

**Scientific Drilling International**  
Survey Report

103 02713

<b>Company:</b>	Stone Energy	<b>Local Co-ordinate Reference:</b>	Well Lemons #7H - Slot Lemons #7H
<b>Project:</b>	Mary Prospect	<b>TVD Reference:</b>	GL 1327' & KB 18' @ 1345.0usft (Saxon 141)
<b>Site:</b>	Lemons Pad - Wetzel County, PA	<b>MD Reference:</b>	GL 1327' & KB-18' @ 1345.0usft (Saxon 141)
<b>Well:</b>	Lemons #7H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Well	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Northeast DB

<b>Project:</b>	Mary Prospect, West Virginia		
<b>Map System:</b>	US State Plane 1927 (Exact solution)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	West Virginia North 4701		

<b>Site:</b>	Lemons Pad - Wetzel County, PA				
<b>Site Position:</b>	<b>Northing:</b>	421,058.00 usft	<b>Latitude:</b>	39° 39' 3.725 N	
<b>From:</b>	<b>Map</b>	<b>Easting:</b>	1,635,875.00 usft	<b>Longitude:</b>	80° 47' 38.145 W
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	-0.83 °

<b>Well:</b>	Lemons #7H - Slot Lemons #7H					
<b>Well Position</b>	<b>+N-S</b>	0.0 usft	<b>Northing:</b>	421,901.00 usft	<b>Latitude:</b>	39° 39' 4.175 N
	<b>+E-W</b>	0.0 usft	<b>Easting:</b>	1,635,715.00 usft	<b>Longitude:</b>	80° 47' 37.642 W
<b>Position Uncertainty</b>	0.0 usft	<b>Wellhead Elevation:</b>	usft	<b>Ground Level:</b>	1,327.0 usft	

<b>Wellbore:</b>	Original Well				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b>	<b>Dip Angle</b>	<b>Field Strength</b>
	IGRF2010	11/8/2012	(°)	(°)	(nT)
			-8.48	67.25	52,874

<b>Design:</b>	As Drilled				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N-S</b>	<b>+E-W</b>	<b>Direction</b>	
	(usft)	(usft)	(usft)	(°)	
	0.0	0.0	0.0	349.70	

<b>Survey Program:</b>	Date 1/29/2013			
<b>From</b>	<b>To</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
(usft)	(usft)			
108.0	5,148.3	SDI Keeper Gyro (Original Well)	SDI Standard Keeper 103	SDI Standard Wireline Keeper ver 1.0.3
5,183.0	7,508.0	Survey 2 - Curve (Original Well)	MWD SDI	MWD - Standard ver 1.0.1
7,540.0	11,248.0	Survey 3 - Lateral (Original Well)	MWD SDI	MWD - Standard ver 1.0.1

<b>Survey</b>										
<b>Measured Depth</b>	<b>Inclination</b>	<b>Azimuth</b>	<b>Vertical Depth</b>	<b>+N-S</b>	<b>+E-W</b>	<b>Vertical Section</b>	<b>Dogleg Rate</b>	<b>Build Rate</b>	<b>Turn Rate</b>	
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
108.0	0.55	79.93	108.0	0.1	0.5	0.0	0.51	0.51	0.00	
<b>First SDI Gyro Survey</b>										
132.6	0.62	73.19	132.6	0.1	0.8	0.0	0.40	0.28	-27.40	
157.7	0.66	72.96	157.7	0.2	1.0	0.0	0.16	0.18	-0.92	
181.8	0.71	60.85	181.8	0.3	1.3	0.1	0.44	0.21	32.73	
206.6	0.78	60.37	206.6	0.3	1.6	0.1	0.28	0.28	-1.94	
232.9	0.84	64.41	232.9	0.4	2.0	0.0	0.31	0.23	15.36	
257.6	0.79	93.06	257.6	0.4	2.3	0.0	0.54	-0.20	35.02	

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<b>Site:</b>	Lemons Pad - Wetzel County, PA	<b>MD Reference:</b>	GL 1327' & KB 18' @ 1345.0usft (Saxon 141)
<b>Well:</b>	Lemons #7H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Well	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Northeast DB

