

Angel Fire 10 State #1 Gyro.txt

H HEADER INFORMATION -----
H COMPANY : Cimarex Energy
H FIELD : Angel Fire
H SITE : Lea County, NM
H WELL : Angel Fire 10 State #1
H WELLPATH: 1
H DEPTHUNT: ft
H SURVDATE: 2005-05-31
H-----

SUR: A-10-15s-36e, 1195/N & 965/E
BHL: A-10-15s-36e, 1241/N & 1123/E
API #30-025-37198

H WELL INFORMATION
H WELL EW MAP : 0.00
H WELL NS MAP : 0.00
H DATUM ELEVN : 0.00
H VSECT ANGLE : 244.76
H VSECT NORTH : 0.00
H VSECT EAST : 0.00
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H SURVEY TYPE INFORMATION
100.00 - 10917.00 Gyro : Keeper
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H SURVEY LIST					
H MD	INC	AZI	TVD	NS	EW
0.00	0.00	359.45	0.00	0.00	0.00
100.00	0.46	253.48	100.00	-0.11	-0.38
200.00	0.57	245.31	199.99	-0.44	-1.22
300.00	0.50	221.99	299.99	-0.97	-1.97
400.00	0.58	202.98	399.99	-1.76	-2.45
500.00	0.63	186.61	499.98	-2.77	-2.72
600.00	0.57	185.06	599.98	-3.81	-2.82
700.00	0.42	192.48	699.97	-4.67	-2.95
800.00	0.56	174.24	799.97	-5.51	-2.98
900.00	0.43	189.80	899.96	-6.37	-2.99
1000.00	0.45	179.38	999.96	-7.13	-3.05
1100.00	0.48	165.53	1099.96	-7.93	-2.94
1200.00	0.46	192.50	1199.95	-8.72	-2.92
1300.00	0.51	174.76	1299.95	-9.56	-2.97
1400.00	0.44	172.67	1399.95	-10.38	-2.88
1500.00	0.44	166.10	1499.94	-11.14	-2.74
1600.00	0.51	164.31	1599.94	-11.94	-2.53
1700.00	0.46	158.68	1699.94	-12.74	-2.26
1800.00	0.50	169.00	1799.93	-13.54	-2.03
1900.00	0.59	147.27	1899.93	-14.40	-1.67
2000.00	0.49	164.60	1999.93	-15.25	-1.28
2100.00	0.48	131.43	2099.92	-15.94	-0.85
2200.00	0.38	150.08	2199.92	-16.50	-0.37
2300.00	0.80	140.50	2299.91	-17.33	0.24
2400.00	0.85	135.46	2399.90	-18.40	1.20
2500.00	0.76	135.09	2499.89	-19.39	2.19
2600.00	1.00	130.37	2599.88	-20.43	3.32
2700.00	0.86	135.03	2699.87	-21.53	4.52
2800.00	0.99	124.73	2799.86	-22.55	5.76
2900.00	1.04	123.93	2899.84	-23.55	7.22
3000.00	1.08	135.99	2999.82	-24.73	8.63
3100.00	0.99	122.96	3099.81	-25.88	10.01
3200.00	0.88	121.87	3199.79	-26.76	11.39
3300.00	0.88	119.25	3299.78	-27.54	12.71
3400.00	0.94	117.56	3399.77	-28.29	14.11
3500.00	0.95	110.35	3499.76	-28.96	15.61
3600.00	0.88	107.53	3599.74	-29.48	17.12
3700.00	0.81	109.75	3699.73	-29.95	18.52
3800.00	0.84	104.62	3799.72	-30.37	19.89
3900.00	0.79	91.08	3899.71	-30.57	21.29
4000.00	0.76	91.03	3999.70	-30.60	22.64
4100.00	0.66	82.14	4099.69	-30.53	23.88
4200.00	0.61	90.10	4199.69	-30.45	24.98
4300.00	0.66	77.90	4299.68	-30.33	26.08
4400.00	0.52	78.16	4399.68	-30.12	27.08
4500.00	0.47	84.69	4499.67	-29.99	27.94
4600.00	0.31	83.03	4599.67	-29.91	28.61
4700.00	0.35	79.49	4699.67	-29.83	29.18



