

Job Number: 23D1010125
 Company: Stone Energy
 Lease/Well: Mills-Wetzel #1H
 Location: Mills Wetzel Pad
 Rig Name: Saxon 141
 RKB: 18
 G.L. or M.S.L.:

State/Country: West Virginia
 Declination: -8.45
 Grid: .75
 File name: D:WINSERVEIMW#1H.SVY
 Date/Time: 19-Oct-10 / 05:58
 Curve Name: Mills-Wetzel #1H

Scientific Drilling

WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane 329.27
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Distance FT	Dogleg Severity Deg/100
.00	.00	.00	.00	.00	.00	.00	.00	.00
108.00	.21	199.77	108.00	-.19	-.07	-.13	.20	.19
208.00	.10	249.42	208.00	-.39	-.21	-.23	.44	.16
308.00	.19	51.18	308.00	-.32	-.16	-.19	.36	.29
408.00	.17	23.41	408.00	-.08	.03	-.08	.08	.09
508.00	.20	68.72	508.00	.12	.25	-.02	.28	.15
608.00	.28	129.34	608.00	.03	.60	-.28	.60	.25
708.00	.16	166.66	708.00	-.26	.82	-.64	.86	.18
808.00	.17	328.73	808.00	-.27	.77	-.63	.82	.33
908.00	.31	84.50	908.00	-.12	.97	-.59	.97	.41
1008.00	.22	110.82	1008.00	-.16	1.42	-.86	1.42	.15
1108.00	.26	158.97	1107.99	-.44	1.68	-1.23	1.73	.20
1208.00	.22	177.02	1207.99	-.84	1.77	-1.63	1.96	.09
1308.00	.28	119.92	1307.99	-1.15	1.99	-2.01	2.30	.24
1408.00	.23	135.48	1407.99	-1.42	2.34	-2.42	2.74	.08
1508.00	.24	31.57	1507.99	-1.38	2.59	-2.51	2.94	.37
1608.00	.68	43.11	1607.99	-.77	3.11	-2.25	3.20	.45
1708.00	.22	21.87	1707.98	-.16	3.58	-1.97	3.59	.48
1808.00	.50	338.41	1807.98	.42	3.50	-1.42	3.52	.37
1908.00	.58	5.97	1907.98	1.33	3.39	-.59	3.64	.27
2008.00	.14	317.87	2007.98	1.93	3.36	-.06	3.87	.50
2108.00	1.37	24.09	2107.97	3.11	3.76	.75	4.88	1.32
2208.00	1.24	27.75	2207.94	5.16	4.76	2.00	7.02	.15
2308.00	1.26	36.33	2307.92	7.00	5.91	3.00	9.16	.19
2408.00	1.42	54.02	2407.89	8.61	7.57	3.54	11.46	.44

