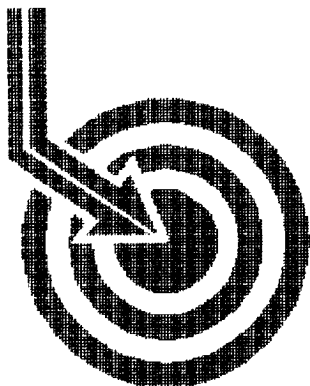




Scientific Drilling

Sur: 23-19S-36E
800/N & 1650/W

BHL: 801/N & 1821/W



TEXACO E & P INC.

Field: Monument

Site: Lea County, NM

Well: New Mexico E State #3

Wellpath: VH/HH - Job #32K1299361 & 373

Survey: 12/15/99-12/24/99

API #: 30-025-34042

Gyro Footage: 0'-5333'

MWD Footage: 5505'-7458'

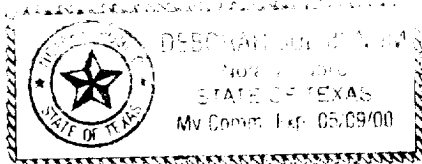
Survey: Sec. 23, T19S, R36E

K.O.P.: 5333'

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

Leah Noddy Company Representative

Notorized this date 25th of March, 2000.



Leborah Sue Dynum
Midland Co, TX

SCIENTIFIC DRILLING SURVEY REPORT

Company: TEXACO E & P INC.
Field: Monument
Site: Lea County, NM
Well: New Mexico E State #3
Wellpath: VH/HH - Job #32K1299361 &

Date: 3/9/2000 Time: 12:07:17 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: Slot (0.0E, 0.0N, 0.0Az)
Survey Calculation Method: Minimum Curvature

Survey: 12/15/99-12/24/99
KSRG 0'-5333'/MWD 5505'-7458'

