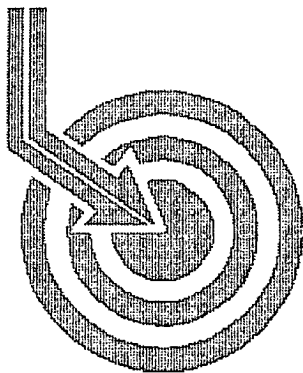




Scientific Drilling

30-015-37431

CIMAREX ENERGY

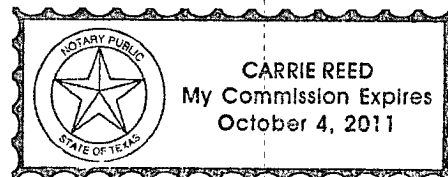
Field: Bone Spring Wildcat
Site: Eddy County, NM
Well: Cottonwood Draw 22 Federal Com #5H
Wellpath: VH - Job #32K0110001
Survey: 01/01/10

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

.....*Richard M. [Signature]*.....Company Representative

Notorized this date 28th of January, 2010.

Carrie Reed
Notary Signature
County of Midland
State of Texas





Scientific Drilling International Survey Report

Company: CIMAREX ENERGY	Date: 01/12/2010	Time: 09:38:58	Page: 1
Field: Bone Spring Wildcat	Co-ordinate(NE) Reference:	Site: Eddy County, NM, Grid North	
Site: Eddy County, NM	Vertical (TVD) Reference:	SITE 0.0	
Well: Cottonwood Draw 22 Federal Com	Section (VS) Reference:	Well (0.00N,0.00E,185.63Azi)	
Wellpath: VH - Job #32K0110001	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Survey: 01/01/10	Start Date: 01/01/2010
Company: Scientific Drilling Internatio	Engineer: Madrid w/Gray
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
0.00	0.00	359.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.44	354.07	100.00	-0.38	0.38	-0.04	0.44	0.38	354.07
200.00	0.60	290.29	200.00	-0.88	0.95	-0.57	0.57	1.10	328.89
300.00	1.01	259.98	299.99	-0.78	0.97	-1.93	0.58	2.16	296.78
400.00	0.94	259.27	399.97	-0.31	0.67	-3.60	0.07	3.66	280.50
500.00	0.82	231.91	499.96	0.41	0.07	-4.97	0.43	4.97	270.85
600.00	0.91	219.07	599.95	1.57	-0.98	-6.04	0.21	6.12	260.74
700.00	1.09	218.85	699.93	3.03	-2.34	-7.13	0.18	7.51	251.83
800.00	1.01	200.13	799.92	4.68	-3.91	-8.03	0.35	8.93	244.05
900.00	1.12	165.91	899.90	6.45	-5.69	-8.10	0.64	9.90	234.93
1000.00	1.28	155.89	999.88	8.34	-7.65	-7.40	0.26	10.65	224.05
1100.00	1.94	124.14	1099.84	10.12	-9.62	-5.55	1.09	11.11	209.96
1200.00	3.11	112.28	1199.74	11.71	-11.60	-1.64	1.28	11.72	188.03
1300.00	3.42	117.60	1299.58	13.60	-14.01	3.52	0.43	14.45	165.91
1400.00	4.41	111.73	1399.35	15.78	-16.82	9.73	1.07	19.43	149.94
1500.00	5.05	108.50	1499.01	17.83	-19.64	17.48	0.69	26.29	138.33
1600.00	5.21	108.46	1598.60	19.82	-22.47	25.96	0.16	34.33	130.88
1700.00	4.92	108.88	1698.21	21.81	-25.30	34.32	0.29	42.64	126.39
1800.00	4.04	112.87	1797.91	23.83	-28.05	41.63	0.93	50.20	123.98
1900.00	3.22	118.47	1897.71	25.97	-30.76	47.34	0.89	56.46	123.01
2000.00	2.78	120.34	1997.57	28.07	-33.32	51.90	0.45	61.68	122.70
2100.00	2.46	122.28	2097.46	30.05	-35.70	55.81	0.33	66.25	122.60
2200.00	2.31	123.55	2197.38	31.95	-37.96	59.30	0.16	70.41	122.62
2300.00	2.11	126.66	2297.30	33.85	-40.17	62.46	0.23	74.26	122.75
2400.00	1.86	130.77	2397.24	35.73	-42.33	65.17	0.29	77.71	123.00
2500.00	1.66	141.16	2497.20	37.70	-44.52	67.30	0.38	80.69	123.48
2600.00	1.52	141.00	2597.16	39.68	-46.67	69.05	0.14	83.34	124.06
2700.00	1.57	137.88	2697.12	41.54	-48.72	70.80	0.10	85.94	124.53
2800.00	1.60	137.26	2797.08	43.39	-50.76	72.67	0.03	88.64	124.94
2900.00	1.37	135.37	2897.05	45.08	-52.64	74.45	0.24	91.18	125.26
3000.00	1.17	137.86	2997.03	46.53	-54.25	75.98	0.21	93.36	125.53
3100.00	1.03	143.60	3097.01	47.88	-55.73	77.20	0.18	95.21	125.82
3200.00	0.89	147.12	3196.99	49.16	-57.10	78.15	0.15	96.79	126.15
3300.00	0.75	155.89	3296.98	50.34	-58.35	78.84	0.19	98.09	126.51
3400.00	0.74	168.49	3396.97	51.52	-59.58	79.24	0.16	99.14	126.94
3500.00	0.73	182.82	3496.97	52.77	-60.85	79.33	0.18	99.98	127.49
3600.00	0.75	184.77	3596.96	54.07	-62.14	79.25	0.03	100.71	128.10
3700.00	0.86	194.79	3696.95	55.46	-63.52	79.00	0.18	101.37	128.80
3800.00	0.90	201.63	3796.94	56.96	-64.97	78.52	0.11	101.92	129.61
3900.00	0.93	204.24	3896.92	58.48	-66.44	77.90	0.05	102.39	130.46
4000.00	0.97	192.93	3996.91	60.09	-68.01	77.38	0.19	103.02	131.31
4100.00	0.86	179.95	4096.90	61.68	-69.58	77.19	0.23	103.92	132.03
4200.00	0.78	198.44	4196.89	63.09	-70.98	76.97	0.28	104.70	132.68
4300.00	0.91	205.86	4296.88	64.50	-72.34	76.41	0.17	105.22	133.43
4400.00	0.91	209.10	4396.86	65.97	-73.75	75.68	0.05	105.67	134.26
4500.00	0.90	209.01	4496.85	67.42	-75.13	74.91	0.01	106.10	135.08
4600.00	1.00	204.57	4596.84	68.96	-76.61	74.17	0.12	106.63	135.93
4700.00	1.14	213.78	4696.82	70.67	-78.23	73.25	0.22	107.17	136.88
4800.00	1.05	217.63	4796.80	72.32	-79.78	72.14	0.12	107.56	137.88