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Distance FT	Dogleg Severity Deg/100
2508.00	1.51	40.60	2507.86	10.34	9.43	4.07	13.99	.35
2608.00	1.15	35.96	2607.83	12.15	10.87	4.89	16.31	.38
2708.00	1.30	3.60	2707.81	14.10	11.53	6.23	18.22	.70
2808.00	1.10	.37	2807.79	16.19	11.61	7.98	19.92	.21
2908.00	1.01	352.25	2907.77	18.02	11.50	9.62	21.38	.17
3008.00	.40	329.18	3007.76	19.20	11.20	10.78	22.23	.66
3108.00	.12	290.78	3107.76	19.53	10.92	11.21	22.38	.31
3208.00	.16	282.82	3207.76	19.60	10.69	11.39	22.33	.04
3308.00	.28	25.66	3307.76	19.85	10.66	11.62	22.53	.35
3408.00	.31	29.77	3407.76	20.31	10.90	11.89	23.05	.04
3508.00	.19	262.18	3507.76	20.52	10.87	12.08	23.22	.45
3608.00	.22	89.23	3607.76	20.50	10.90	12.05	23.22	.41
3708.00	.23	86.52	3707.76	20.52	11.29	11.87	23.42	.01
3808.00	.19	285.06	3807.76	20.57	11.33	11.89	23.48	.41
3908.00	.20	351.07	3907.76	20.79	11.14	12.17	23.58	.21
4008.00	.27	74.87	4007.76	21.02	11.34	12.27	23.89	.32
4108.00	.21	309.49	4107.76	21.20	11.43	12.38	24.08	.43
4208.00	.30	53.08	4207.75	21.47	11.50	12.58	24.36	.40
4308.00	.04	106.07	4307.75	21.62	11.74	12.58	24.60	.28
4408.00	.22	327.66	4407.75	21.77	11.67	12.75	24.70	.25
4508.00	.21	62.30	4507.75	22.02	11.73	12.93	24.95	.32
4608.00	.21	174.17	4607.75	21.92	11.91	12.76	24.95	.35
4708.00	.22	104.87	4707.75	21.69	12.12	12.45	24.84	.24
4808.00	.43	121.56	4807.75	21.44	12.62	11.98	24.88	.23
4908.00	.61	153.70	4907.75	20.77	13.18	11.12	24.60	.34
5008.00	.65	136.96	5007.74	19.88	13.80	10.04	24.20	.19
5108.00	.65	170.53	5107.73	18.91	14.28	8.95	23.69	.38
5208.00	.81	152.15	5207.73	17.72	14.70	7.72	23.03	.28
5308.00	.68	142.31	5307.72	16.63	15.40	6.42	22.66	.18
5408.00	.60	160.03	5407.71	15.66	15.94	5.32	22.35	.21
5508.00	.21	154.10	5507.71	15.01	16.20	4.62	22.08	.39
5608.00	.45	134.57	5607.71	14.57	16.56	4.06	22.05	.26
5708.00	.40	122.86	5707.71	14.10	17.13	3.37	22.19	.10
5808.00	.46	128.15	5807.70	13.67	17.74	2.68	22.39	.07
5908.00	.13	99.80	5907.70	13.40	18.17	2.23	22.57	.35
6008.00	.37	182.57	6007.70	13.06	18.26	1.89	22.45	.38
6108.00	.12	163.51	6107.70	12.63	18.28	1.52	22.22	.26
6208.00	.37	172.22	6207.70	12.21	18.35	1.12	22.04	.25
6308.00	.23	95.43	6307.70	11.87	18.60	.70	22.06	.39
6408.00	.20	103.91	6407.70	11.81	18.97	.46	22.34	.04
6487.00	.14	247.70	6486.70	11.74	19.01	.38	22.34	.41
6519.00	.07	118.89	6518.70	11.72	18.99	.37	22.32	.60
6550.00	1.68	328.30	6549.69	12.10	18.77	.81	22.33	5.62
6581.00	3.44	328.66	6580.66	13.28	18.05	2.19	22.40	5.68
6613.00	5.33	326.93	6612.56	15.34	16.74	4.64	22.70	5.92

