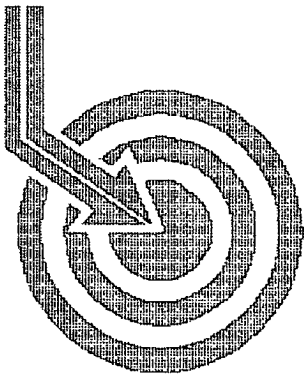




Scientific Drilling

SUR: E-5-9s-34e, 1650/N & 990/W
BHL: E-5-9s-34e, 1655/N & 989/W
API #30-025-31411

J CLEO THOMPSON

Field: Apache
Site: Lea County, NM
Well: Apache #1
Wellpath: VH - Job #32K1104719
Survey: 11/19/04



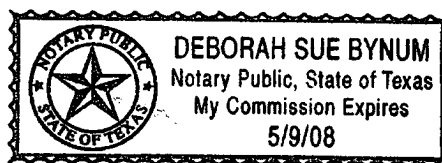
This survey is correct to the best of my knowledge
and is supported by actual field data.

...Bucky Tharston.....Company Representative

Notorized this date 20th of December, 2004.

Deborah Sue Bynum
Notary Signature

County of Midland
State of Texas





Scientific Drilling International Survey Report

Company: J CLEO THOMPSON	Date: 12/20/2004	Time: 09:08:08	Page: 1
Field: Apache	Co-ordinate(NE) Reference:	Site: Lea County, NM, Grid North	
Site: Lea County, NM	Vertical (TVD) Reference:	SITE 0.0	
Well: Apache #1	Section (VS) Reference:	Well (0.00N,0.00E,45.78Azi)	
Wellpath: VH - Job #32K1104719	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Survey: 11/19/04	Start Date: 11/19/2004
KSRG 0'-11775'	
Company: Scientific Drilling Internatio	Engineer: Foster/Gonzales
Tool: Keeper;Keeper Gyro	Tied-to: From Surface

Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
0.0	0.00	359.53	0.0	0.0	0.0	0.0	0.00	0.0	0.00
100.0	0.52	181.52	100.0	-0.3	-0.5	0.0	0.52	0.5	181.52
200.0	0.32	191.23	200.0	-0.9	-1.2	-0.1	0.21	1.2	183.80
300.0	0.36	204.82	300.0	-1.4	-1.7	-0.3	0.09	1.8	188.65
400.0	0.25	250.04	400.0	-1.9	-2.1	-0.6	0.26	2.2	195.99
500.0	0.52	204.39	500.0	-2.5	-2.6	-1.0	0.39	2.8	201.02
600.0	0.56	221.68	600.0	-3.4	-3.4	-1.5	0.17	3.7	204.11
700.0	0.49	189.87	700.0	-4.3	-4.2	-1.9	0.30	4.6	204.64
800.0	0.40	193.29	800.0	-4.9	-4.9	-2.1	0.09	5.3	202.73
900.0	0.40	226.63	900.0	-5.5	-5.5	-2.4	0.23	6.0	203.54
1000.0	0.63	223.06	1000.0	-6.4	-6.1	-3.0	0.23	6.8	206.22
1100.0	0.54	213.13	1100.0	-7.5	-6.9	-3.7	0.14	7.8	207.80
1200.0	0.57	240.42	1200.0	-8.4	-7.6	-4.3	0.26	8.7	209.85
1300.0	0.74	242.43	1300.0	-9.5	-8.1	-5.3	0.17	9.7	213.39
1400.0	0.63	241.55	1399.9	-10.6	-8.7	-6.4	0.11	10.8	216.44
1500.0	0.43	244.83	1499.9	-11.5	-9.1	-7.2	0.20	11.6	218.47
1600.0	0.63	263.47	1599.9	-12.3	-9.3	-8.1	0.26	12.4	221.05
1700.0	0.42	273.95	1699.9	-13.0	-9.4	-9.0	0.23	13.0	223.97
1800.0	0.21	312.58	1799.9	-13.2	-9.2	-9.5	0.29	13.2	225.98
1900.0	0.16	264.10	1899.9	-13.4	-9.1	-9.8	0.16	13.4	227.13
2000.0	0.19	223.02	1999.9	-13.6	-9.2	-10.1	0.13	13.6	227.43
2100.0	0.40	216.63	2099.9	-14.2	-9.6	-10.4	0.21	14.2	227.12
2200.0	0.40	243.95	2199.9	-14.8	-10.1	-10.9	0.19	14.8	227.26
2300.0	0.44	275.96	2299.9	-15.4	-10.2	-11.6	0.23	15.4	228.70
2400.0	0.37	259.81	2399.9	-15.9	-10.2	-12.3	0.13	16.0	230.31
2500.0	0.36	256.78	2499.9	-16.5	-10.3	-12.9	0.02	16.5	231.35
2600.0	0.45	258.90	2599.9	-17.1	-10.5	-13.6	0.09	17.2	232.41
2700.0	0.48	263.58	2699.9	-17.7	-10.6	-14.4	0.05	17.9	233.66
2800.0	0.52	277.85	2799.9	-18.3	-10.6	-15.3	0.13	18.6	235.28
2900.0	0.30	270.28	2899.9	-18.8	-10.5	-16.0	0.23	19.1	236.65
3000.0	0.70	342.78	2999.9	-18.7	-9.9	-16.4	0.67	19.2	238.84
3100.0	0.64	355.93	3099.9	-18.1	-8.8	-16.6	0.16	18.8	242.16
3200.0	0.79	342.95	3199.9	-17.4	-7.6	-16.9	0.22	18.5	245.84
3300.0	0.66	20.11	3299.9	-16.6	-6.4	-16.9	0.48	18.1	249.32
3400.0	0.85	37.62	3399.9	-15.3	-5.2	-16.2	0.30	17.1	252.09
3500.0	0.77	10.94	3499.9	-14.0	-4.0	-15.7	0.38	16.2	255.67
3600.0	0.38	303.87	3599.9	-13.5	-3.2	-15.8	0.71	16.1	258.71
3700.0	0.02	342.02	3699.9	-13.6	-3.0	-16.1	0.36	16.4	259.59
3800.0	0.31	54.77	3799.9	-13.3	-2.8	-15.9	0.30	16.1	260.06
3900.0	0.31	45.28	3899.9	-12.8	-2.4	-15.5	0.05	15.7	261.04
4000.0	0.46	50.38	3999.9	-12.1	-2.0	-15.0	0.15	15.1	262.42
4100.0	0.89	68.36	4099.9	-11.0	-1.4	-13.9	0.47	14.0	264.06
4200.0	0.96	53.29	4199.8	-9.4	-0.7	-12.5	0.25	12.6	266.98
4300.0	0.89	44.94	4299.8	-7.8	0.4	-11.3	0.15	11.3	271.97
4400.0	0.81	36.74	4399.8	-6.4	1.5	-10.3	0.15	10.5	278.28
4500.0	0.70	33.75	4499.8	-5.1	2.6	-9.6	0.12	9.9	285.07
4600.0	0.47	31.14	4599.8	-4.1	3.4	-9.0	0.23	9.7	290.85
4700.0	0.59	49.72	4699.8	-3.2	4.1	-8.4	0.21	9.4	296.07
4800.0	0.66	36.77	4799.8	-2.1	4.9	-7.7	0.16	9.1	302.60



Scientific
Drilling

Scientific Drilling International

Survey Report

Company: J CLEO THOMPSON
Field: Apache
Site: Lea County, NM
Well: Apache #1
Wellpath: VH - Job #32K1104719

