



Scientific Drilling

3D-025-3814D

CHEVRON

Field: SWD
Site: Lea County, NM
Well: New Mexico -O- State NCT 1 #40
Wellpath: DH - Job #32D0307200
Survey: 03/09/07-03/15/07



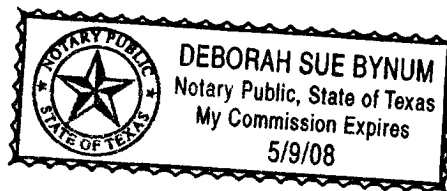
This survey is correct to the best of my knowledge
and is supported by actual field data.

Blharb.....Company Representative

Notorized this date 17th of April, 2007.

Deborah Sue Bynum
Notary Signature

County of Midland
State of Texas





Scientific Drilling International Survey Report

Company: CHEVRON	Date: 04/16/2007	Time: 13:36:04	Page: 1
Field: SWD	Co-ordinate(NE) Reference:	Site: Lea County, NM, Grid North	
Site: Lea County, NM	Vertical (TVD) Reference:	SITE 0.0	
Well: New Mexico -O- State NCT 1 #40	Section (VS) Reference:	Well (0.00N,0.00E,34.14Azi)	
Wellpath: VH - Job #32K0307203	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Survey: 03/10/07	Start Date: 03/10/2007
Company: Scientific Drilling Internatio	Engineer: Guebara w/P&M
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	ChD ft	ChA deg
0.00	0.00	359.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.28	292.91	100.00	-0.05	0.10	-0.22	0.28	0.24	292.91
200.00	0.25	283.77	200.00	-0.17	0.24	-0.66	0.05	0.70	290.09
300.00	0.25	264.21	300.00	-0.39	0.27	-1.09	0.08	1.12	284.00
400.00	0.43	284.51	400.00	-0.65	0.34	-1.67	0.21	1.70	281.63
500.00	0.41	293.00	499.99	-0.85	0.58	-2.36	0.06	2.43	283.74
600.00	0.86	298.73	599.99	-0.99	1.08	-3.35	0.45	3.52	287.84
700.00	1.70	313.55	699.96	-0.82	2.46	-5.08	0.90	5.65	295.83
800.00	3.17	336.50	799.87	0.91	6.02	-7.26	1.74	9.43	309.66
900.00	4.80	350.62	899.63	5.42	12.68	-9.04	1.89	15.58	324.51
1000.00	6.01	358.26	999.18	12.69	22.04	-9.88	1.40	24.15	335.84
1100.00	6.42	0.49	1098.59	21.59	32.86	-10.00	0.48	34.35	343.08
1200.00	4.97	1.88	1198.10	29.91	42.79	-9.80	1.46	43.90	347.09
1300.00	3.29	3.54	1297.83	36.05	49.98	-9.49	1.69	50.88	349.25
1400.00	2.10	358.66	1397.72	40.01	54.68	-9.35	1.21	55.47	350.30
1500.00	1.89	358.06	1497.66	42.84	58.16	-9.45	0.21	58.92	350.77
1600.00	1.94	0.38	1597.61	45.58	61.50	-9.49	0.09	62.23	351.22