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4800.00	0.17	88.38	4799.67	-29.77	29.63
4900.00	0.16	107.26	4899.67	-29.80	29.91
5000.00	0.16	43.09	4999.67	-29.74	30.14
5100.00	0.19	149.62	5099.67	-29.78	30.32
5200.00	0.16	86.15	5199.67	-29.92	30.54
5300.00	0.15	62.50	5299.67	-29.85	30.80
5400.00	0.03	147.24	5399.67	-29.81	30.93
5500.00	0.15	72.94	5499.67	-29.79	31.07
5600.00	0.34	178.85	5599.67	-30.05	31.20
5700.00	0.49	169.40	5699.66	-30.77	31.28
5800.00	0.68	157.46	5799.66	-31.74	31.59
5900.00	1.13	143.80	5899.65	-33.08	32.40
6000.00	1.30	143.69	5999.62	-34.79	33.65
6100.00	1.33	144.32	6099.60	-36.65	35.00
6200.00	1.52	140.28	6199.57	-38.61	36.53
6300.00	1.56	141.55	6299.53	-40.70	38.22
6400.00	1.67	143.86	6399.49	-42.94	39.93
6500.00	1.81	147.80	6499.44	-45.45	41.63
6600.00	1.93	143.94	6599.39	-48.15	43.46
6700.00	1.80	145.82	6699.34	-50.81	45.33
6800.00	1.87	140.70	6799.29	-53.37	47.25
6900.00	1.66	144.22	6899.24	-55.81	49.13
7000.00	1.61	143.06	6999.20	-58.11	50.82
7100.00	1.55	144.99	7099.16	-60.34	52.44
7200.00	1.19	146.24	7199.13	-62.31	53.79
7300.00	1.01	155.66	7299.11	-63.98	54.73
7400.00	0.92	150.61	7399.10	-65.48	55.49
7500.00	0.72	156.08	7499.09	-66.75	56.14
7600.00	0.56	177.17	7599.08	-67.81	56.42
7700.00	0.35	168.89	7699.08	-68.60	56.50
7800.00	0.38	231.72	7799.08	-69.11	56.30
7900.00	0.18	237.15	7899.08	-69.40	55.91
8000.00	0.15	217.29	7999.08	-69.59	55.70
8100.00	0.31	228.43	8099.07	-69.87	55.42
8200.00	0.24	223.50	8199.07	-70.20	55.07
8300.00	0.18	167.14	8299.07	-70.51	54.96
8400.00	0.30	109.56	8399.07	-70.75	55.24
8500.00	0.63	97.35	8499.07	-70.91	56.03
8600.00	0.50	101.50	8599.06	-71.06	57.01
8700.00	0.60	88.55	8699.06	-71.14	57.96
8800.00	0.60	78.31	8799.05	-71.02	58.99
8900.00	0.46	82.87	8899.05	-70.86	59.90
9000.00	0.37	69.66	8999.05	-70.70	60.61
9100.00	0.29	55.42	9099.05	-70.44	61.12
9200.00	0.23	47.72	9199.04	-70.17	61.47
9300.00	0.25	111.46	9299.04	-70.11	61.82
9400.00	0.26	132.92	9399.04	-70.34	62.19
9500.00	0.55	129.97	9499.04	-70.81	62.73
9600.00	0.42	164.61	9599.04	-71.47	63.19
9700.00	0.50	184.76	9699.03	-72.26	63.25
9800.00	0.52	177.45	9799.03	-73.15	63.24
9900.00	0.42	182.08	9899.03	-73.97	63.24
10000.00	0.48	185.57	9999.02	-74.75	63.19
10100.00	0.39	183.95	10099.02	-75.50	63.13
10200.00	0.51	172.84	10199.02	-76.29	63.16
10300.00	0.57	194.03	10299.01	-77.21	63.09
10400.00	0.63	197.16	10399.01	-78.22	62.81
10500.00	0.72	202.58	10499.00	-79.32	62.41
10600.00	0.57	212.65	10598.99	-80.32	61.90
10700.00	0.50	224.53	10698.99	-81.05	61.32
10800.00	0.67	232.29	10798.98	-81.72	60.56
10900.00	0.60	276.10	10898.98	-82.02	59.57
10917.00	0.67	273.20	10915.98	-82.01	59.38