Start Date: 12/17/1999

Company: S.D.I. & Ryan
Tool: KEEPER

Engineer: Shoup & Carter

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS d/100ft	Clc deg	Clc ft
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.0
100.0	1.28	228.32	100.0	-0.7	-0.8	-0.7	1.28	228.32	1.1
200.0	1.17	228.12	200.0	-2.2	-2.4	-2.2	0.11	228.26	3.3
300.0	0.79	237.28	300.0	-3.2	-3.8	-3.2	0.41	229.48	5.0
400.0	0.40	235.69	399.9	-3.8	-4.6	-3.8	0.39	230.74	6.0
500.0	0.21	238.74	499.9	-4.1	-5.1	-4.1	0.19	231.22	6.5
600.0	0.32	227.70	599.9	-4.4	-5.4	-4.4	0.12	231.28	7.0
700.0	0.37	228.79	699.9	-4.8	-5.9	-4.8	0.05	231.04	7.6
800.0	0.20	228.37	799.9	-5.1	-6.3	-5.1	0.17	230.89	8.1
900.0	0.04	354.52	899.9	-5.2	-6.4	-5.2	0.23	231.04	8.2
1000.0	0.13	123.19	999.9	-5.2	-6.3	-5.2	0.16	230.49	8.2
1100.0	0.18	72.97	1099.9	-5.2	-6.1	-5.2	0.14	229.29	8.0
1200.0	0.08	73.64	1199.9	-5.2	-5.8	-5.2	0.10	228.61	7.8
1300.0	0.22	145.38	1299.9	-5.3	-5.7	-5.3	0.21	226.98	7.8
1400.0	0.20	151.65	1399.9	-5.6	-5.5	-5.6	0.03	224.36	7.8
1500.0	0.56	66.80	1499.9	-5.6	-4.9	-5.6	0.58	221.64	7.4
1600.0	0.82	44.69	1599.9	-4.9	-4.0	-4.9	0.37	219.40	6.3
1700.0	0.77	56.06	1699.9	-4.0	-2.9	-4.0	0.17	216.41	4.9
1800.0	0.68	47.37	1799.9	-3.2	-1.9	-3.2	0.14	211.21	3.7
1900.0	0.80	68.73	1899.9	-2.5	-0.9	-2.5	0.30	198.52	2.7
2000.0	0.73	72.46	1999.9	-2.1	0.4	-2.1	0.09	169.11	2.1
2100.0	0.78	80.19	2099.9	-1.8	1.7	-1.8	0.11	136.84	2.5
2200.0	0.69	78.27	2199.9	-1.6	2.9	-1.6	0.09	117.87	3.3
2300.0	0.77	66.04	2299.9	-1.2	4.1	-1.2	0.17	105.64	4.3
2400.0	1.23	57.66	2399.9	-0.3	5.7	-0.3	0.48	93.17	5.7
2500.0	1.30	53.97	2499.8	0.9	7.5	0.9	0.11	82.94	7.5
2600.0	1.55	52.75	2599.8	2.4	9.5	2.4	0.25	75.72	9.8
2700.0	2.21	54.09	2699.7	4.4	12.1	4.4	0.66	70.21	12.9
2800.0	1.98	55.19	2799.7	6.5	15.1	6.5	0.23	66.78	16.4
2900.0	2.18	61.44	2899.6	8.4	18.2	8.4	0.30	65.28	20.0
3000.0	2.20	68.03	2999.5	10.0	21.6	10.0	0.25	65.19	23.8
3100.0	2.31	77.04	3099.5	11.2	25.4	11.2	0.37	66.25	27.7
3200.0	2.34	75.61	3199.4	12.1	29.3	12.1	0.07	67.53	31.7
3300.0	2.46	79.77	3299.3	13.0	33.4	13.0	0.21	68.71	35.9
3400.0	2.65	80.47	3399.2	13.8	37.8	13.8	0.19	69.97	40.2
3500.0	2.86	83.47	3499.1	14.5	42.6	14.5	0.25	71.25	45.0
3600.0	2.90	84.29	3599.0	15.0	47.6	15.0	0.06	72.51	49.9
3700.0	3.08	84.42	3698.8	15.5	52.8	15.5	0.18	73.63	55.0
3800.0	3.14	85.68	3798.7	16.0	58.2	16.0	0.09	74.65	60.3
3900.0	3.19	83.92	3898.5	16.5	63.7	16.5	0.11	75.50	65.8
4000.0	3.14	83.74	3998.4	17.1	69.1	17.1	0.05	76.14	71.2
4100.0	3.04	86.89	4098.2	17.5	74.5	17.5	0.20	76.78	76.5
4200.0	3.08	84.73	4198.1	17.9	79.8	17.9	0.12	77.37	81.8
4300.0	2.99	86.64	4297.9	18.3	85.1	18.3	0.14	77.87	87.1
4400.0	2.86	88.06	4397.8	18.5	90.2	18.5	0.15	78.39	92.1
4500.0	2.75	87.58	4497.7	18.7	95.1	18.7	0.11	78.87	96.9
4600.0	2.77	86.72	4597.6	19.0	99.9	19.0	0.05	79.26	101.7
4700.0	2.85	84.17	4697.4	19.3	104.8	19.3	0.15	79.54	106.6

SCIENTIFIC DRILLING SURVEY REPORT

Company: TEXACO E & P INC.
Field: Monument
Site: Lea County, NM
Well: New Mexico E State #3
Wellpath: VH/HH - Job #32K1299361 &

Date: 3/9/2000 Time: 12:07:17 Page: 2
Co-ordinate(N/E) Reference: Site: Lea County, NM, True North
Vertical (TYD) Reference: SITE 0.0 above Mean Sea Level
Section (VS) Reference: Slat (0.0E, 0.0N, 0.0Az)
Survey Calculation Method: Minimum Curvature

