

**Results of Directional Survey HORIZONTAL
LAST READING at TD**

30-005-35628

TEXACO EXPL & PROD INC
CENTRAL VACUUM UNIT # 264

F-31-17s-35e

	MD	N/S	E/W	VTD
	4200	25.10	27.30	4199.00
Point of Entry	4288	28.97	26.95	4286.91
	NA	NA	NA	NA
	4300	29.50	26.90	4298.90

NEXT TO LAST	6675	67.20	-2018.70	4687.40
LAST READING	6707	70.20	-2050.60	4687.40
TD	6707	70.20	-2050.60	4687.40

Surface Location	2100	FN	1390	FW
Bottom Hole Loc	2030	FN	661	FE
Location of				
Point of Entry	2071	FN	1417	FW

SUMMARY of Subsurface Locations

Surface Location	F-31-17S-35E	2100	FN	1390	FW
Point of Entry	F-31-17S-35E	2071	FN	1417	FW
Bottom Hole Loc	H-36-17S-34E	2030	FN	661	FE

Horizontal lateral is within the required stand-off for the required
stand_off for this Project area



Scientific Drilling



TEXACO E & P INC.

Field: Central Vacuum
Site: Lea County, NM
Well: CVU #264
Wellpath: HH - Job #32D0901494
Survey: 9/6/01-9/13/01

31-17-35
30-025-35628

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

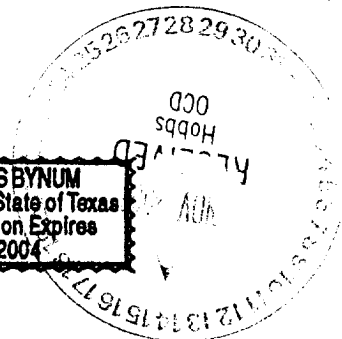
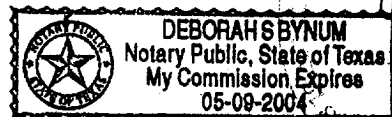
David Nandy

Company Representative

Notorized this date 7th of November, 2001.

Deborah Sue Bynum

Notary Signature
County of Midland
State of Texas



K

Scientific Drilling International Survey Report

Company: TEXACO E & P INC.
Field: Central Vacuum
Site: Lea County, NM
Well: CVU #264
Wellpath: VH - Job #32K0901496

Date: 11/6/2001 Time: 10:13:32 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,272.0Az)
Survey Calculation Method: Minimum Curvature

