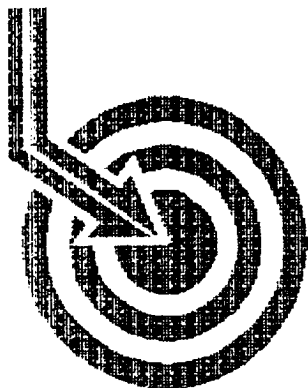




Scientific Drilling



TEXACO E & P INC.

Field: Justin Tubb Drinkard
Site: Lea County, NM
Well: G.L. Erwin "A" #9
Wellpath: DH - Job #32D0201067
Survey: 2/5/01-2/16/01

L-35-24s-37e
SUR: 1720/s & 800/w
BHL: 1395/s & 398/w
3D-025.35279

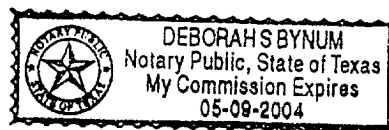
This survey is correct to the best of my knowledge
and is supported by actual field data.

Justin Tubb Drinkard Company Representative

Notorized this date 6th of April, 2001.

Deborah Sue Bynum
Notary Signature

County of Midland
State of Texas



Scientific Drilling International

Survey Report

Company: TEXACO E & P INC.
 Field: Justin Tubb Drinkard
 Site: Lea County, NM
 Well: G.L. Erwin "A" #9
 Wellpath: VH - Job #32K0201072

Date: 3/23/2001 Time: 13:32:10 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,231.9Azi)
 Survey Calculation Method: Minimum Curvature

Survey: 2/7/01
 KSRG 0'-2900'

Start Date: 3/23/2001

Company: Scientific Drilling Internatio
 Tool: KEEPER

Engineer: Bobby Earl

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	0.26	33.74	100.0	-0.2	0.2	0.1	0.2	33.74
200.0	0.41	18.88	200.0	-0.7	0.7	0.4	0.8	27.19
300.0	0.29	25.98	300.0	-1.3	1.3	0.6	1.4	24.88
400.0	0.34	60.18	400.0	-1.8	1.7	1.0	1.9	30.16
500.0	0.26	75.45	500.0	-2.3	1.9	1.4	2.4	37.72
600.0	0.36	73.08	600.0	-2.8	2.0	2.0	2.8	44.28
700.0	0.23	80.76	700.0	-3.3	2.1	2.5	3.3	49.05
800.0	0.17	143.54	800.0	-3.4	2.0	2.7	3.4	53.29
900.0	0.09	151.79	900.0	-3.4	1.9	2.9	3.4	57.08
1000.0	0.38	127.46	1000.0	-3.5	1.6	3.2	3.5	63.41
1100.0	0.61	114.75	1100.0	-3.8	1.2	3.9	4.1	73.47
1200.0	0.54	128.38	1200.0	-4.2	0.6	4.8	4.8	82.27
1300.0	0.56	148.61	1300.0	-4.2	-0.1	5.4	5.4	90.67
1400.0	0.54	129.95	1400.0	-4.2	-0.8	6.0	6.1	97.42
1500.0	0.69	127.70	1500.0	-4.5	-1.5	6.8	7.0	101.98
1600.0	0.57	130.98	1600.0	-4.7	-2.1	7.7	8.0	105.59
1700.0	0.90	120.38	1699.9	-5.1	-2.9	8.8	9.2	108.16
1800.0	1.27	102.72	1799.9	-6.1	-3.5	10.5	11.1	108.48
1900.0	1.96	85.19	1899.9	-8.2	-3.6	13.3	13.8	105.20
2000.0	2.60	79.98	1999.8	-11.7	-3.1	17.2	17.5	100.12
2100.0	2.84	78.24	2099.7	-15.9	-2.2	21.9	22.0	95.67
2200.0	3.25	74.13	2199.6	-20.7	-0.9	27.0	27.1	91.90
2300.0	3.53	74.33	2299.4	-26.2	0.7	32.7	32.7	88.75
2400.0	3.63	76.79	2399.2	-31.9	2.3	38.8	38.8	86.66
2500.0	3.30	80.78	2499.0	-37.3	3.5	44.7	44.8	85.59
2600.0	3.02	80.96	2598.9	-42.1	4.3	50.1	50.3	85.07
2700.0	3.03	82.96	2698.7	-46.7	5.1	55.4	55.8	84.77
2800.0	2.41	85.46	2798.6	-50.7	5.6	60.1	60.3	84.72
2900.0	2.96	87.50	2898.5	-54.5	5.8	64.8	65.0	84.85