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/S (usft)	+E/W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
282.4	0.79	105.24	282.4	0.4	2.7	-0.1	0.88	0.00	49.11	
307.8	0.78	94.64	307.8	0.3	3.0	-0.3	0.57	-0.04	-41.81	
332.6	0.73	111.88	332.6	0.2	3.3	-0.4	0.94	-0.20	69.95	
356.8	0.73	102.34	356.8	0.1	3.6	-0.5	0.51	0.00	-39.79	
382.2	0.59	119.57	382.2	0.0	3.9	-0.7	0.95	-0.55	67.89	
407.4	0.51	110.78	407.4	-0.1	4.1	-0.8	0.46	-0.32	-34.95	
433.2	0.56	124.25	433.2	-0.2	4.3	-1.0	0.52	0.19	52.29	
458.2	0.46	142.39	458.2	-0.3	4.5	-1.1	0.78	-0.40	72.62	
483.1	0.47	100.69	483.1	-0.4	4.6	-1.3	1.33	0.04	-167.40	
508.2	0.43	114.31	508.2	-0.5	4.8	-1.3	0.45	-0.16	54.28	
533.6	0.34	112.73	533.6	-0.6	5.0	-1.4	0.36	-0.35	-6.21	
558.2	0.41	101.29	558.2	-0.6	5.1	-1.5	0.42	0.28	-46.52	
583.2	0.40	88.98	583.1	-0.6	5.3	-1.6	0.35	-0.04	-48.28	
608.7	0.51	85.82	608.7	-0.6	5.5	-1.6	0.44	0.43	-12.38	
633.3	0.36	99.73	633.2	-0.6	5.7	-1.6	0.74	-0.61	56.71	
658.7	0.24	149.17	658.7	-0.7	5.8	-1.7	1.07	-0.47	194.11	
683.4	0.31	184.84	683.3	-0.8	5.8	-1.8	0.74	0.28	144.62	
708.0	0.26	105.10	708.0	-0.9	5.9	-1.9	1.49	-0.20	-323.48	
733.5	0.29	143.49	733.5	-0.9	6.0	-2.0	0.72	0.12	150.61	
758.1	0.13	167.99	758.0	-1.0	6.0	-2.1	0.73	-0.65	99.72	
783.8	0.47	83.73	783.8	-1.0	6.1	-2.1	1.84	1.32	-327.22	
808.3	0.21	138.47	808.3	-1.1	6.3	-2.2	1.59	-1.08	223.61	
834.5	0.31	109.22	834.5	-1.1	6.4	-2.2	0.62	0.38	-111.80	
858.2	0.24	108.28	858.2	-1.1	6.5	-2.3	0.30	-0.30	-3.97	
883.9	0.32	104.45	883.9	-1.2	6.6	-2.3	0.32	0.31	-14.87	
908.3	0.30	108.96	908.3	-1.2	6.7	-2.4	0.13	-0.08	18.48	
933.8	0.30	98.92	933.8	-1.3	6.8	-2.5	0.21	0.00	-39.47	
958.3	0.33	114.17	958.3	-1.3	7.0	-2.5	0.36	0.12	62.17	
983.9	0.23	122.51	983.9	-1.3	7.1	-2.6	0.42	-0.39	32.62	
1,008.5	0.30	110.48	1,008.5	-1.4	7.2	-2.7	0.36	0.28	-48.96	
1,033.2	0.25	121.23	1,033.2	-1.4	7.3	-2.7	0.29	-0.20	43.59	
1,058.6	0.34	107.79	1,058.6	-1.5	7.4	-2.8	0.44	0.35	-52.91	
1,083.4	0.38	107.56	1,083.4	-1.5	7.6	-2.9	0.08	0.08	-0.93	
1,108.3	0.28	123.01	1,108.3	-1.6	7.7	-2.9	0.47	-0.32	62.17	
1,133.1	0.36	102.19	1,133.1	-1.7	7.8	-3.0	0.56	0.32	-83.78	
1,158.1	0.31	105.90	1,158.0	-1.7	7.9	-3.1	0.22	-0.20	14.88	
1,183.5	0.39	96.53	1,183.4	-1.7	8.1	-3.1	0.39	0.31	-36.89	
1,208.2	0.29	106.32	1,208.1	-1.7	8.2	-3.2	0.47	-0.41	39.65	
1,233.9	0.23	100.22	1,233.9	-1.8	8.4	-3.2	0.28	-0.23	-23.68	
1,258.7	0.32	84.13	1,258.6	-1.8	8.5	-3.3	0.48	0.38	-65.04	
1,283.4	0.18	132.45	1,283.4	-1.8	8.6	-3.3	0.97	-0.57	195.23	
1,308.1	0.17	34.57	1,308.1	-1.8	8.6	-3.3	1.07	-0.04	-396.44	
1,333.8	0.32	47.28	1,333.8	-1.7	8.7	-3.2	0.62	0.58	49.42	