Survey: 9/6/01
KSRG 0-4456

Start Date: 11/6/2001

Company: Scientific Drilling International
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	0.53	60.00	100.0	-0.4	0.2	0.4	0.5	60.00
200.0	0.51	81.87	200.0	-1.2	0.5	1.2	1.3	67.06
300.0	0.62	83.39	300.0	-2.2	0.7	2.2	2.3	73.66
400.0	0.54	92.64	400.0	-3.2	0.7	3.2	3.3	77.91
500.0	0.46	99.25	500.0	-4.1	0.6	4.1	4.1	81.60
600.0	0.40	97.64	600.0	-4.8	0.5	4.8	4.9	84.17
700.0	0.31	109.11	700.0	-5.4	0.4	5.4	5.5	86.22
800.0	0.36	115.20	800.0	-6.0	0.1	6.0	6.0	88.69
900.0	0.36	131.00	900.0	-6.5	-0.2	6.5	6.5	91.79
1000.0	0.36	133.26	1000.0	-7.0	-0.6	7.0	7.0	95.12
1100.0	0.28	160.35	1100.0	-7.3	-1.1	7.3	7.4	98.36
1200.0	0.32	156.34	1200.0	-7.5	-1.6	7.5	7.6	101.76
1300.0	0.32	174.45	1300.0	-7.7	-2.1	7.6	7.9	105.35
1400.0	0.35	215.69	1400.0	-7.5	-2.6	7.5	7.9	109.32
1500.0	0.51	216.07	1500.0	-7.1	-3.2	7.0	7.7	114.67
1600.0	0.58	191.47	1600.0	-6.8	-4.1	6.7	7.8	121.50
1700.0	0.70	179.68	1700.0	-6.7	-5.2	6.6	8.4	128.33
1800.0	0.73	175.58	1799.9	-6.8	-6.4	6.6	9.2	134.21
1900.0	0.64	163.88	1899.9	-7.1	-7.6	6.8	10.2	138.13
2000.0	0.68	158.27	1999.9	-7.5	-8.7	7.2	11.3	140.40
2100.0	0.74	147.49	2099.9	-8.1	-9.8	7.8	12.5	141.60
2200.0	0.90	157.50	2199.9	-8.8	-11.1	8.4	13.9	142.76
2300.0	1.01	148.75	2299.9	-9.6	-12.5	9.2	15.5	143.84
2400.0	1.10	138.89	2399.9	-10.7	-14.0	10.3	17.4	143.81
2500.0	1.40	96.62	2499.9	-12.6	-14.9	12.1	19.2	140.89
2600.0	1.68	87.65	2599.8	-15.3	-15.0	14.8	21.0	135.36
2700.0	1.82	77.86	2699.8	-18.3	-14.6	17.8	23.0	129.30
2800.0	1.72	67.91	2799.7	-21.2	-13.7	20.7	24.8	123.39
2900.0	1.75	66.94	2899.7	-23.9	-12.5	23.5	26.6	117.99
3000.0	1.41	55.03	2999.6	-26.3	-11.2	25.9	28.3	113.35
3100.0	1.26	44.77	3099.6	-28.0	-9.7	27.7	29.4	109.31
3200.0	1.16	18.71	3199.6	-29.1	-8.0	28.8	29.9	105.47
3300.0	1.18	10.07	3299.6	-29.5	-6.0	29.3	29.9	101.57
3400.0	1.30	7.71	3399.6	-29.8	-3.9	29.7	29.9	97.42
3500.0	1.44	0.80	3499.5	-29.9	-1.5	29.8	29.9	92.85
3600.0	1.68	359.35	3599.5	-29.8	1.2	29.8	29.9	87.62
3700.0	1.83	355.91	3699.4	-29.5	4.3	29.7	30.0	81.77
3800.0	2.03	350.45	3799.4	-29.0	7.6	29.3	30.3	75.39
3900.0	2.35	351.23	3899.3	-28.3	11.4	28.7	30.9	68.31
4000.0	2.63	353.17	3999.2	-27.5	15.7	28.1	32.2	60.79
4100.0	2.81	355.35	4099.1	-26.9	20.4	27.6	34.4	53.51
4200.0	2.57	356.22	4199.0	-26.4	25.1	27.3	37.1	47.37
4300.0	2.51	352.61	4298.9	-25.8	29.5	26.9	39.9	42.29
4400.0	2.87	348.04	4398.8	-24.9	34.1	26.1	42.9	37.35
4456.0	3.02	346.44	4454.7	-24.1	36.9	25.4	44.8	34.52

Scientific Drilling International

Survey Report

Company: TEXACO E & P INC.
 Field: Central Vacuum
 Site: Lea County, NM
 Well: CVU #264
 Wellpath: HH - Job #32D0901494

Date: 11/6/2001 Time: 10:17:07 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,272.0Az)
 Survey Calculation Method: Minimum Curvature