Scientific Drilling International

Survey Report

Company: TEXACO E & P INC.
Field: Justin Tubb Drinkard
Site: Lea County, NM
Well: G.L. Erwin "A" #9
Wellpath: DH - Job #32D0201067

Date: 3/23/2001 **Time:** 13:48:14 **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,231.8Az)
Survey Calculation Method: Minimum Curvature

Survey: 2/5/01-2/16/01
 MWD 2994'-5556'

Start Date: 3/23/2001

Company: SDI w/Unidril
Tool: MWD

Engineer: Clemence/McGhee

Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	ClsD ft	ClsA deg
2900.0	2.96	87.50	2898.5	-54.5	5.8	64.8	65.0	84.85
2994.0	2.80	88.00	2992.4	-58.4	6.0	69.5	69.7	85.05
3027.0	2.40	86.30	3025.3	-59.6	6.1	71.0	71.2	85.09
3058.0	1.60	89.00	3056.3	-60.5	6.1	72.1	72.3	85.13
3090.0	0.90	112.90	3088.3	-60.9	6.1	72.7	73.0	85.24
3121.0	0.50	152.70	3119.3	-61.0	5.8	73.0	73.3	85.43
3153.0	0.80	198.00	3151.3	-60.8	5.5	73.0	73.2	85.69
3183.0	1.50	221.80	3181.3	-60.3	5.0	72.7	72.9	86.06
3214.0	2.30	231.60	3212.3	-59.2	4.3	71.9	72.1	86.56
3246.0	3.00	229.40	3244.2	-57.8	3.4	70.8	70.9	87.27
3276.0	3.50	230.70	3274.2	-56.1	2.3	69.5	69.5	88.12
3308.0	4.30	231.70	3306.1	-53.9	0.9	67.8	67.8	89.22
3339.0	5.00	234.50	3337.0	-51.4	-0.6	65.8	65.8	90.51
3370.0	5.50	233.40	3367.9	-48.5	-2.3	63.5	63.5	92.03
3401.0	6.80	235.50	3398.7	-45.2	-4.2	60.8	60.9	93.93
3432.0	7.70	237.80	3429.5	-41.3	-6.3	57.5	57.9	96.27
3462.0	8.80	239.70	3459.2	-37.1	-8.6	53.8	54.5	99.03
3493.0	9.80	242.30	3489.7	-32.1	-11.0	49.4	50.7	102.51
3524.0	11.00	244.20	3520.2	-26.6	-13.5	44.5	46.5	106.88
3556.0	12.00	243.70	3551.6	-20.4	-16.3	38.7	42.0	112.82
3587.0	13.10	241.70	3581.9	-13.8	-19.4	32.7	38.0	120.63
3619.0	14.70	242.00	3612.9	-6.2	-23.0	26.0	34.7	131.56
3650.0	16.10	240.40	3642.8	1.9	-27.0	18.7	32.9	145.21
3681.0	18.00	240.00	3672.4	10.9	-31.5	10.9	33.3	160.97
3713.0	18.50	239.70	3702.8	20.8	-36.5	2.2	36.6	176.56
3744.0	19.40	238.60	3732.1	30.8	-41.7	-6.4	42.2	188.79
3776.0	20.40	237.10	3762.2	41.7	-47.5	-15.7	50.0	198.25
3807.0	21.10	235.40	3791.2	52.6	-53.6	-24.8	59.1	204.82
3838.0	22.80	233.90	3820.0	64.2	-60.3	-34.2	69.3	209.59
3870.0	24.90	234.10	3849.2	77.1	-67.9	-44.7	81.3	213.36
3901.0	27.60	234.00	3877.0	90.8	-76.0	-55.8	94.3	216.30
3933.0	30.20	233.30	3905.1	106.3	-85.1	-68.3	109.1	218.72
3964.0	32.50	233.20	3931.5	122.4	-94.8	-81.2	124.8	220.58
3995.0	33.10	232.60	3957.6	139.2	-104.9	-94.6	141.2	222.03
4027.0	33.40	232.80	3984.3	156.7	-115.5	-108.5	158.5	223.21
4058.0	33.50	232.50	4010.2	173.8	-125.9	-122.1	175.4	224.12
4091.0	33.60	232.80	4037.7	192.0	-137.0	-136.6	193.5	224.92
4122.0	33.20	233.70	4063.6	209.1	-147.2	-150.3	210.4	225.60
4154.0	32.40	234.60	4090.5	226.4	-157.3	-164.3	227.5	226.25
4185.0	31.70	235.90	4116.8	242.8	-166.7	-177.8	243.8	226.85
4218.0	31.70	235.90	4144.8	260.1	-176.4	-192.2	260.9	227.45
4310.0	27.50	234.20	4224.8	305.5	-202.4	-229.5	306.0	228.58
4341.0	26.20	234.90	4252.5	319.5	-210.5	-240.9	319.9	228.84
4373.0	24.90	234.10	4281.4	333.3	-218.6	-252.1	333.7	229.08
4411.0	24.60	234.20	4315.9	349.2	-227.9	-265.0	349.5	229.31
4442.0	24.70	234.10	4344.0	362.1	-235.4	-275.5	362.4	229.48
4467.0	24.70	233.90	4366.7	372.5	-241.6	-283.9	372.8	229.61
4498.0	23.40	235.30	4395.1	385.1	-248.9	-294.2	385.4	229.77

