	23.72	2999.8	-14.2	-14.2	-1.8	14.3	187.25
3100.0	0.78	38.58	3099.8	-13.2	-13.2	-1.2	13.2	185.06
3200.0	0.90	58.22	3199.8	-12.3	-12.3	-0.1	12.3	180.36
3300.0	0.96	58.01	3299.7	-11.4	-11.4	1.3	11.5	173.48
3400.0	0.99	60.50	3399.7	-10.5	-10.5	2.8	10.9	165.28
3500.0	0.97	60.62	3499.7	-9.7	-9.7	4.3	10.6	156.29
3600.0	0.88	64.32	3599.7	-8.9	-8.9	5.7	10.6	147.54
3700.0	0.79	68.17	3699.7	-8.3	-8.3	7.0	10.9	139.95
3800.0	0.54	54.70	3799.7	-7.8	-7.8	8.0	11.2	134.20
3900.0	0.37	61.55	3899.7	-7.4	-7.4	8.7	11.4	130.33
4000.0	0.36	62.61	3999.7	-7.1	-7.1	9.3	11.7	127.42
4100.0	0.14	62.31	4099.7	-6.9	-6.9	9.7	11.9	125.51
4200.0	0.20	175.98	4199.7	-7.0	-7.0	9.8	12.0	125.64
4300.0	0.11	159.57	4299.7	-7.3	-7.3	9.8	12.2	126.52
4400.0	0.48	180.61	4399.7	-7.8	-7.8	9.9	12.6	128.30
4500.0	0.51	174.77	4499.7	-8.6	-8.6	9.9	13.1	131.16
4600.0	0.61	172.84	4599.7	-9.6	-9.6	10.0	13.9	133.89
4700.0	0.56	190.71	4699.7	-10.6	-10.6	10.0	14.6	136.81

Scientific Drilling International

Survey Report

Company: TEXACO E & P INC.
 Field: Strawn
 Site: Lea County, NM
 Well: State "P" #14
 Wellpath: VH - Job #32K1001534