Survey: 9/6/01-9/13/01
 MWD 4529-6707

Start Date: 11/6/2001

Company: SDI w/Unidril
 Tool: MWD

Engineer: Lamb/McGhee

Survey

MD ft	Incl deg	Azlm deg	TVD ft	VS ft	N/S ft	E/W ft	ClsD ft	ClsA deg
4456.0	3.02	346.44	4454.7	-24.1	36.9	25.4	44.8	34.52
4529.0	3.02	346.44	4527.6	-23.1	40.7	24.5	47.5	31.07
4603.0	28.00	276.60	4598.6	-4.9	44.7	6.5	45.1	8.24
4613.0	32.00	275.60	4607.2	0.1	45.2	1.5	45.2	1.89
4635.0	41.40	272.10	4624.8	13.2	46.0	-11.6	47.5	345.84
4645.0	45.90	270.40	4632.1	20.1	46.2	-18.5	49.7	338.16
4655.0	50.20	268.90	4638.7	27.5	46.1	-25.9	52.9	330.64
4660.0	52.40	268.10	4641.9	31.4	46.0	-29.8	54.8	327.04
4696.0	66.50	264.00	4660.1	62.1	43.8	-60.7	74.8	305.83
4728.0	71.80	263.50	4671.5	91.7	40.5	-90.4	99.1	294.16
4759.0	76.50	264.30	4680.0	121.2	37.4	-120.0	125.7	287.30
4790.0	81.30	265.70	4685.9	151.4	34.7	-150.3	154.3	283.01
4822.0	86.00	266.60	4689.5	183.1	32.6	-182.1	185.0	280.15
4854.0	91.00	266.70	4690.3	214.9	30.7	-214.0	216.2	278.17
4885.0	93.20	267.30	4689.2	245.8	29.1	-244.9	246.6	276.78
4916.0	93.40	267.00	4687.4	276.6	27.6	-275.8	277.2	275.71
4948.0	96.30	265.00	4684.7	308.3	25.3	-307.6	308.7	274.71
4980.0	96.80	264.70	4681.0	339.9	22.5	-339.3	340.0	273.79
5011.0	96.50	264.70	4677.5	370.4	19.7	-369.9	370.5	273.04
5043.0	94.00	265.40	4674.5	402.0	16.9	-401.7	402.0	272.41
5074.0	93.50	265.00	4672.5	432.8	14.3	-432.5	432.8	271.90
5106.0	93.80	265.20	4670.5	464.5	11.6	-464.3	464.5	271.43
5137.0	95.80	266.30	4667.9	495.2	9.3	-495.1	495.2	271.08
5169.0	95.80	266.10	4664.6	526.8	7.2	-526.9	527.0	270.78
5201.0	95.90	265.60	4661.4	558.5	4.9	-558.7	558.7	270.50
5232.0	95.50	265.80	4658.3	589.2	2.6	-589.4	589.4	270.25
5264.0	92.80	265.80	4656.0	620.9	0.2	-621.2	621.2	270.02
5294.0	92.50	265.70	4654.6	650.7	-2.0	-651.1	651.1	269.83
5326.0	93.00	265.60	4653.1	682.5	-4.4	-683.0	683.0	269.63
5357.0	94.00	265.90	4651.2	713.2	-6.7	-713.9	713.9	269.46
5387.0	93.70	265.90	4649.2	743.0	-8.8	-743.7	743.8	269.32
5418.0	93.80	265.40	4647.1	773.7	-11.2	-774.6	774.6	269.17
5450.0	94.30	264.10	4644.9	805.4	-14.1	-806.3	806.5	269.00
5482.0	93.90	263.90	4642.6	837.0	-17.4	-838.1	838.3	268.81
5513.0	94.20	263.30	4640.4	867.6	-20.9	-868.8	869.1	268.62
5545.0	93.60	263.30	4638.2	899.2	-24.6	-900.5	900.9	268.43
5576.0	92.40	264.50	4636.6	929.8	-27.9	-931.3	931.7	268.28
5608.0	92.30	264.50	4635.3	961.5	-31.0	-963.1	963.6	268.16
5640.0	94.50	266.30	4633.4	993.2	-33.5	-995.0	995.5	268.07
5671.0	94.50	266.30	4630.9	1024.0	-35.5	-1025.8	1026.4	268.02
5703.0	94.30	266.20	4628.5	1055.7	-37.6	-1057.6	1058.3	267.96
5734.0	94.30	267.80	4626.2	1086.5	-39.2	-1088.5	1089.2	267.84
5765.0	92.80	268.70	4624.2	1117.4	-40.2	-1119.4	1120.2	267.94
5797.0	92.50	269.10	4622.8	1149.3	-40.8	-1151.4	1152.1	267.97
5828.0	90.70	269.50	4621.9	1180.3	-41.2	-1182.4	1183.1	268.01
5860.0	89.10	270.30	4622.0	1212.3	-41.2	-1214.4	1215.1	268.06
5891.0	85.80	271.70	4623.3	1243.2	-40.7	-1245.3	1246.0	268.13
5922.0	82.60	273.00	4626.5	1274.1	-39.4	-1276.2	1276.8	268.23