1700.00	2.02	4.13	1697.55	48.51	64.95	-9.36	0.15	65.62	351.80
1800.00	2.03	9.42	1797.48	51.64	68.45	-8.94	0.19	69.04	352.56
1900.00	1.91	19.31	1897.43	54.86	71.77	-8.10	0.36	72.23	353.56
2000.00	1.83	27.55	1997.37	58.06	74.76	-6.81	0.28	75.07	354.80
2100.00	1.86	36.69	2097.32	61.27	77.48	-5.10	0.30	77.65	356.23
2200.00	1.98	40.22	2197.26	64.60	80.10	-3.02	0.17	80.16	357.84
2300.00	1.99	41.20	2297.20	68.04	82.72	-0.76	0.04	82.73	359.47
2400.00	2.10	45.57	2397.14	71.56	85.31	1.69	0.19	85.33	1.14
2500.00	2.01	53.09	2497.08	75.02	87.65	4.40	0.28	87.76	2.88
2600.00	2.06	54.63	2597.01	78.36	89.74	7.27	0.07	90.04	4.63
2700.00	2.14	54.91	2696.95	81.79	91.85	10.26	0.08	92.43	6.38
2800.00	2.10	55.32	2796.88	85.24	93.97	13.30	0.04	94.91	8.05
2900.00	2.27	55.99	2896.81	88.79	96.12	16.45	0.17	97.52	9.71
3000.00	2.41	56.24	2996.72	92.57	98.39	19.83	0.14	100.37	11.40
3100.00	2.57	56.10	3096.63	96.59	100.81	23.44	0.16	103.50	13.09
3200.00	2.74	57.04	3196.52	100.87	103.36	27.30	0.18	106.90	14.80
3300.00	3.09	57.08	3296.39	105.55	106.12	31.57	0.35	110.72	16.57
3400.00	3.35	57.69	3396.23	110.71	109.15	36.30	0.26	115.02	18.39
3500.00	3.32	57.11	3496.06	116.05	112.28	41.19	0.04	119.60	20.15
3600.00	2.99	55.65	3595.91	121.14	115.32	45.78	0.34	124.08	21.65
3700.00	3.06	55.75	3695.77	126.05	118.30	50.14	0.07	128.49	22.97
3800.00	3.16	53.13	3795.63	131.14	121.45	54.55	0.17	133.14	24.19
3900.00	3.39	52.08	3895.46	136.56	124.92	59.09	0.24	138.19	25.31
4000.00	3.43	52.47	3995.29	142.21	128.56	63.79	0.05	143.52	26.39
4100.00	3.42	50.91	4095.11	147.90	132.26	68.48	0.09	148.94	27.37
4200.00	3.36	52.15	4194.93	153.55	135.94	73.11	0.09	154.35	28.27
4300.00	3.22	51.38	4294.77	159.02	139.50	77.62	0.15	159.63	29.09
4400.00	3.03	51.38	4394.62	164.22	142.90	81.88	0.19	164.69	29.81
4500.00	2.52	46.56	4494.50	168.90	146.06	85.54	0.56	169.27	30.36
4600.00	2.03	42.68	4594.42	172.80	148.88	88.34	0.51	173.12	30.68
4700.00	1.48	42.06	4694.37	175.83	151.14	90.41	0.55	176.12	30.89
4800.00	1.41	48.63	4794.34	178.30	152.91	92.19	0.18	178.55	31.09