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Cimarex Energy Co., Inc.
Angelfire 10 State #1 - MWD Survey #1

Lea Co, New Mexico
Angelfire 10 State #1

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
10917.00	0.670	273.200	10915.98	82.01 S	59.38 E	-18.75	0.00
10980.00	1.000	288.300	10978.97	81.81 S	58.49 E	-18.02	0.63
11010.00	1.300	282.900	11008.96	81.66 S	57.91 E	-17.57	1.06
11042.00	1.700	283.900	11040.95	81.46 S	57.10 E	-16.91	1.25
11073.00	2.100	279.600	11071.94	81.26 S	56.09 E	-16.09	1.37
11105.00	2.500	269.000	11103.91	81.17 S	54.82 E	-14.97	1.82
11136.00	3.300	267.000	11134.87	81.23 S	53.25 E	-13.53	2.60
11169.00	4.200	269.100	11167.80	81.30 S	51.09 E	-11.55	2.76
11201.00	4.600	270.400	11199.71	81.31 S	48.64 E	-9.32	1.29
11233.00	5.200	272.100	11231.59	81.25 S	45.91 E	-6.88	1.93
11264.00	5.700	273.200	11262.45	81.11 S	42.97 E	-4.28	1.65
11295.00	6.200	275.800	11293.28	80.85 S	39.76 E	-1.49	1.83
11327.00	6.900	278.200	11325.07	80.40 S	36.14 E	1.59	2.35
11359.00	7.400	278.300	11356.82	79.83 S	32.20 E	4.92	1.56
11391.00	7.600	277.100	11388.55	79.27 S	28.06 E	8.42	0.79
11423.00	7.600	277.400	11420.27	78.74 S	23.86 E	11.99	0.12
11454.00	7.100	277.100	11451.01	78.24 S	19.93 E	15.34	1.62
11486.00	6.700	276.300	11482.78	77.79 S	16.11 E	18.60	1.29
11518.00	6.700	276.100	11514.56	77.39 S	12.40 E	21.78	0.07
11550.00	7.000	275.400	11546.34	77.00 S	8.60 E	25.06	0.97
11581.00	7.300	278.800	11577.09	76.52 S	4.77 E	28.31	1.67
11612.00	7.700	280.400	11607.83	75.85 S	0.78 E	31.63	1.46
11653.00	8.200	280.700	11648.43	74.81 S	4.79 W	36.23	1.22
11685.00	8.600	280.400	11680.09	73.95 S	9.39 W	40.02	1.26
11717.00	8.800	281.100	11711.72	73.05 S	14.14 W	43.94	0.71
11754.00	8.400	280.400	11748.31	72.02 S	19.58 W	48.42	1.12
11786.00	8.300	279.000	11779.97	71.24 S	24.16 W	52.23	0.71
11817.00	8.000	277.900	11810.65	70.59 S	28.50 W	55.88	1.09
11849.00	7.800	275.800	11842.35	70.06 S	32.87 W	59.61	1.10
11881.00	7.700	273.700	11874.06	69.71 S	37.17 W	63.34	0.94
11912.00	7.400	272.200	11904.79	69.49 S	41.24 W	66.93	1.16
11944.00	7.300	271.700	11936.53	69.36 S	45.33 W	70.57	0.37
11976.00	7.200	270.400	11968.27	69.28 S	49.36 W	74.19	0.60
12008.00	7.100	270.100	12000.02	69.26 S	53.35 W	77.79	0.33
12039.00	7.200	270.300	12030.78	69.25 S	57.21 W	81.27	0.33
12070.00	7.000	270.000	12061.54	69.24 S	61.04 W	84.73	0.66
12102.00	6.900	270.400	12093.31	69.23 S	64.91 W	88.23	0.35
12132.00	6.900	271.000	12123.09	69.18 S	68.51 W	91.47	0.24