Survey

MD ft	Incl deg	Azimuth deg	TYD ft	N/S ft	E/W ft	VS ft	DLS d/100ft	ChA deg	ChD ft
4800.0	2.82	83.90	4797.3	19.9	109.7	19.9	0.03	79.74	111.5
4900.0	2.65	81.45	4897.2	20.5	114.5	20.5	0.21	79.86	116.3
5000.0	2.64	81.69	4997.1	21.1	119.0	21.1	0.01	79.93	120.9
5100.0	2.30	86.13	5097.0	21.6	123.3	21.6	0.39	80.06	125.2
5200.0	2.14	90.02	5196.9	21.7	127.2	21.7	0.22	80.30	129.0
5300.0	1.56	90.14	5296.9	21.7	130.4	21.7	0.58	80.53	132.2
5333.4	1.80	92.37	5330.3	21.7	131.4	21.7	0.74	80.61	133.2
5505.0	1.90	94.30	5501.8	21.4	136.9	21.4	0.07	81.12	138.6
5691.0	2.10	98.20	5687.7	20.7	143.4	20.7	0.13	81.79	144.8
5879.0	2.10	85.90	5875.5	20.4	150.2	20.4	0.24	82.25	151.6
6065.0	2.10	89.00	6061.4	20.7	157.0	20.7	0.06	82.48	158.4
6199.0	2.50	62.70	6195.3	22.1	162.1	22.1	0.83	82.23	163.6
6304.0	2.10	80.60	6300.2	23.5	166.0	23.5	0.78	81.95	167.6
6366.0	1.80	88.70	6362.2	23.7	168.1	23.7	0.66	81.98	169.7
6439.0	1.40	124.50	6435.2	23.2	170.0	23.2	1.44	82.22	171.5
6532.0	1.40	146.30	6528.1	21.6	171.5	21.6	0.57	82.82	172.9
6563.0	1.40	143.90	6559.1	21.0	172.0	21.0	0.19	83.04	173.2
6656.0	1.10	179.00	6652.1	19.2	172.6	19.2	0.87	83.66	173.7
6718.0	1.40	186.10	6714.1	17.8	172.6	17.8	0.54	84.10	173.5
6812.0	1.80	178.00	6808.1	15.2	172.5	15.2	0.49	84.96	173.2
6867.0	1.80	185.70	6863.0	13.5	172.5	13.5	0.44	85.52	173.0
6967.0	1.90	194.10	6963.0	10.3	171.9	10.3	0.29	86.56	172.2
7061.0	1.40	196.60	7056.9	7.7	171.2	7.7	0.54	87.42	171.4
7153.0	0.90	176.90	7148.9	5.9	170.9	5.9	0.69	88.02	171.0
7248.0	1.10	156.90	7243.9	4.3	171.3	4.3	0.42	88.55	171.4
7311.0	0.90	174.50	7306.9	3.3	171.6	3.3	0.58	88.90	171.6
7341.0	1.10	188.90	7336.9	2.8	171.6	2.8	1.07	89.07	171.6
7404.0	0.50	200.80	7399.9	1.9	171.4	1.9	0.98	89.36	171.4
7458.0	0.70	192.40	7453.9	1.4	171.2	1.4	0.40	89.54	171.2