Scientific Drilling International

Survey Report

Company: TEXACO E & P INC.
Field: Justin Tubb Drinkard
Site: Lea County, NM
Well: G.L. Erwin "A" #9
Wellpath: DH - Job #32D0201067

Date: 3/23/2001 **Time:** 13:48:14 **Page:** 2
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,231.9Azi)
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
4530.0	22.00	236.90	4424.6	397.4	-255.8	-304.5	397.7	229.97
4561.0	20.30	236.60	4453.5	408.6	-261.9	-313.8	408.8	230.15
4592.0	19.40	235.80	4482.6	419.1	-267.8	-322.6	419.2	230.30
4624.0	17.70	234.80	4513.0	429.3	-273.6	-330.9	429.4	230.42
4655.0	15.60	235.00	4542.7	438.1	-278.7	-338.2	438.2	230.51
4686.0	13.30	235.10	4572.7	445.8	-283.1	-344.6	446.0	230.59
4717.0	12.10	236.30	4602.9	452.6	-287.0	-350.2	452.7	230.67
4749.0	12.10	236.30	4634.2	459.3	-290.7	-355.8	459.4	230.75
4780.0	11.90	237.30	4664.6	465.8	-294.2	-361.2	465.8	230.83
4811.0	10.10	237.00	4695.0	471.6	-297.4	-366.1	471.7	230.91
4842.0	7.90	235.20	4725.6	476.5	-300.1	-370.2	476.5	230.97
4873.0	7.10	236.40	4756.3	480.5	-302.4	-373.5	480.6	231.01
4904.0	7.10	234.80	4787.1	484.3	-304.6	-376.7	484.4	231.04
4936.0	7.00	235.80	4818.9	488.3	-306.8	-379.9	488.3	231.08
4963.0	4.90	232.10	4845.7	491.1	-308.4	-382.2	491.1	231.09
4994.0	0.00	0.00	4876.7	492.4	-309.2	-383.2	492.4	231.10
5024.0	4.30	231.30	4906.6	493.5	-309.9	-384.1	493.5	231.10
5057.0	4.20	230.70	4939.5	495.9	-311.5	-386.0	496.0	231.10
5088.0	4.00	231.40	4970.5	498.2	-312.9	-387.7	498.2	231.10
5118.0	2.90	234.10	5000.4	500.0	-314.0	-389.1	500.0	231.10
5149.0	2.50	232.40	5031.4	501.4	-314.8	-390.3	501.5	231.11
5180.0	2.50	231.90	5062.4	502.8	-315.7	-391.4	502.8	231.11
5212.0	2.70	238.40	5094.3	504.2	-316.5	-392.6	504.3	231.12
5244.0	2.40	234.20	5126.3	505.6	-317.3	-393.8	505.7	231.14
5275.0	2.40	234.20	5157.3	506.9	-318.0	-394.8	507.0	231.15
5308.0	2.40	231.40	5190.2	508.3	-318.9	-395.9	508.4	231.15
5339.0	2.30	237.00	5221.2	509.6	-319.6	-396.9	509.6	231.16
5371.0	2.10	225.40	5253.2	510.8	-320.4	-397.9	510.9	231.16
5403.0	1.90	222.70	5285.2	511.9	-321.2	-398.7	512.0	231.14
5431.0	1.90	219.40	5313.1	512.8	-321.9	-399.3	512.9	231.13
5463.0	1.90	223.10	5345.1	513.9	-322.7	-400.0	513.9	231.11
5493.0	1.80	225.50	5375.1	514.8	-323.4	-400.7	514.9	231.09
5525.0	1.70	215.50	5407.1	515.8	-324.1	-401.3	515.8	231.07
5556.0	0.00	0.00	5438.1	516.2	-324.5	-401.6	516.3	231.06