12158.00	6.800	272.400	12148.91	69.09 S	71.61 W	94.24	0.75
12190.00	7.000	273.300	12180.67	68.90 S	75.45 W	97.63	0.71
12222.00	6.900	271.600	12212.44	68.73 S	79.32 W	101.06	0.71
12253.00	7.000	273.100	12243.21	68.58 S	83.07 W	104.38	0.67
12285.00	7.200	274.900	12274.97	68.30 S	87.01 W	107.83	0.93
12317.00	6.800	275.000	12306.73	67.97 S	90.90 W	111.20	1.25
12348.00	6.600	274.300	12337.52	67.67 S	94.50 W	114.34	0.70
12380.00	6.800	272.200	12369.30	67.46 S	98.23 W	117.62	0.99
12411.00	7.000	271.300	12400.07	67.35 S	101.95 W	120.94	0.73
12442.00	7.000	271.200	12430.84	67.27 S	105.73 W	124.32	0.04
12474.00	6.700	272.400	12462.61	67.15 S	109.54 W	127.72	1.04
12504.00	6.700	272.600	12492.41	66.99 S	113.04 W	130.82	0.08
12535.00	6.600	274.500	12523.20	66.77 S	116.62 W	133.96	0.78
12567.00	6.800	273.100	12554.98	66.53 S	120.35 W	137.23	0.81
12598.00	7.300	272.900	12585.75	66.33 S	124.15 W	140.58	1.61
12629.00	7.400	273.700	12616.49	66.10 S	128.11 W	144.06	0.46
12658.00	7.000	275.400	12645.26	65.81 S	131.73 W	147.22	1.56
12689.00	6.200	277.800	12676.06	65.41 S	135.27 W	150.25	2.73
12720.00	5.800	279.600	12706.89	64.92 S	138.47 W	152.93	1.43
12751.00	5.400	278.300	12737.74	64.45 S	141.46 W	155.44	1.35
12783.00	5.600	275.900	12769.59	64.07 S	144.50 W	158.03	0.95
12814.00	5.800	273.900	12800.44	63.81 S	147.57 W	160.69	0.91

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12846.00	5.800	273.900	12832.28	63.59 S	150.80 W	163.51	0.00
12876.00	5.600	272.100	12862.13	63.43 S	153.77 W	166.14	0.89
12908.00	5.600	270.300	12893.97	63.36 S	156.89 W	168.93	0.55
12939.00	5.500	271.600	12924.83	63.31 S	159.89 W	171.62	0.52
13220.00	5.500	41.660	13205.24	52.85 S	164.41 W	171.25	3.55
13322.00	5.500	41.660	13306.77	45.55 S	157.91 W	162.26	0.00

All data are in feet unless otherwise stated. Directions and coordinates are relative to Grid North. Vertical depths are relative to WELL. Northings and Eastings are relative to well.

The Dogleg Severity is in Degrees per 100 feet.

Vertical Section is from Slot and calculated along an Azimuth of 244.760° (Grid).

Coordinate System is NAD 1927 (NADCON CONUS) US State Plane 1927 (Exact solution), New Mexico East 3001. Central meridian is -104.333°.

Grid Convergence at Surface is 0.571°.

Based upon Minimum Curvature type calculations, at a Measured Depth of 13322.00ft., the Bottom Hole Displacement is 164.35ft., in the Direction of 244.760° (Grid).