

Job Number: 23D0211041
 Company: Stone
 Lease/Well: Nice Unit A #2H
 Location: Mary/Brandy
 Rig Name: Saxon 141
 RKB:
 G.L. or M.S.L.:

State/Country: West Virginia
 Declination:
 Grid:
 File name: D:\WINSERVE\NICEA2H.SVY
 Date/Time: 04-May-11 / 07:25
 Curve Name: Nice A2H as Drilled

Scientific Drilling

WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane 332.76
 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	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
108.00	.10	229.10	108.00	-.06	-.07	-.02	.09	229.10	.09
208.00	.11	331.03	208.00	-.03	-.18	.05	.19	259.26	.16
308.00	.15	268.03	308.00	.04	-.36	.20	.36	277.05	.14
408.00	.09	348.52	408.00	.12	-.51	.34	.52	282.99	.16
508.00	.06	49.70	508.00	.23	-.48	.42	.53	295.26	.08
608.00	.03	189.54	608.00	.24	-.45	.41	.51	297.80	.09
708.00	.04	319.23	708.00	.24	-.47	.43	.53	296.49	.06
808.00	.10	6.26	808.00	.35	-.49	.53	.60	305.63	.08
908.00	.12	245.05	908.00	.39	-.57	.61	.69	304.38	.19
1008.00	.29	216.62	1008.00	.15	-.82	.50	.83	280.04	.19
1108.00	.12	28.60	1108.00	.03	-.92	.45	.92	272.11	.41
1208.00	.19	34.35	1208.00	.26	-.78	.59	.82	288.69	.07
1308.00	.20	42.39	1308.00	.53	-.57	.73	.77	313.08	.03
1408.00	.62	28.31	1407.99	1.13	-.19	1.10	1.15	350.44	.43
1508.00	.62	12.99	1507.99	2.14	.19	1.81	2.15	5.01	.17
1608.00	.89	351.74	1607.98	3.43	.20	2.96	3.44	3.29	.38
1708.00	.89	348.33	1707.97	4.96	-.07	4.44	4.96	359.18	.05
1808.00	.41	17.21	1807.96	6.06	-.12	5.45	6.07	358.84	.57
1908.00	.43	65.93	1907.96	6.56	.33	5.68	6.57	2.84	.35
2008.00	.50	102.32	2007.96	6.62	1.09	5.38	6.71	9.39	.30
2108.00	.65	141.17	2107.95	6.08	1.88	4.55	6.37	17.14	.41
2208.00	.88	118.50	2207.94	5.28	2.91	3.36	6.02	28.86	.38
2308.00	1.15	97.80	2307.93	4.77	4.58	2.15	6.61	43.79	.45
2408.00	1.18	89.23	2407.91	4.65	6.60	1.11	8.07	54.83	.18

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
2508.00	1.16	83.06	2507.89	4.79	8.63	.30	9.87	60.99	.13
2608.00	1.25	85.79	2607.86	4.99	10.73	-.47	11.83	65.05	.11
2708.00	.78	250.67	2707.86	4.84	11.17	-.81	12.18	66.56	2.01
2808.00	2.30	262.71	2807.82	4.36	8.54	-.03	9.59	62.93	1.55
2908.00	3.49	279.59	2907.69	4.62	3.55	2.48	5.82	37.54	1.45
3008.00	4.94	277.45	3007.42	5.68	-3.72	6.76	6.79	326.77	1.46
3108.00	5.21	279.28	3107.03	6.97	-12.47	11.91	14.29	299.21	.31
3208.00	5.12	277.94	3206.62	8.32	-21.37	17.18	22.94	291.27	.15
3308.00	4.64	282.96	3306.26	9.84	-29.73	22.36	31.32	288.32	.64
3408.00	4.88	282.35	3405.91	11.66	-37.83	27.68	39.59	287.13	.25
3508.00	5.00	282.04	3505.54	13.48	-46.25	33.15	48.17	286.25	.12