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<b>Well:</b>	Lemons #7H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Well	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Northeast DB

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
1,358.0	0.32	36.69	1,358.0	-1.6	8.8	-3.2	0.24	0.00	-43.72	
1,363.4	0.49	43.93	1,363.3	-1.5	8.9	-3.0	0.70	0.67	28.58	
1,409.2	0.35	38.29	1,409.2	-1.3	9.0	-2.9	0.56	-0.54	-21.81	
1,434.1	0.44	37.94	1,434.0	-1.2	9.1	-2.8	0.38	0.36	-1.41	
1,458.8	0.43	25.38	1,458.7	-1.0	9.2	-2.7	0.39	-0.04	-50.67	
1,484.7	0.42	24.69	1,484.6	-0.9	9.3	-2.5	0.04	-0.04	-2.66	
1,508.4	0.40	7.79	1,508.4	-0.7	9.4	-2.4	0.51	-0.08	-71.19	
1,533.3	0.42	22.33	1,533.2	-0.5	9.4	-2.2	0.42	0.08	58.44	
1,559.2	0.38	25.43	1,559.2	-0.4	9.5	-2.1	0.18	-0.15	11.95	
1,583.1	0.36	33.72	1,583.0	-0.2	9.6	-1.9	0.24	-0.08	34.74	
1,608.5	0.38	41.92	1,608.5	-0.1	9.7	-1.8	0.20	0.00	32.28	
1,633.4	0.47	53.16	1,633.3	0.0	9.8	-1.7	0.55	0.44	45.21	
1,658.3	0.64	60.83	1,658.2	0.1	10.0	-1.6	0.74	0.68	30.77	
1,683.8	0.65	58.04	1,683.7	0.3	10.2	-1.5	0.13	0.04	-10.94	
1,708.3	0.76	59.25	1,708.3	0.4	10.5	-1.4	0.45	0.45	4.93	
1,733.5	0.68	67.31	1,733.4	0.8	10.8	-1.3	0.51	-0.32	32.07	
1,758.6	0.70	56.47	1,758.6	0.7	11.0	-1.3	0.52	0.08	-43.08	
1,783.1	0.64	64.04	1,783.1	0.9	11.3	-1.2	0.44	-0.24	30.91	
1,808.3	0.80	65.10	1,808.3	1.0	11.6	-1.1	0.64	0.63	4.21	
1,834.2	0.34	106.50	1,834.1	1.1	11.8	-1.1	2.28	-1.78	160.15	
1,858.8	0.44	139.09	1,858.7	1.0	11.9	-1.2	0.97	0.41	132.43	
1,883.9	0.70	159.73	1,883.9	0.8	12.1	-1.4	1.30	1.03	82.13	
1,908.8	0.96	160.08	1,908.7	0.4	12.2	-1.8	1.04	1.04	1.41	
1,933.6	1.21	161.84	1,933.5	0.0	12.3	-2.2	1.02	1.01	7.11	
1,959.0	1.12	157.15	1,959.0	-0.5	12.5	-2.7	0.51	-0.35	-18.41	
1,983.8	1.16	159.19	1,983.5	-1.0	12.7	-3.2	0.23	0.16	8.32	
2,008.8	1.12	158.65	2,008.5	-1.4	12.9	-3.7	0.26	-0.16	-10.15	
2,033.8	1.20	157.34	2,033.5	-1.9	13.1	-4.2	0.32	0.32	2.76	
2,058.7	1.17	153.38	2,058.6	-2.4	13.3	-4.7	0.35	-0.12	-15.77	
2,084.4	1.10	152.43	2,084.3	-2.8	13.5	-5.2	0.28	-0.27	-3.70	
2,108.6	0.82	138.94	2,108.5	-3.2	13.8	-5.6	1.48	-1.16	-55.67	
2,133.3	0.56	140.39	2,133.2	-3.4	13.9	-5.8	1.08	-1.05	5.87	
2,159.0	0.33	133.53	2,158.9	-3.5	14.1	-6.0	0.92	-0.90	-26.70	
2,183.9	0.18	51.21	2,183.8	-3.6	14.2	-6.0	1.42	-0.60	-330.74	
2,209.0	0.21	335.91	2,208.9	-3.5	14.2	-6.0	0.95	0.12	-298.40	
2,233.2	0.34	300.41	2,233.1	-3.4	14.1	-5.9	0.88	0.54	-146.82	
2,259.0	0.48	281.63	2,258.9	-3.3	13.9	-5.8	0.75	0.54	-72.96	
2,283.2	0.71	274.87	2,283.1	-3.3	13.7	-5.7	0.99	0.95	-27.91	
2,308.9	0.79	272.27	2,308.8	-3.3	13.3	-5.6	0.34	0.31	-10.10	
2,333.3	0.77	268.40	2,333.2	-3.3	13.0	-5.6	0.23	-0.08	-15.87	
2,358.5	0.82	274.42	2,358.4	-3.3	12.7	-5.5	0.39	0.20	23.88	
2,383.9	0.69	283.00	2,383.8	-3.2	12.3	-5.4	0.68	-0.51	33.81	
2,408.2	0.65	303.34	2,408.1	-3.1	12.1	-5.2	0.99	-0.16	83.77	
2,433.4	0.78	352.29	2,433.3	-2.9	11.9	-5.0	2.42	0.58	194.17	