Scientific Drilling International Survey Report

Company: CHEVRON
Field: SWD
Site: Lea County, NM
Well: New Mexico -O- State NCT 1 #40
Wellpath: VH - Job #32K0307203

Date: 04/16/2007 Time: 13:36:04 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,34.14Azi)
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
4900.00	1.23	47.51	4894.32	180.54	154.45	93.91	0.18	180.76	31.30
5000.00	1.18	44.57	4994.29	182.60	155.91	95.43	0.08	182.80	31.47
5100.00	0.73	30.07	5094.28	184.25	157.20	96.47	0.50	184.44	31.54
5200.00	0.46	352.49	5194.27	185.19	158.15	96.74	0.46	185.39	31.45
5300.00	0.25	2.41	5294.27	185.68	158.77	96.70	0.22	185.90	31.34
5400.00	0.27	62.87	5394.27	186.07	159.10	96.91	0.26	186.29	31.35
5500.00	0.26	81.54	5494.27	186.43	159.24	97.35	0.09	186.64	31.44
5600.00	0.25	102.91	5594.27	186.67	159.23	97.79	0.10	186.86	31.56
5700.00	0.28	79.57	5694.27	186.92	159.22	98.24	0.11	187.09	31.67
5800.00	0.19	83.84	5794.27	187.20	159.28	98.64	0.09	187.36	31.77
5900.00	0.27	113.10	5894.27	187.35	159.21	99.02	0.14	187.49	31.88
6000.00	0.54	111.34	5994.26	187.50	158.95	99.68	0.27	187.62	32.09
6100.00	0.64	93.38	6094.26	187.89	158.74	100.68	0.21	187.98	32.38
6200.00	0.41	115.90	6194.25	188.22	158.55	101.55	0.30	188.29	32.64
6300.00	0.18	152.10	6294.25	188.20	158.26	101.95	0.29	188.25	32.79
6400.00	0.23	163.09	6394.25	188.00	157.92	102.08	0.06	188.05	32.88
6500.00	0.33	170.71	6494.25	187.67	157.45	102.19	0.11	187.70	32.98
6600.00	0.36	163.93	6594.25	187.26	156.87	102.32	0.05	187.29	33.12
6700.00	0.33	180.14	6694.25	186.82	156.28	102.41	0.10	186.84	33.24
6800.00	0.21	172.12	6794.25	186.44	155.80	102.43	0.12	186.46	33.32
6900.00	0.04	166.63	6894.25	186.28	155.58	102.47	0.17	186.29	33.37
7000.00	0.06	241.10	6994.25	186.21	155.52	102.43	0.06	186.22	33.37
7100.00	0.22	237.94	7094.25	185.99	155.40	102.22	0.16	186.00	33.34
7200.00	0.24	252.41	7194.25	185.65	155.23	101.86	0.06	185.67	33.27
7300.00	0.37	251.24	7294.24	185.23	155.07	101.36	0.13	185.25	33.17
7400.00	0.40	231.03	7394.24	184.64	154.74	100.78	0.14	184.67	33.08
7500.00	0.59	218.18	7494.24	183.79	154.12	100.19	0.22	183.83	33.03
7600.00	0.54	211.52	7594.23	182.81	153.31	99.63	0.08	182.84	33.02
7700.00	0.69	209.55	7694.23	181.74	152.39	99.09	0.15	181.77	33.03
7800.00	0.74	212.53	7794.22	180.49	151.32	98.44	0.06	180.53	33.05
7900.00	0.73	212.62	7894.21	179.21	150.24	97.75	0.01	179.24	33.05
8000.00	0.86	223.66	7994.20	177.83	149.16	96.89	0.20	177.87	33.01
8100.00	0.93	226.46	8094.19	176.30	148.06	95.79	0.08	176.35	32.90
8200.00	0.85	230.71	8194.18	174.80	147.03	94.62	0.10	174.85	32.76
8300.00	0.76	218.24	8294.17	173.43	146.04	93.64	0.20	173.49	32.67
8400.00	0.42	228.65	8394.16	172.41	145.28	92.95	0.36	172.47	32.61
8500.00	0.23	209.41	8494.16	171.85	144.86	92.58	0.22	171.92	32.58
8600.00	0.22	172.49	8594.16	171.51	144.50	92.50	0.14	171.57	32.63
8700.00	0.26	207.71	8694.16	171.14	144.11	92.43	0.15	171.20	32.67
8800.00	0.29	220.12	8794.16	170.67	143.71	92.16	0.07	170.72	32.67
8900.00	0.42	215.61	8894.16	170.05	143.22	91.78	0.13	170.11	32.65
9000.00	0.44	220.22	8994.15	169.30	142.63	91.32	0.04	169.36	32.63
9100.00	0.47	230.13	9094.15	168.53	142.08	90.76	0.08	168.59	32.57
9200.00	0.38	207.60	9194.15	167.80	141.52	90.29	0.19	167.87	32.54
9300.00	0.15	178.47	9294.15	167.37	141.09	90.14	0.26	167.43	32.57
9400.00	0.11	114.89	9394.15	167.27	140.92	90.23	0.14	167.33	32.63
9500.00	0.27	87.83	9494.15	167.43	140.89	90.55	0.18	167.48	32.73
9600.00	0.21	46.51	9594.15	167.74	141.02	90.92	0.18	167.79	32.81
9700.00	0.08	99.25	9694.14	167.95	141.14	91.12	0.17	168.00	32.85
9800.00	0.18	234.04	9794.14	167.84	141.04	91.06	0.24	167.88	32.85
9900.00	0.39	203.33	9894.14	167.35	140.63	90.80	0.26	167.40	32.85
10000.00	0.85	175.39	9994.14	166.44	139.57	90.73	0.54	166.47	33.03