**Scientific
Drilling**

TEXACO E & P INC

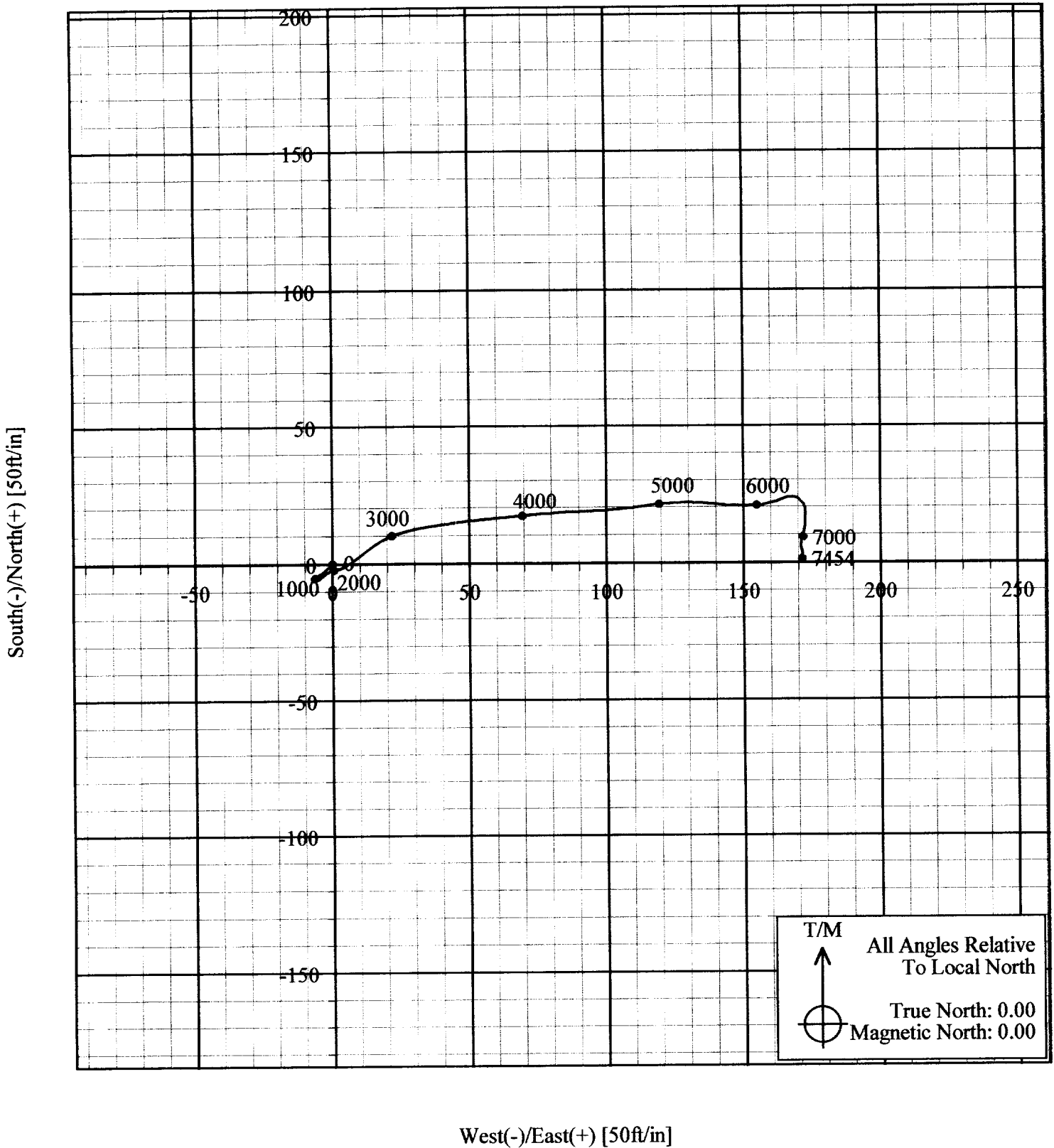
Field: Monument

Site: Lea County, NM

Well: New Mexico E State #3

Wellpath: VH/HH - Job #32K1299361 & 373

Survey: 12/15/99-12/24/99





Lateral: 1			Proposed Direction: 0			Dog Leg Severity per: 100 feet		
Measured Depth	Inclination	Azimuth	True Vertical Depth	North/South Coordinate	East/West Coordinate	Vertical Section	Dog Leg Severity	Survey Tool
243	1.00	0.00	0.00	0.00	0.00	0.00	0.00	TOTCO
631	0.75	0.00	387.95	5.93	0.00	5.93	0.06	
1120	0.75	0.00	876.91	12.33	0.00	12.33	0.00	
1306	1.00	0.00	1062.89	15.17	0.00	15.17	0.13	TOTCO
1783	1.25	0.00	1539.80	24.53	0.00	24.53	0.05	
2280	0.75	0.00	2036.72	33.21	0.00	33.21	0.10	TOTCO
2778	2.50	0.00	2534.50	47.33	0.00	47.33	0.35	
2932	2.25	0.00	2688.37	53.71	0.00	53.71	0.16	
3086	2.00	0.00	2842.26	59.42	0.00	59.42	0.16	TOTCO
3585	2.75	0.00	3340.83	80.10	0.00	80.10	0.15	
3740	3.50	0.00	3495.60	88.55	0.00	88.55	0.48	
3866	3.25	0.00	3621.38	95.96	0.00	95.96	0.20	TOTCO
3991	2.25	0.00	3746.24	101.96	0.00	101.96	0.80	
4149	3.50	0.00	3904.03	109.89	0.00	109.89	0.79	
4274	3.00	0.00	4028.83	116.97	0.00	116.97	0.40	TOTCO
4430	3.00	0.00	4184.62	125.14	0.00	125.14	0.00	
4555	3.50	0.00	4309.42	132.22	0.00	132.22	0.40	
4681	2.50	0.00	4435.24	138.82	0.00	138.82	0.79	TOTCO
4845	2.75	0.00	4599.07	146.33	0.00	146.33	0.15	
4992	2.75	0.00	4745.90	153.38	0.00	153.38	0.00	TOTCO
5151	2.50	0.00	4904.73	160.66	0.00	160.66	0.16	TOTCO
5556	2.25	0.00	5309.39	177.45	0.00	177.45	0.06	TOTCO
5994	4.00	0.00	5746.72	201.32	0.00	201.32	0.40	TOTCO