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Distance FT	Dogleg Severity Deg/100
6644.00	7.31	326.46	6643.37	18.19	14.86	8.05	23.49	6.39
6676.00	10.09	327.28	6675.00	22.25	12.22	12.88	25.38	8.70
6732.00	13.02	330.15	6729.86	31.85	6.43	24.09	32.49	5.33
6763.00	14.87	332.93	6759.95	38.42	2.88	31.56	38.53	6.35
6795.00	17.23	333.69	6790.70	46.33	-1.09	40.38	46.34	7.40
6827.00	20.48	334.80	6820.98	55.64	-5.58	50.68	55.92	10.22
6859.00	23.70	334.90	6850.62	66.54	-10.69	62.66	67.39	10.06
6890.00	27.22	334.13	6878.61	78.56	-16.43	75.92	80.26	11.40
6922.00	29.55	331.81	6906.76	92.10	-23.35	91.10	95.02	8.05
6954.00	32.77	330.28	6934.14	106.58	-31.37	107.65	111.10	10.36
6986.00	36.10	328.56	6960.53	122.15	-40.59	125.74	128.72	10.84
7018.00	39.45	327.46	6985.82	138.77	-50.98	145.33	147.84	10.68
7050.00	42.46	327.50	7009.99	156.45	-62.25	166.30	168.38	9.41
7081.00	44.23	327.25	7032.53	174.37	-73.72	187.56	189.32	5.74
7113.00	46.48	328.04	7055.01	193.61	-85.90	210.32	211.81	7.25
7145.00	49.36	328.56	7076.46	213.81	-98.38	234.06	235.36	9.08
7177.00	52.06	328.72	7096.72	234.96	-111.27	258.82	259.97	8.45
7208.00	54.40	328.29	7115.28	256.13	-124.24	283.65	284.67	7.63
7240.00	56.70	328.08	7133.38	278.55	-138.15	310.03	310.93	7.21
7272.00	58.09	328.26	7150.62	301.46	-152.37	336.99	337.77	4.37
7304.00	60.04	328.60	7167.07	324.84	-166.74	364.43	365.13	6.16
7336.00	63.01	328.89	7182.32	348.88	-181.33	392.55	393.19	9.32
7368.00	64.47	328.97	7196.48	373.46	-196.14	421.25	421.84	4.57
7399.00	64.47	330.20	7209.84	397.59	-210.30	449.22	449.78	3.58
7431.00	66.32	330.26	7223.16	422.84	-224.75	478.31	478.86	5.78
7463.00	69.81	330.56	7235.12	448.65	-239.40	507.98	508.53	10.94
7494.00	74.70	330.00	7244.56	474.28	-254.03	537.50	538.03	15.87
7526.00	77.43	329.95	7252.27	501.17	-269.57	568.55	569.07	8.53
7558.00	79.50	329.94	7258.67	528.31	-285.28	599.90	600.41	6.47
7590.00	80.93	329.97	7264.10	555.60	-301.06	631.43	631.93	4.47
7622.00	82.83	329.11	7268.62	582.91	-317.12	663.11	663.59	6.51
7654.00	84.31	328.77	7272.21	610.15	-333.53	694.90	695.36	4.74
7686.00	85.70	328.95	7274.99	637.43	-350.01	726.78	727.21	4.38
7718.00	87.51	328.74	7276.89	664.77	-366.54	758.72	759.12	5.69
7781.00	90.60	329.36	7277.93	718.78	-398.93	821.71	822.07	5.00
7845.00	91.54	329.35	7276.73	773.83	-431.55	885.69	886.03	1.47
7908.00	90.30	325.26	7275.72	826.83	-465.57	948.63	948.90	6.78
7971.00	90.23	325.92	7275.43	878.81	-501.17	1011.50	1011.67	1.05
8035.00	91.21	327.55	7274.63	932.31	-536.27	1075.43	1075.54	2.97
8098.00	92.08	327.88	7272.82	985.55	-569.90	1138.38	1138.47	1.48
8162.00	90.50	327.11	7271.38	1039.51	-604.28	1202.33	1202.39	2.75
8225.00	90.30	326.86	7270.94	1092.34	-638.61	1265.28	1265.31	.51
8289.00	89.53	326.66	7271.03	1145.86	-673.69	1329.22	1329.23	1.24
8353.00	88.25	328.09	7272.27	1199.75	-708.19	1393.17	1393.18	3.00
8416.00	90.17	329.24	7273.14	1253.56	-740.95	1456.16	1456.16	3.55