3608.00	4.56	279.48	3605.19	15.04	-54.43	38.29	56.47	285.45	.49
3708.00	3.77	271.99	3704.93	15.81	-61.64	42.27	63.63	284.39	.96
3808.00	2.79	282.83	3804.76	16.47	-67.30	45.44	69.28	283.75	1.16
3908.00	1.74	299.46	3904.69	17.75	-70.99	48.28	73.18	284.04	1.23
4008.00	.92	298.24	4004.66	18.88	-73.02	50.21	75.42	284.50	.82
4108.00	.63	327.77	4104.65	19.73	-74.02	51.42	76.60	284.92	.48
4208.00	.48	328.95	4204.64	20.55	-74.53	52.39	77.31	285.42	.15
4308.00	.61	5.00	4304.64	21.44	-74.70	53.25	77.72	286.01	.36
4408.00	.64	34.72	4404.64	22.43	-74.34	53.97	77.65	286.79	.32
4508.00	.59	38.38	4504.63	23.29	-73.70	54.44	77.29	287.54	.06
4608.00	.71	40.95	4604.62	24.16	-72.97	54.88	76.87	288.32	.12
4708.00	.77	48.71	4704.61	25.07	-72.06	55.28	76.30	289.19	.12
4808.00	.71	45.70	4804.61	25.95	-71.11	55.62	75.70	290.05	.07
4908.00	.73	43.31	4904.60	26.85	-70.23	56.02	75.19	290.92	.04
5008.00	.96	48.43	5004.59	27.87	-69.17	56.44	74.57	291.94	.24
5108.00	.60	40.38	5104.58	28.82	-68.20	56.84	74.04	292.91	.38
5208.00	.60	35.31	5204.57	29.65	-67.56	57.28	73.78	293.69	.05
5308.00	.63	32.33	5304.57	30.54	-66.96	57.80	73.60	294.52	.04
5408.00	.79	26.98	5404.56	31.62	-66.36	58.48	73.50	295.48	.17
5417.00	.66	26.28	5413.56	31.72	-66.31	58.55	73.50	295.57	1.45
MWD SURVEY									
5448.00	.68	9.76	5444.56	32.06	-66.20	58.80	73.55	295.84	.62
5511.00	.60	12.99	5507.55	32.75	-66.06	59.35	73.73	296.37	.14
5574.00	.58	25.73	5570.55	33.36	-65.85	59.80	73.81	296.87	.21
5638.00	.71	5.12	5634.54	34.05	-65.67	60.33	73.97	297.40	.41
5670.00	.76	355.62	5666.54	34.46	-65.67	60.69	74.16	297.69	.41
5701.00	.70	336.26	5697.54	34.83	-65.76	61.07	74.42	297.91	.81
5733.00	2.32	292.62	5729.53	35.26	-66.44	61.76	75.21	297.96	5.86
5765.00	5.33	288.80	5761.45	35.99	-68.44	63.33	77.33	297.74	9.43
5797.00	8.73	287.75	5793.21	37.21	-72.16	66.11	81.19	297.28	10.63
5829.00	10.42	287.05	5824.76	38.80	-77.24	69.85	86.44	296.67	5.29
5861.00	12.00	286.35	5856.15	40.58	-83.20	74.17	92.57	296.00	4.96
5893.00	13.63	282.03	5887.35	42.31	-90.08	78.85	99.52	295.16	5.91
5924.00	15.94	279.14	5917.32	43.74	-97.86	83.68	107.19	294.09	7.82
5956.00	16.39	274.49	5948.06	44.80	-106.70	88.67	115.72	292.77	4.28

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
5988.00	17.43	270.10	5978.68	45.16	-115.99	93.24	124.47	291.27	5.14
6019.00	19.28	270.63	6008.10	45.22	-125.75	97.77	133.64	289.78	5.99
6051.00	20.73	270.38	6038.17	45.32	-136.70	102.86	144.02	288.34	4.54
6083.00	22.91	273.02	6067.87	45.68	-148.59	108.63	155.45	287.09	7.47
6115.00	26.20	275.10	6096.98	46.64	-161.85	115.55	168.43	286.08	10.63