Date: 11/6/2001 Time: 09:32:19 Page: 2
 Co-ordinate(N/E) 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,258.9Azi)
 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
4800.0	0.62	193.51	4799.7	-11.6	-11.6	9.8	15.2	140.01
4900.0	0.58	198.82	4899.6	-12.6	-12.6	9.5	15.8	143.16
5000.0	0.50	206.00	4999.6	-13.5	-13.5	9.1	16.3	146.00
5100.0	0.46	206.47	5099.6	-14.3	-14.3	8.7	16.7	148.49
5200.0	0.45	230.45	5199.6	-14.9	-14.9	8.3	17.0	150.95
5300.0	0.46	234.30	5299.6	-15.4	-15.4	7.6	17.1	153.57
5400.0	0.74	254.59	5399.6	-15.8	-15.8	6.7	17.1	157.02
5500.0	0.86	258.09	5499.6	-16.1	-16.1	5.3	16.9	161.68
5600.0	0.87	261.45	5599.6	-16.4	-16.4	3.8	16.8	166.79
5700.0	0.82	257.29	5699.6	-16.6	-16.6	2.4	16.8	171.81
5800.0	0.63	250.65	5799.6	-17.0	-17.0	1.2	17.0	176.04
5900.0	0.74	254.91	5899.6	-17.3	-17.3	0.0	17.3	179.89
6000.0	0.52	250.30	5999.6	-17.6	-17.6	-1.0	17.7	183.31
6100.0	0.55	237.82	6099.6	-18.0	-18.0	-1.9	18.1	185.86
6200.0	0.55	232.24	6199.6	-18.6	-18.6	-2.6	18.8	188.07
6300.0	0.65	230.24	6299.6	-19.2	-19.2	-3.5	19.6	190.17
6400.0	0.62	240.46	6399.6	-19.9	-19.9	-4.4	20.4	192.37
6500.0	0.69	254.35	6499.5	-20.3	-20.3	-5.4	21.0	194.92
6600.0	0.59	278.87	6599.5	-20.4	-20.4	-6.5	21.4	197.68
6700.0	0.60	272.64	6699.5	-20.3	-20.3	-7.5	21.6	200.37
6800.0	0.55	277.65	6799.5	-20.2	-20.2	-8.5	21.9	202.89
6900.0	0.52	286.29	6899.5	-20.0	-20.0	-9.4	22.1	205.26
7000.0	0.59	295.05	6999.5	-19.7	-19.7	-10.3	22.2	207.74
7100.0	0.56	304.82	7099.5	-19.2	-19.2	-11.2	22.2	210.32
7200.0	0.60	306.11	7199.5	-18.6	-18.6	-12.0	22.1	212.93
7300.0	0.66	320.45	7299.5	-17.8	-17.8	-12.8	22.0	215.73
7400.0	0.60	317.23	7399.5	-17.0	-17.0	-13.5	21.7	218.55
7500.0	0.61	317.40	7499.5	-16.2	-16.2	-14.3	21.6	221.32
7600.0	0.67	325.70	7599.5	-15.3	-15.3	-15.0	21.4	224.26
7700.0	0.68	321.14	7699.5	-14.4	-14.4	-15.7	21.3	227.39
7800.0	0.58	332.08	7799.5	-13.5	-13.5	-16.3	21.1	230.32
7900.0	0.71	335.16	7899.5	-12.5	-12.5	-16.8	20.9	233.32
8000.0	0.74	345.36	7999.5	-11.3	-11.3	-17.2	20.6	236.68
8100.0	0.57	334.26	8099.5	-10.2	-10.2	-17.6	20.3	239.80
8200.0	0.46	304.86	8199.5	-9.5	-9.5	-18.1	20.5	242.21
8300.0	0.43	317.72	8299.4	-9.0	-9.0	-18.7	20.8	244.19
8400.0	0.53	330.43	8399.4	-8.4	-8.4	-19.2	20.9	246.45
8500.0	0.56	315.36	8499.4	-7.6	-7.6	-19.7	21.2	248.93
8600.0	0.64	331.32	8599.4	-6.8	-6.8	-20.4	21.5	251.60
8700.0	0.71	348.64	8699.4	-5.7	-5.7	-20.7	21.5	254.71
8800.0	0.75	1.74	8799.4	-4.4	-4.4	-20.8	21.3	258.05
8900.0	0.83	25.55	8899.4	-3.1	-3.1	-20.5	20.7	261.40
9000.0	0.68	23.95	8999.4	-1.9	-1.9	-20.0	20.1	264.54
9100.0	0.77	15.90	9099.4	-0.7	-0.7	-19.5	19.5	267.89
9200.0	0.58	346.97	9199.4	0.4	0.4	-19.5	19.5	271.24
9300.0	0.59	318.19	9299.4	1.3	1.3	-19.9	20.0	273.73
9400.0	0.67	289.25	9399.4	1.9	1.9	-20.8	20.9	275.14
9500.0	0.78	270.63	9499.4	2.1	2.1	-22.1	22.1	275.37
9600.0	0.85	255.31	9599.4	1.9	1.9	-23.4	23.5	274.62
9700.0	0.78	242.78	9699.3	1.4	1.4	-24.8	24.8	273.22
9800.0	0.83	244.03	9799.3	0.8	0.8	-26.0	26.0	271.68
9900.0	0.73	259.95	9899.3	0.3	0.3	-27.3	27.3	270.71

Scientific Drilling International

Survey Report

Company: TEXACO E & P INC.
Field: Strawn
Site: Lea County, NM
Well: State "P" #14
Wellpath: VH - Job #32K1001534

Date: 11/6/2001 **Time:** 09:32:19 **Page:** 3
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,258.9Azi)
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
10000.0	1.06	268.71	9999.3	0.2	0.2	-28.9	28.9	270.41
10100.0	1.45	274.39	10099.3	0.3	0.3	-31.0	31.0	270.52
10200.0	1.18	258.44	10199.3	0.2	0.2	-33.3	33.3	270.30
10300.0	0.90	235.99	10299.2	-0.5	-0.5	-35.0	35.0	269.22
10400.0	2.15	239.73	10399.2	-1.9	-1.9	-37.2	37.3	267.14
10500.0	2.09	247.14	10499.1	-3.5	-3.5	-40.5	40.7	265.05
10600.0	1.96	260.09	10599.1	-4.5	-4.5	-43.9	44.1	264.13
10700.0	1.19	246.80	10699.0	-5.2	-5.2	-46.6	46.8	263.60
10800.0	1.12	250.86	10799.0	-5.9	-5.9	-48.4	48.8	263.00
10900.0	1.12	235.81	10899.0	-6.8	-6.8	-50.2	50.6	262.26
11000.0	1.17	240.71	10999.0	-7.9	-7.9	-51.9	52.5	261.37
11100.0	1.11	216.58	11099.0	-9.1	-9.1	-53.3	54.1	260.27
11200.0	0.79	211.66	11199.0	-10.5	-10.5	-54.3	55.3	259.04
11217.0	0.73	221.63	11215.9	-10.7	-10.7	-54.4	55.4	258.88

03/11/2001
 09:32:19