Date: 12/20/2004 Time: 09:08:08 Page: 2
Co-ordinate(NE) Reference: Site: Lea County, NM, Grid North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,45.78Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
4900.0	0.72	19.95	4899.8	-0.9	6.0	-7.1	0.21	9.3	309.94
5000.0	0.60	18.50	4999.8	0.1	7.1	-6.7	0.12	9.8	316.28
5100.0	0.47	7.81	5099.8	0.9	8.0	-6.5	0.16	10.3	320.65
5200.0	0.26	21.56	5199.8	1.4	8.6	-6.4	0.23	10.7	323.32
5300.0	0.45	307.80	5299.8	1.6	9.0	-6.6	0.45	11.2	323.77
5400.0	0.47	320.49	5399.8	1.5	9.6	-7.2	0.10	12.0	323.14
5500.0	0.71	308.39	5499.8	1.5	10.3	-7.9	0.27	13.0	322.36
5600.0	0.30	354.59	5599.8	1.6	10.9	-8.4	0.55	13.8	322.32
5700.0	0.06	157.04	5699.8	1.7	11.1	-8.4	0.36	14.0	322.84
5800.0	0.37	48.55	5799.8	2.0	11.3	-8.2	0.39	14.0	324.11
5900.0	0.26	91.76	5899.8	2.5	11.5	-7.7	0.25	13.9	326.18
6000.0	0.36	47.05	5999.8	3.0	11.7	-7.3	0.25	13.8	328.24
6100.0	0.51	71.88	6099.7	3.7	12.1	-6.6	0.24	13.8	331.32
6200.0	0.37	99.79	6199.7	4.3	12.2	-5.9	0.25	13.5	334.25
6300.0	0.12	98.32	6299.7	4.5	12.1	-5.4	0.25	13.3	335.76
6400.0	0.16	50.60	6399.7	4.7	12.2	-5.2	0.12	13.2	336.73
6500.0	0.28	42.40	6499.7	5.1	12.4	-5.0	0.12	13.4	338.25
6600.0	0.40	59.52	6599.7	5.7	12.8	-4.5	0.16	13.6	340.64
6700.0	0.38	89.24	6699.7	6.3	13.0	-3.9	0.20	13.5	343.42
6800.0	0.21	74.01	6799.7	6.7	13.0	-3.4	0.19	13.5	345.56
6900.0	0.44	48.48	6899.7	7.2	13.3	-2.9	0.27	13.6	347.77
7000.0	0.51	81.67	6999.7	8.0	13.6	-2.2	0.28	13.8	351.00
7100.0	0.27	91.13	7099.7	8.5	13.7	-1.5	0.25	13.8	353.82
7200.0	0.47	60.55	7199.7	9.1	13.9	-0.9	0.27	13.9	356.33
7300.0	0.25	109.49	7299.7	9.6	14.0	-0.3	0.36	14.0	358.65
7400.0	0.40	65.66	7399.7	10.0	14.1	0.2	0.28	14.1	0.79
7500.0	0.45	60.88	7499.7	10.7	14.4	0.9	0.06	14.5	3.39
7600.0	0.43	72.17	7599.7	11.4	14.7	1.6	0.09	14.8	6.02
7700.0	0.45	64.51	7699.7	12.1	15.0	2.3	0.06	15.2	8.58
7800.0	0.87	60.39	7799.7	13.2	15.6	3.3	0.42	15.9	11.90
7900.0	0.86	84.57	7899.7	14.5	16.0	4.7	0.36	16.7	16.31
8000.0	0.91	75.04	7999.7	15.8	16.3	6.2	0.16	17.4	20.84
8100.0	1.26	98.90	8099.7	17.2	16.3	8.1	0.56	18.2	26.25
8200.0	0.97	98.65	8199.7	18.3	16.0	10.0	0.29	18.9	31.90
8300.0	1.08	90.06	8299.6	19.5	15.9	11.8	0.19	19.8	36.47
8400.0	0.89	98.04	8399.6	20.7	15.8	13.5	0.23	20.8	40.45
8500.0	0.83	87.95	8499.6	21.7	15.7	15.0	0.16	21.7	43.60
8600.0	0.80	90.03	8599.6	22.7	15.7	16.4	0.04	22.7	46.15
8700.0	1.11	90.15	8699.6	23.9	15.7	18.1	0.31	23.9	48.92
8800.0	1.00	103.80	8799.6	25.1	15.5	19.9	0.27	25.2	51.99
8900.0	0.88	113.78	8899.6	25.8	15.0	21.4	0.20	26.2	54.98
9000.0	0.66	116.62	8999.5	26.3	14.4	22.6	0.22	26.8	57.46
9100.0	0.56	102.54	9099.5	26.8	14.1	23.6	0.18	27.5	59.21
9200.0	0.54	80.47	9199.5	27.4	14.0	24.6	0.21	28.3	60.24
9300.0	0.47	48.28	9299.5	28.2	14.4	25.3	0.29	29.1	60.39
9400.0	0.30	22.48	9399.5	28.9	14.9	25.7	0.24	29.8	59.92
9500.0	0.17	337.75	9499.5	29.1	15.3	25.8	0.22	30.0	59.33
9600.0	0.08	67.45	9599.5	29.3	15.5	25.8	0.19	30.1	59.07
9700.0	0.40	299.48	9699.5	29.2	15.7	25.6	0.45	30.0	58.51
9800.0	0.21	347.93	9799.5	29.2	16.0	25.2	0.30	29.9	57.59
9900.0	0.53	301.38	9899.5	29.2	16.4	24.8	0.41	29.7	56.46
10000.0	0.92	326.59	9999.5	29.3	17.3	23.9	0.49	29.6	54.09