6146.00	29.14	275.61	6124.43	47.99	-176.18	123.30	182.59	285.24	9.51
6178.00	32.89	275.30	6151.85	49.55	-192.59	132.21	198.86	284.43	11.73
6210.00	36.28	276.60	6178.19	51.44	-210.65	142.15	216.84	283.72	10.84
6242.00	40.12	275.35	6203.33	53.49	-230.33	152.98	236.46	283.07	12.24
6274.00	43.33	276.02	6227.21	55.61	-251.52	164.56	257.59	282.47	10.13
6306.00	47.69	276.86	6249.63	58.17	-274.19	177.22	280.30	281.98	13.75
6338.00	49.81	277.25	6270.73	61.13	-298.07	190.78	304.27	281.59	6.69
6369.00	51.96	278.79	6290.29	64.49	-321.88	204.67	328.28	281.33	7.93
6401.00	54.33	280.87	6309.48	68.87	-347.11	220.11	353.87	281.22	9.05
6433.00	56.29	282.92	6327.69	74.29	-372.85	236.71	380.18	281.27	8.08
6465.00	58.64	284.65	6344.90	80.73	-399.04	254.42	407.13	281.44	8.64
6496.00	61.69	285.53	6360.32	87.73	-425.00	272.53	433.96	281.66	10.14
6528.00	62.62	286.84	6375.27	95.62	-452.18	291.98	462.18	281.94	4.64
6560.00	62.65	289.46	6389.98	104.47	-479.18	312.21	490.43	282.30	7.27
6592.00	62.45	290.49	6404.73	114.17	-505.87	333.05	518.59	282.72	2.92
6624.00	62.15	292.43	6419.61	124.53	-532.23	354.34	546.61	283.17	5.45
6656.00	62.72	295.40	6434.42	136.03	-558.16	376.43	574.50	283.70	8.42
6687.00	64.24	298.32	6448.27	148.57	-582.90	398.89	601.53	284.30	9.75
6719.00	66.21	299.60	6461.67	162.64	-608.32	423.04	629.68	284.97	7.15
6754.00	66.88	300.92	6475.61	178.82	-636.05	450.12	660.71	285.70	3.95
6785.00	66.79	302.49	6487.80	193.79	-660.30	474.53	688.15	286.36	4.67
6817.00	67.45	306.76	6500.25	210.54	-684.55	500.52	716.19	287.10	12.47
6849.00	68.90	310.25	6512.15	229.04	-707.79	527.60	743.92	287.93	11.09
6880.00	70.79	313.45	6522.83	248.45	-729.46	554.79	770.61	288.81	11.45
6912.00	72.29	314.84	6532.96	269.59	-751.24	583.55	798.14	289.74	6.24
6944.00	74.13	314.88	6542.21	291.20	-772.95	612.70	825.98	290.64	5.75
6976.00	75.90	315.19	6550.48	313.07	-794.79	642.14	854.23	291.50	5.61
7007.00	77.62	315.72	6557.58	334.58	-815.96	670.95	881.89	292.30	5.79
7039.00	78.22	315.43	6564.28	356.93	-837.86	700.85	910.72	293.07	2.07
7070.00	80.08	316.11	6570.11	378.74	-859.10	729.96	938.88	293.79	6.38
7101.00	83.24	318.29	6574.61	401.24	-879.93	759.51	967.10	294.51	12.34
7133.00	84.18	318.86	6578.11	425.09	-900.98	790.34	996.23	295.26	3.43
7164.00	87.18	319.15	6580.45	448.42	-921.25	820.37	1024.59	295.95	9.72
7195.00	88.86	319.16	6581.52	471.86	-941.51	850.48	1053.14	296.62	5.42
7227.00	88.86	319.77	6582.16	496.17	-962.31	881.61	1082.69	297.28	1.91
7258.00	87.31	322.13	6583.19	520.23	-981.82	911.94	1111.14	297.92	9.10
7290.00	86.88	324.36	6584.82	545.84	-1000.95	943.45	1140.10	298.60	7.09