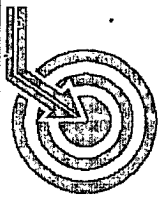
Scientific Drilling International Survey Report

Company: CIMAREX ENERGY
Field: Bone Spring Wildcat
Site: Eddy County, NM
Well: Cottonwood Draw 22 Federal Com
Wellpath: VH - Job #32K0110001

Date: 01/12/2010 **Time:** 09:38:58 **Page:** 2
Co-ordinate(NE) Reference: Site: Eddy County, NM, Grid North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,185.63Azi)
Survey Calculation Method: Minimum Curvature **Db:** Sybase

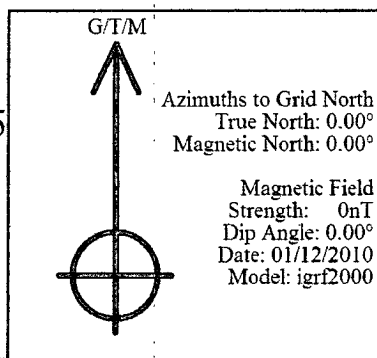
Survey

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	1.17	218.55	4896.78	73.95	-81.31	70.94	0.12	107.91	138.89
5000.00	1.24	222.17	4996.76	75.68	-82.91	69.58	0.10	108.24	139.99
5100.00	1.20	232.89	5096.74	77.26	-84.34	68.02	0.23	108.35	141.11
5200.00	1.35	237.40	5196.71	78.70	-85.61	66.19	0.18	108.21	142.29
5300.00	1.48	241.84	5296.68	80.15	-86.85	64.06	0.17	107.92	143.59
5400.00	1.20	246.76	5396.66	81.37	-87.87	61.96	0.30	107.52	144.81
5500.00	0.40	319.55	5496.65	81.64	-88.02	60.77	1.15	106.96	145.38
5600.00	0.62	322.17	5596.64	81.00	-87.33	60.21	0.22	106.08	145.41
5700.00	1.19	331.47	5696.63	79.75	-85.99	59.39	0.59	104.50	145.37
5800.00	1.51	336.86	5796.60	77.73	-83.87	58.37	0.34	102.18	145.16
5858.00	0.97	338.71	5854.59	76.63	-82.71	57.89	0.93	100.95	145.01