Scientific Drilling International Survey Report

Company: CHEVRON
Field: SWD
Site: Lea County, NM
Well: New Mexico -O- State NCT 1 #40
Wellpath: VH - Job #32K0307203

Date: 04/16/2007 Time: 13:36:04 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,34.14Azi)
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
10100.00	0.78	125.67	10094.13	165.84	138.43	91.34	0.69	165.85	33.42
10200.00	0.56	110.65	10194.12	165.93	137.86	92.35	0.28	165.94	33.82
10300.00	1.67	201.45	10294.11	164.62	136.33	92.27	1.77	164.62	34.09
10321.00	2.33	205.01	10315.09	163.90	135.66	91.98	3.18	163.90	34.14



Scientific
Drilling

Field: SWD

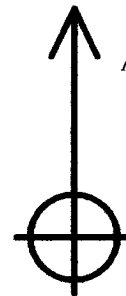
Site: Lea County, NM

Well: New Mexico -O- State NCT 1 #40

Wellpath: DH - Job #32D0307200

Survey: 03/09/07-03/15/07

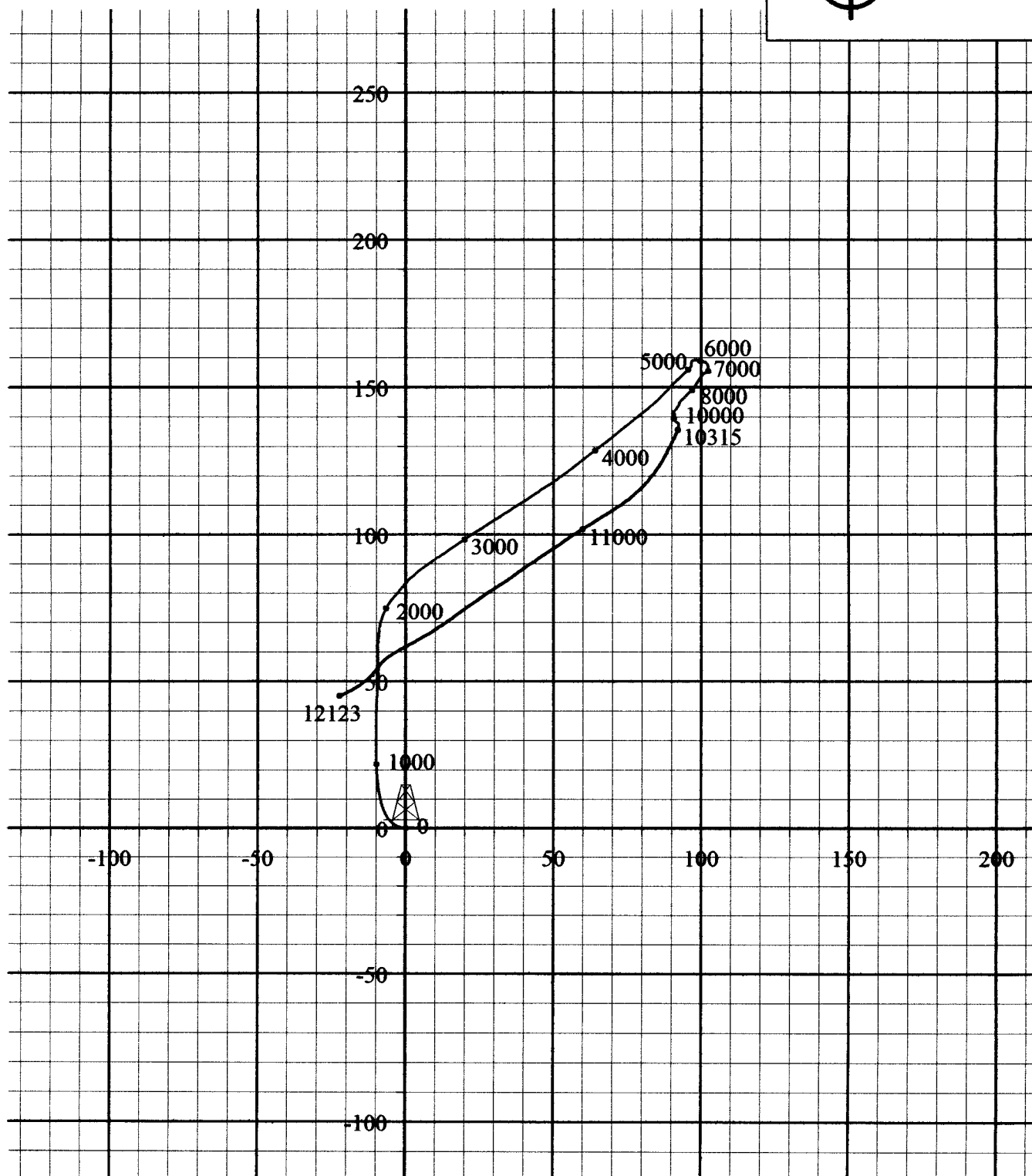
G/T/M



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

Magnetic Field
Strength: 0nT
Dip Angle: 0.00°
Date: 04/16/2007
Model: igrf2000

South(-)/North(+) [20ft/in]



West(-)/East(+) [20ft/in]



Scientific Drilling International Survey Report

Company: CHEVRON Date: 04/16/2007 Time: 15:20:02 Page: 1
Field: SWD Co-ordinate(NE) Reference: Site: Lea County, NM, Grid North
Site: Lea County, NM Vertical (TVD) Reference: SITE 0.0
Well: New Mexico -O- State NCT 1 #40 Section (VS) Reference: Well (0.00N,0.00E,34.14Azi)
Wellpath: DH - Job #32D0307200 Survey Calculation Method: Minimum Curvature Db: Sybase

Survey: 03/09/07-03/15/07 Start Date: 03/09/2007