7322.00	87.11	326.53	6586.49	572.15	-1019.07	975.15	1168.70	299.31	6.81
7354.00	87.05	328.46	6588.12	599.10	-1036.24	1006.97	1196.97	300.03	6.03
7385.00	88.05	330.66	6589.45	625.80	-1051.93	1037.89	1224.01	300.75	7.79

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth			Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
				N-S FT	E-W FT		Distance FT	Direction Deg	
7417.00	88.66	332.13	6590.37	653.89	-1067.25	1069.87	1251.63	301.50	4.97
7449.00	90.17	333.00	6590.69	682.28	-1081.99	1101.86	1279.15	302.23	5.45
7481.00	90.87	332.69	6590.40	710.76	-1096.59	1133.86	1306.79	302.95	2.39
7513.00	90.60	331.61	6589.99	739.05	-1111.54	1165.86	1334.81	303.62	3.48
7545.00	90.54	333.18	6589.67	767.40	-1126.37	1197.85	1362.94	304.27	4.91
7608.00	91.41	337.14	6588.60	824.55	-1152.83	1260.78	1417.35	305.57	6.43
7670.00	92.08	337.80	6586.71	881.79	-1176.57	1322.54	1470.33	306.85	1.52
7732.00	91.07	338.89	6585.01	939.39	-1199.44	1384.22	1523.52	308.07	2.40
7793.00	90.84	339.11	6583.99	996.33	-1221.30	1444.85	1576.15	309.21	.52
7854.00	90.91	338.67	6583.06	1053.23	-1243.26	1505.49	1629.42	310.27	.73
7916.00	89.90	338.77	6582.62	1111.00	-1265.77	1567.16	1684.19	311.27	1.64
7978.00	89.53	340.57	6582.93	1169.14	-1287.30	1628.70	1738.98	312.25	2.96
8039.00	89.73	341.41	6583.33	1226.81	-1307.17	1689.07	1792.70	313.18	1.42
8100.00	90.03	340.74	6583.45	1284.51	-1326.96	1749.43	1846.83	314.07	1.20
8162.00	90.10	340.48	6583.38	1343.00	-1347.54	1810.85	1902.50	314.90	.43
8223.00	89.87	339.99	6583.40	1400.40	-1368.17	1871.33	1957.81	315.67	.89
8285.00	89.60	339.03	6583.69	1458.48	-1389.87	1932.90	2014.67	316.38	1.61
8347.00	89.87	340.18	6583.97	1516.59	-1411.48	1994.46	2071.79	317.06	1.91
8409.00	90.30	341.40	6583.88	1575.14	-1431.88	2055.85	2128.69	317.73	2.09
8471.00	90.44	341.73	6583.48	1633.95	-1451.48	2117.11	2185.54	318.38	.58
8532.00	90.64	341.46	6582.91	1691.83	-1470.74	2177.39	2241.73	319.00	.55
8594.00	90.97	341.22	6582.03	1750.57	-1490.58	2238.69	2299.19	319.59	.66
8658.00	91.21	340.93	6580.82	1811.09	-1511.33	2302.00	2358.85	320.16	.59
8721.00	90.03	339.95	6580.14	1870.45	-1532.42	2364.43	2418.04	320.67	2.43
8785.00	89.53	338.39	6580.38	1930.27	-1555.18	2428.03	2478.81	321.14	2.56
8848.00	89.40	337.70	6580.97	1988.70	-1578.73	2490.76	2539.15	321.56	1.11
8912.00	89.03	337.46	6581.85	2047.85	-1603.14	2554.53	2600.72	321.94	.69
8976.00	88.99	338.04	6582.95	2107.08	-1627.37	2618.27	2662.35	322.32	.91
9039.00	89.43	337.60	6583.82	2165.41	-1651.15	2681.02	2723.10	322.67	.99