Scientific Drilling International

Survey Report

Company: TEXACO E & P INC.
Field: Central Vacuum
Site: Lea County, NM
Well: CVU #264
Wellpath: HH - Job #32D0901494

Date: 11/6/2001 **Time:** 10:17:07 **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,272.0Azi)
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
5954.0	83.30	276.00	4630.4	1305.8	-36.9	-1307.8	1308.3	268.38
5985.0	84.40	277.80	4633.7	1336.5	-33.2	-1338.4	1338.8	268.58
6016.0	85.30	278.10	4636.5	1367.2	-29.0	-1369.0	1369.3	268.79
6048.0	86.30	278.80	4638.8	1398.9	-24.3	-1400.5	1400.8	269.01
6080.0	86.00	278.60	4641.0	1430.6	-19.4	-1432.1	1432.2	269.22
6112.0	86.10	278.60	4643.2	1462.3	-14.7	-1463.7	1463.7	269.43
6143.0	86.60	278.60	4645.2	1493.0	-10.0	-1494.3	1494.3	269.62
6175.0	86.30	278.50	4647.2	1524.8	-5.3	-1525.8	1525.9	269.80
6206.0	86.60	278.40	4649.1	1555.5	-0.7	-1556.5	1556.5	269.97
6238.0	86.90	278.70	4650.9	1587.3	4.0	-1588.0	1588.1	270.14
6270.0	84.70	279.10	4653.2	1618.9	8.9	-1619.6	1619.6	270.32
6301.0	85.00	279.10	4656.0	1649.6	13.8	-1650.1	1650.1	270.48
6333.0	85.10	280.00	4658.8	1681.2	19.1	-1681.5	1681.6	270.65
6365.0	85.10	280.50	4661.5	1712.7	24.8	-1712.9	1713.1	270.83
6396.0	85.30	280.50	4664.1	1743.3	30.4	-1743.2	1743.5	271.00
6428.0	84.10	278.20	4667.1	1774.9	35.6	-1774.7	1775.0	271.15
6459.0	86.20	278.60	4669.7	1805.6	40.1	-1805.2	1805.7	271.27
6490.0	87.50	278.00	4671.4	1836.3	44.6	-1835.9	1836.4	271.39
6521.0	84.70	277.20	4673.5	1867.1	48.7	-1866.5	1867.2	271.49
6553.0	84.00	277.30	4676.6	1898.8	52.7	-1898.1	1898.8	271.59
6584.0	83.90	277.30	4679.9	1929.5	56.6	-1928.7	1929.5	271.68
6615.0	84.40	277.00	4683.1	1960.2	60.4	-1959.3	1960.2	271.77
6651.0	86.20	276.60	4686.0	1996.0	64.7	-1994.9	1996.0	271.86
6675.0	87.30	275.40	4687.4	2019.9	67.2	-2018.7	2019.9	271.91
6707.0	87.30	275.40	4688.9	2051.8	70.2	-2050.6	2051.8	271.96