MWD 10515'-12086' w/projection @ 12135'
Company: Scientific Drilling Internatio Engineer: Calvert/Boyd/Lambert
Tool: MWD;MWD Tied-to: From: Definitive Path

Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
10321.00	2.33	205.01	10315.09	163.90	135.66	91.98	0.00	163.90	34.14
10515.00	3.35	207.40	10508.85	154.38	127.05	87.70	0.53	154.39	34.62
10702.00	3.94	221.60	10695.48	142.58	117.40	80.92	0.57	142.59	34.58
10891.00	5.37	238.50	10883.86	128.09	107.92	69.07	1.04	128.13	32.62
11079.00	5.74	236.00	11070.97	111.35	98.07	53.78	0.24	111.84	28.74
11267.00	6.83	235.20	11257.84	92.19	86.43	36.80	0.58	93.94	23.06
11404.00	6.44	235.80	11393.92	77.45	77.46	23.76	0.29	81.02	17.05
11473.00	6.29	233.60	11462.50	70.29	73.04	17.51	0.41	75.12	13.48
11535.00	5.85	235.80	11524.15	64.15	69.25	12.17	0.80	70.31	9.97
11598.00	5.44	239.30	11586.85	58.46	65.92	6.94	0.85	66.29	6.01
11661.00	5.03	242.30	11649.58	53.32	63.12	1.93	0.78	63.14	1.75
11723.00	4.55	239.80	11711.37	48.71	60.61	-2.60	0.84	60.67	357.54
11786.00	3.21	234.60	11774.22	44.81	58.34	-6.20	2.20	58.66	353.93
11849.00	2.96	217.00	11837.13	41.53	56.02	-8.62	1.55	56.67	351.26
11912.00	2.95	218.90	11900.05	38.29	53.45	-10.61	0.16	54.50	348.77
11975.00	2.97	226.60	11962.96	35.08	51.07	-12.82	0.63	52.65	345.91
12037.00	3.70	237.98	12024.86	31.68	48.91	-15.68	1.58	51.36	342.22
12086.00	4.74	241.90	12073.72	28.44	47.12	-18.81	2.20	50.73	338.24
12135.00	4.74	241.90	12122.56	24.86	45.21	-22.38	0.00	50.44	333.67

7" CSG Set