9103.00	89.43	337.71	6584.46	2224.60	-1675.48	2744.79	2784.97	323.01	.17
9166.00	89.87	338.67	6584.84	2283.09	-1698.88	2807.50	2845.82	323.35	1.68
9230.00	90.27	338.11	6584.76	2342.59	-1722.45	2871.19	2907.68	323.67	1.08
9294.00	90.47	338.01	6584.35	2401.96	-1746.37	2934.92	2969.71	323.98	.35
9358.00	90.64	339.03	6583.73	2461.51	-1769.80	2998.59	3031.70	324.28	1.62
9421.00	90.77	339.35	6582.96	2520.39	-1792.18	3061.19	3092.62	324.58	.55
9485.00	90.77	339.92	6582.10	2580.39	-1814.45	3124.72	3154.46	324.89	.89
9548.00	90.94	338.56	6581.16	2639.29	-1836.78	3187.31	3215.52	325.16	2.18
9612.00	91.01	337.04	6580.07	2698.53	-1860.96	3251.05	3277.99	325.41	2.38
9676.00	90.94	337.81	6578.98	2757.62	-1885.52	3314.83	3340.61	325.64	1.21
9739.00	90.67	338.08	6578.09	2816.01	-1909.17	3377.57	3402.18	325.86	.61
9803.00	91.01	339.01	6577.15	2875.56	-1932.58	3441.23	3464.64	326.10	1.55
9866.00	91.54	338.81	6575.75	2934.33	-1955.25	3503.86	3526.08	326.32	.90
9929.00	90.77	339.26	6574.48	2993.15	-1977.78	3566.46	3587.55	326.54	1.42
9993.00	90.37	340.35	6573.85	3053.21	-1999.87	3629.98	3649.87	326.77	1.81
10057.00	90.60	340.41	6573.30	3113.49	-2021.36	3693.41	3712.10	327.01	.37

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S		Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
				FT	FT		Distance FT	Direction Deg	
10121.00	90.91	339.96	6572.46	3173.69	-2043.06	3756.87	3774.44	327.23	.85
10184.00	91.31	339.47	6571.24	3232.78	-2064.89	3819.39	3835.96	327.43	1.00
10247.00	90.37	339.80	6570.32	3291.83	-2086.81	3881.93	3897.56	327.63	1.58
10311.00	90.30	339.34	6569.94	3351.80	-2109.15	3945.48	3960.19	327.82	.73
10375.00	90.30	339.01	6569.61	3411.62	-2131.91	4009.08	4022.96	328.00	.52
10439.00	90.60	338.93	6569.10	3471.36	-2154.87	4072.70	4085.80	328.17	.49
10502.00	90.87	338.47	6568.30	3530.05	-2177.76	4135.36	4147.75	328.33	.85
10566.00	90.60	337.86	6567.48	3589.45	-2201.56	4199.06	4210.82	328.48	1.04
10629.00	90.40	338.05	6566.93	3647.84	-2225.20	4261.80	4272.97	328.62	.44
10693.00	89.06	338.00	6567.23	3707.19	-2249.15	4325.53	4336.12	328.75	2.10
10757.00	89.26	337.62	6568.17	3766.44	-2273.32	4389.28	4399.33	328.89	.67
10821.00	89.73	337.23	6568.73	3825.54	-2297.89	4453.06	4462.63	329.01	.95
10884.00	90.03	335.79	6568.86	3883.32	-2323.00	4515.92	4525.09	329.11	2.33
10948.00	90.20	334.81	6568.73	3941.46	-2349.74	4579.86	4588.72	329.20	1.55
11011.00	89.87	335.16	6568.69	3998.55	-2376.38	4642.81	4651.41	329.28	.76
11075.00	89.70	336.83	6568.93	4057.01	-2402.42	4706.71	4714.97	329.37	2.62
11139.00	89.97	337.09	6569.12	4115.91	-2427.46	4770.54	4778.42	329.47	.59