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Distance FT	Dogleg Severity Deg/100
8480.00	90.54	329.66	7272.74	1308.67	-773.48	1520.15	1520.16	.87
8543.00	88.69	329.69	7273.17	1363.05	-805.28	1583.15	1583.15	2.94
8607.00	89.80	332.21	7274.01	1418.99	-836.35	1647.11	1647.12	4.30
8671.00	87.31	331.91	7275.62	1475.50	-866.33	1711.01	1711.03	3.92
8734.00	87.25	332.46	7278.61	1531.16	-895.69	1773.86	1773.90	.88
8798.00	89.60	331.17	7280.37	1587.55	-925.91	1837.76	1837.83	4.19
8861.00	90.87	331.46	7280.11	1642.81	-956.14	1900.72	1900.80	2.07
8925.00	90.13	330.13	7279.56	1698.67	-987.37	1964.69	1964.79	2.38
8988.00	90.60	330.33	7279.15	1753.36	-1018.65	2027.68	2027.78	.81
9052.00	90.07	329.96	7278.78	1808.86	-1050.51	2091.67	2091.78	1.01
9115.00	89.50	329.79	7279.02	1863.35	-1082.13	2154.67	2154.78	.94
9179.00	89.63	329.13	7279.50	1918.47	-1114.65	2218.67	2218.78	1.05
9243.00	88.69	329.44	7280.44	1973.49	-1147.33	2282.66	2282.77	1.55
9307.00	89.23	329.68	7281.60	2028.66	-1179.75	2346.65	2346.76	.92
9370.00	90.00	329.78	7282.03	2083.07	-1211.51	2409.64	2409.75	1.23
9434.00	90.74	330.01	7281.61	2138.43	-1243.61	2473.64	2473.75	1.21
9489.00	91.65	329.90	7280.47	2186.03	-1271.14	2528.62	2528.74	1.67
9562.00	91.24	329.64	7278.62	2249.08	-1307.88	2601.60	2601.72	.66
9625.00	89.77	328.47	7278.07	2303.11	-1340.27	2664.59	2664.71	2.98
9689.00	89.97	328.46	7278.21	2357.66	-1373.75	2728.58	2728.69	.31
9753.00	90.50	328.66	7277.95	2412.26	-1407.13	2792.58	2792.67	.89
9816.00	90.74	328.35	7277.27	2465.98	-1440.04	2855.57	2855.65	.62
9880.00	91.48	328.43	7276.03	2520.47	-1473.58	2919.55	2919.63	1.16
9944.00	91.07	328.46	7274.61	2575.00	-1507.06	2983.53	2983.59	.64
10007.00	90.34	327.11	7273.83	2628.29	-1540.64	3046.50	3046.56	2.44
10071.00	90.57	326.73	7273.32	2681.92	-1575.58	3110.44	3110.48	.69
10135.00	91.21	326.04	7272.33	2735.21	-1611.00	3174.35	3174.38	1.47
10198.00	91.48	325.90	7270.85	2787.40	-1646.25	3237.23	3237.24	.48
10261.00	91.98	327.22	7268.95	2839.95	-1680.95	3300.13	3300.14	2.24
10324.00	89.80	322.63	7267.97	2891.48	-1717.14	3362.92	3362.92	8.06
10388.00	89.73	321.61	7268.23	2942.00	-1756.43	3426.42	3426.43	1.60
10452.00	89.73	323.18	7268.53	2992.70	-1795.48	3489.96	3489.99	2.45
10515.00	90.20	326.30	7268.57	3044.13	-1831.85	3552.75	3552.80	5.01
10579.00	90.67	328.39	7268.09	3098.01	-1866.38	3616.71	3616.77	3.35
10642.00	91.11	328.95	7267.11	3151.82	-1899.13	3679.70	3679.77	1.13
10706.00	91.64	329.13	7265.57	3206.69	-1932.05	3743.68	3743.75	.87
10770.00	90.10	326.61	7264.60	3260.87	-1966.08	3807.65	3807.72	4.61
10834.00	90.44	326.66	7264.30	3314.32	-2001.27	3871.58	3871.67	.54
10897.00	91.24	327.30	7263.37	3367.14	-2035.60	3934.52	3934.63	1.63
10961.00	90.00	325.08	7262.68	3420.31	-2071.21	3998.42	3998.55	3.97
11025.00	90.20	324.53	7262.57	3472.61	-2108.10	4062.23	4062.40	.91
11057.00	90.30	324.89	7262.43	3498.73	-2126.58	4094.12	4094.32	1.17
Proj. to Bit								
11112.00	90.30	324.89	7262.14	3543.72	-2158.21	4148.96	4149.20	.00