6117	2.50	0.00	5869.52	208.30	0.00	208.30	1.22	TOTCO
Lateral: 2			Proposed Direction: 90			Dog Leg Severity per: 100 feet		
Measured Depth	Inclination	Azimuth	True Vertical Depth	North/South Coordinate	East/West Coordinate	Vertical Section	Dog Leg Severity	Survey Tool
5333	1.80	92.37	5330.30	21.70	131.40	131.40	0.00	GYRO
5505	1.90	94.30	5501.81	21.38	136.93	136.93	0.07	MWD
5691	2.10	98.20	5687.70	20.66	143.38	143.38	0.13	
5879	2.10	85.90	5875.57	20.41	150.22	150.22	0.24	
6065	2.10	89.00	6061.45	20.72	157.03	157.03	0.06	
6199	2.50	62.70	6195.34	22.10	162.08	162.08	0.83	
6304	2.10	80.60	6300.26	23.46	166.01	166.01	0.78	MWD
6366	1.80	88.70	6362.22	23.67	168.11	168.11	0.66	MWD
6439	1.40	124.50	6435.20	23.19	169.99	169.99	1.44	
6532	1.40	146.30	6528.17	21.60	171.56	171.56	0.57	
6563	1.40	143.90	6559.16	20.98	171.99	171.99	0.19	MWD
6656	1.10	179.00	6652.14	19.17	172.67	172.67	0.87	
6718	1.40	186.10	6714.12	17.82	172.60	172.60	0.54	
6812	1.80	178.00	6808.09	15.21	172.53	172.53	0.49	MWD
6867	1.80	185.70	6863.06	13.48	172.48	172.48	0.44	
6967	1.90	194.10	6963.01	10.31	171.92	171.92	0.29	MWD
7061	1.40	196.60	7056.97	7.70	171.21	171.21	0.54	MWD
7153	0.90	176.90	7148.95	5.90	170.93	170.93	0.69	
7248	1.10	156.90	7243.94	4.32	171.33	171.33	0.42	
7311	0.90	174.50	7306.93	3.27	171.61	171.61	0.58	MWD
7341	1.10	188.90	7336.92	2.75	171.59	171.59	1.07	
7404	0.50	200.80	7399.92	1.90	171.40	171.40	0.98	
7458	0.70	192.40	7453.91	1.35	171.24	171.24	0.40	MWD
7506	0.70	192.40	7502.00	0.90	171.10	171.10	0.00	PROJECT