Scientific
Drilling

Scientific Drilling International

Survey Report

Company: J CLEO THOMPSON
Field: Apache
Site: Lea County, NM
Well: Apache #1
Wellpath: VH - Job #32K1104719

Date: 12/20/2004 Time: 09:08:08 Page: 3
Co-ordinate(NE) Reference: Site: Lea County, NM, Grid North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,45.78Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

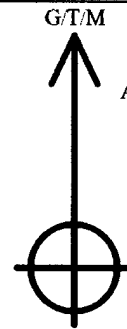
Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
10100.0	0.78	342.89	10099.5	29.7	18.7	23.3	0.28	29.9	51.32
10200.0	0.56	311.77	10199.5	30.0	19.6	22.7	0.42	30.0	49.19
10300.0	0.76	297.06	10299.5	29.7	20.3	21.8	0.26	29.8	47.07
10400.0	0.68	313.26	10399.5	29.5	21.0	20.8	0.22	29.5	44.71
10500.0	0.59	300.78	10499.5	29.3	21.6	19.9	0.16	29.4	42.58
10600.0	1.04	318.59	10599.5	29.3	22.6	18.8	0.51	29.4	39.84
10700.0	0.94	319.47	10699.5	29.4	23.9	17.7	0.10	29.7	36.55
10800.0	1.10	300.68	10799.4	29.2	25.0	16.4	0.37	29.9	33.19
10900.0	0.62	345.62	10899.4	29.2	26.0	15.4	0.79	30.2	30.61
11000.0	0.09	169.24	10999.4	29.4	26.5	15.3	0.71	30.6	29.99
11100.0	0.64	135.78	11099.4	29.4	26.0	15.7	0.57	30.3	31.10
11200.0	1.53	168.05	11199.4	28.6	24.3	16.3	1.05	29.3	33.95
11300.0	2.15	171.85	11299.4	26.8	21.1	16.9	0.63	27.0	38.65
11400.0	2.28	184.32	11399.3	24.2	17.3	17.0	0.50	24.2	44.54
11500.0	2.21	197.50	11499.2	21.0	13.5	16.3	0.52	21.1	50.42
11600.0	1.98	211.04	11599.1	17.7	10.1	14.8	0.54	17.9	55.60
11700.0	1.59	219.82	11699.1	14.6	7.6	13.0	0.48	15.1	59.77
11775.0	1.31	240.29	11774.1	12.8	6.4	11.6	0.78	13.2	61.27