11203.00	90.84	337.19	6568.67	4174.88	-2452.33	4834.35	4841.85	329.57	1.37
11267.00	90.64	337.97	6567.84	4234.03	-2476.73	4898.11	4905.23	329.67	1.26
11330.00	90.23	337.67	6567.36	4292.37	-2500.52	4960.87	4967.60	329.78	.81
11394.00	90.54	337.38	6566.93	4351.51	-2524.98	5024.64	5031.02	329.88	.66
11458.00	90.97	337.24	6566.09	4410.55	-2549.67	5088.44	5094.48	329.97	.71
11521.00	91.18	336.79	6564.91	4468.54	-2574.26	5151.25	5157.00	330.05	.79
11585.00	90.30	338.06	6564.08	4527.63	-2598.83	5215.03	5220.47	330.14	2.41
11649.00	90.91	338.35	6563.40	4587.05	-2622.59	5278.74	5283.84	330.24	1.06
11712.00	91.65	337.88	6562.00	4645.49	-2646.07	5341.45	5346.24	330.33	1.39
11776.00	92.08	337.19	6559.91	4704.60	-2670.51	5405.19	5409.71	330.42	1.27
11838.00	90.84	338.69	6558.33	4762.04	-2693.79	5466.92	5471.16	330.50	3.14
11902.00	90.94	338.56	6557.34	4821.64	-2717.11	5530.57	5534.51	330.60	.26
11965.00	89.23	339.42	6557.25	4880.44	-2739.70	5593.20	5596.84	330.69	3.04
12029.00	89.66	339.46	6557.87	4940.36	-2762.17	5656.76	5660.11	330.79	.67
12093.00	89.63	339.36	6558.26	5000.28	-2784.68	5720.33	5723.39	330.89	.16
12156.00	88.69	339.11	6559.19	5059.18	-2807.01	5782.92	5785.72	330.98	1.54
12220.00	88.89	338.80	6560.54	5118.89	-2829.99	5846.53	5849.09	331.06	.58
12283.00	89.30	338.98	6561.53	5177.66	-2852.68	5909.16	5911.51	331.15	.71
12347.00	89.30	338.83	6562.32	5237.36	-2875.71	5972.79	5974.92	331.23	.23
12410.00	89.60	338.21	6562.92	5295.99	-2898.78	6035.47	6037.41	331.31	1.09
12474.00	90.03	338.14	6563.13	5355.40	-2922.57	6099.18	6100.96	331.38	.68
12538.00	90.27	337.70	6562.96	5414.70	-2946.63	6162.92	6164.55	331.45	.78
12602.00	90.44	337.37	6562.56	5473.85	-2971.08	6226.70	6228.19	331.51	.58
12666.00	89.73	337.42	6562.47	5532.93	-2995.68	6290.49	6291.85	331.57	1.11
12729.00	89.80	337.36	6562.73	5591.09	-3019.90	6353.28	6354.53	331.63	.15
12793.00	90.24	337.42	6562.70	5650.17	-3044.51	6417.08	6418.21	331.68	.69
12856.00	90.46	337.04	6562.32	5708.26	-3068.89	6479.88	6480.92	331.74	.70
12920.00	91.24	336.99	6561.37	5767.17	-3093.88	6543.70	6544.64	331.79	1.22

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
12983.00	91.56	336.39	6559.83	5825.01	-3118.80	6606.53	6607.39	331.83	1.08
13047.00	92.06	336.33	6557.81	5883.61	-3144.45	6670.37	6671.16	331.88	.79
13111.00	92.84	336.39	6555.07	5942.18	-3170.09	6734.19	6734.91	331.92	1.22
13175.00	93.15	335.93	6551.73	6000.64	-3195.92	6797.99	6798.65	331.96	.87
Proj. to Bit									
13232.00	93.58	335.71	6548.38	6052.55	-3219.23	6854.81	6855.42	331.99	.85