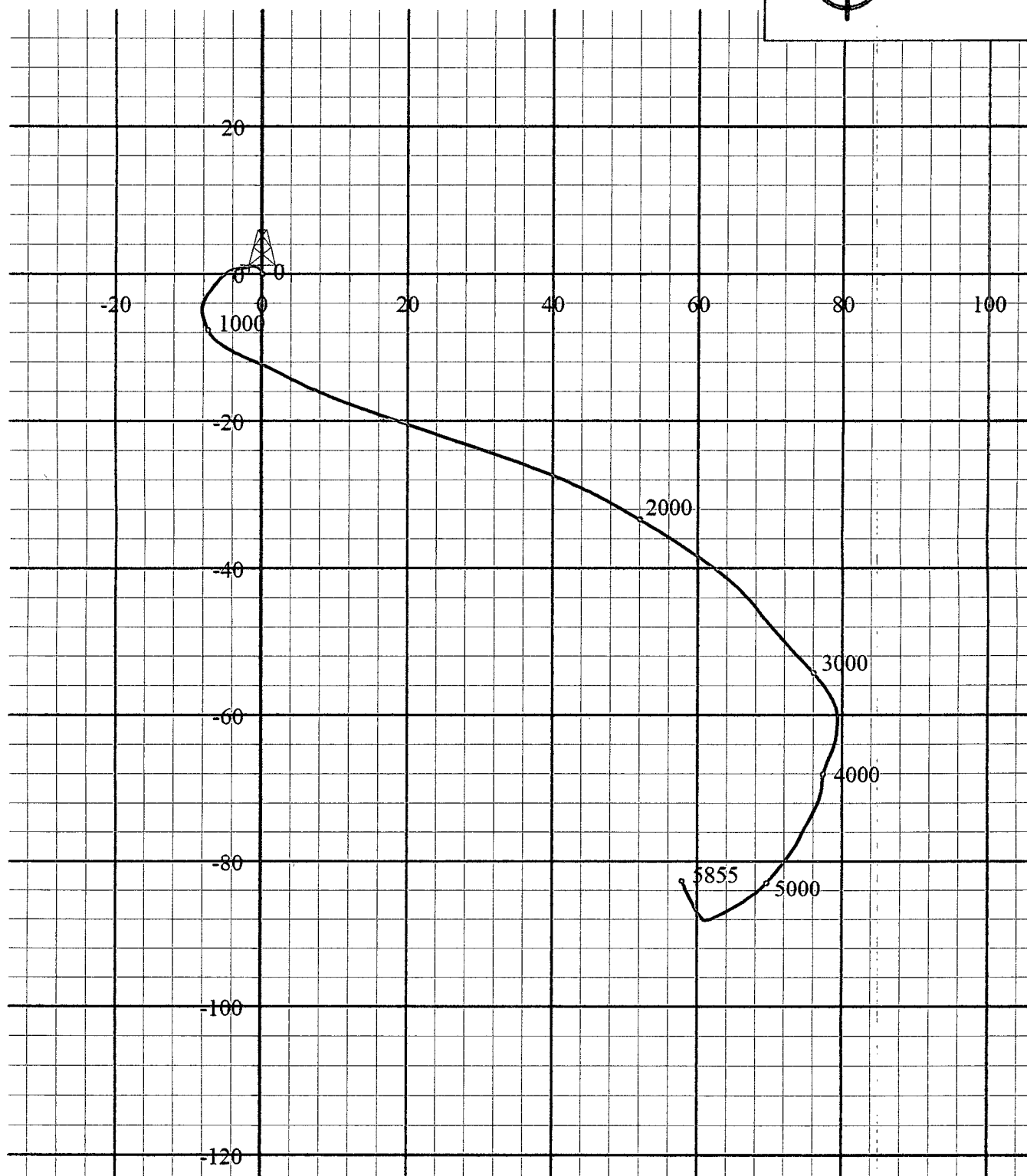


Scientific
Drilling

Field: Bone Spring Wildcat
Site: Eddy County, NM
Well: Cottonwood Draw 22 Federal Com #5
Path: VH - Job #32K0110001
Survey: 01/01/10



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



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