Scientific
Drilling

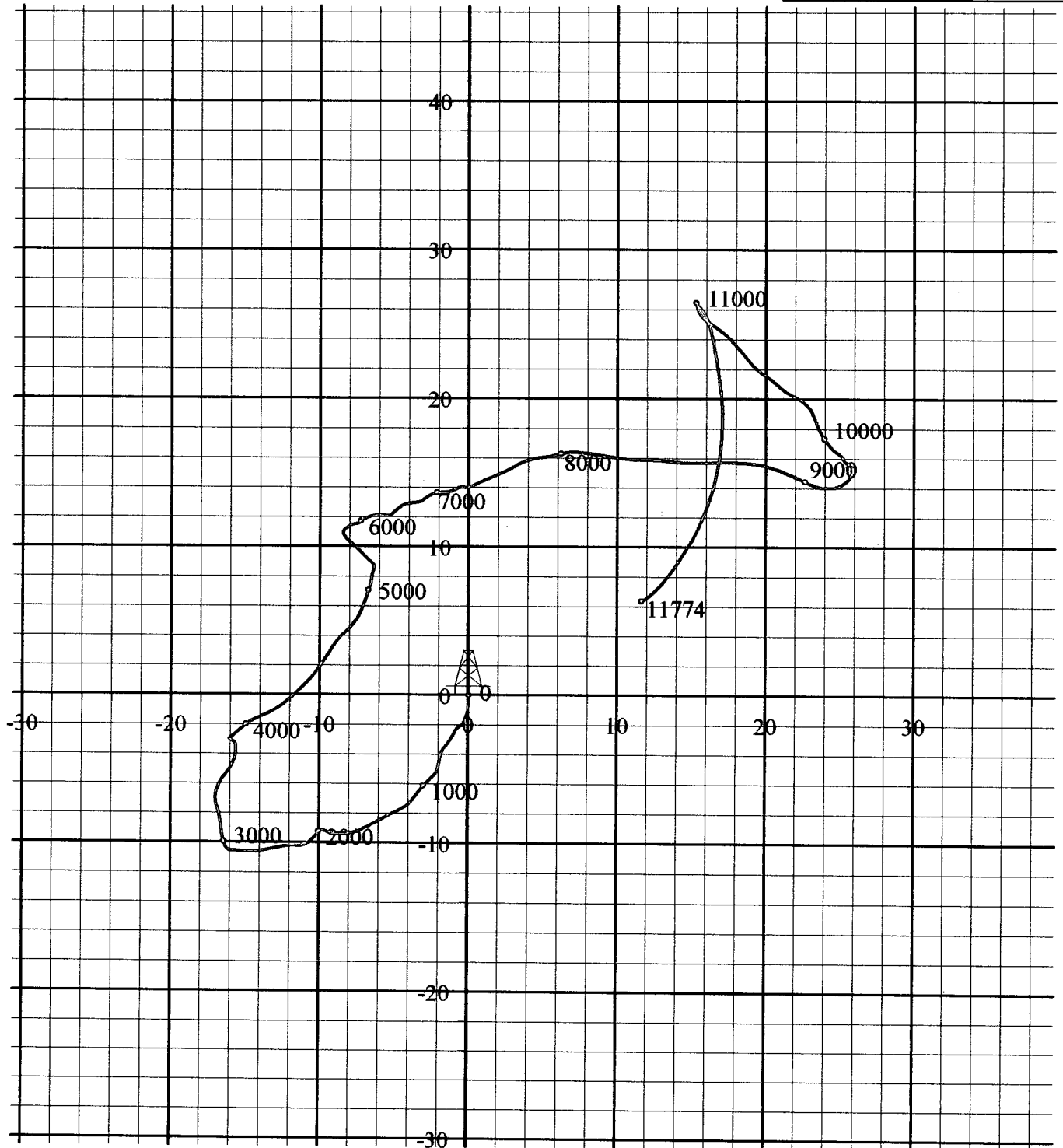
Field: Apache
Site: Lea County, NM
Well: Apache #1
Wellpath: VH - Job #32K1104719
Survey: 11/19/04



Azimuths to Grid North
True North: 0.00°
Magnetic North: 0.00°

Magnetic Field
Strength: 0nT
Dip Angle: 0.00°
Date: 12/19/2004
Model: igrf2000

South(-)/North(+) [10ft/in]



West(-)/East(+) [10ft/in]