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<b>Site:</b> Lemons Pad - Wetzel County, PA	<b>MD Reference:</b> GL 1327' & KB 18' @ 1345.0usft (Saxon 141)
<b>Well:</b> Lemons #7H	<b>North Reference:</b> Grid
<b>Wellbore:</b> Original Well	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> As Drilled.	<b>Database:</b> Northeast DB

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
2,459.2	0.95	358.14	2,459.1	-2.5	11.9	-4.6	0.71	0.62	22.68
2,483.1	1.36	8.08	2,483.0	-2.0	11.9	-4.1	1.90	1.72	41.52
2,508.4	1.64	8.89	2,508.2	-1.4	12.0	-3.5	1.11	1.11	3.28
2,533.7	1.80	10.63	2,533.6	-0.8	12.2	-2.7	1.05	1.03	6.86
2,559.1	2.32	4.10	2,558.9	0.3	12.3	-1.9	1.80	1.66	-25.74
2,583.7	2.44	2.65	2,583.5	1.4	12.3	-0.9	0.54	0.49	-5.88
2,608.2	2.89	7.46	2,608.0	2.5	12.4	0.2	2.05	1.84	19.62
2,633.2	3.03	6.06	2,632.9	3.8	12.6	1.5	0.63	0.56	-5.61
2,658.9	3.25	4.73	2,658.6	5.2	12.7	2.8	0.80	0.66	-5.17
2,684.2	3.49	5.14	2,683.8	6.7	12.9	4.3	0.95	0.95	1.62
2,721.0	3.57	348.95	2,720.6	8.9	12.7	6.5	2.70	0.22	-43.91
2,808.0	4.25	1.01	2,807.4	14.8	12.3	12.4	1.22	0.78	13.87
2,908.0	5.52	44.11	2,907.1	21.9	15.7	18.8	3.77	1.27	43.10
3,008.0	6.14	52.11	3,006.5	28.7	23.3	24.1	1.02	0.62	6.00
3,108.0	5.84	42.99	3,106.0	35.7	30.9	29.8	1.00	-0.30	-8.12
3,208.0	5.71	27.23	3,205.5	43.8	38.7	36.6	1.59	-0.13	-15.78
3,308.0	5.73	31.15	3,305.0	52.5	41.5	44.3	0.39	0.02	3.92
3,408.0	5.69	34.57	3,404.5	60.9	46.9	51.5	0.34	-0.04	3.42
3,508.0	5.76	41.57	3,504.0	68.7	53.1	58.1	0.70	0.07	7.00
3,608.0	5.85	44.28	3,603.5	76.1	60.0	64.2	0.29	0.09	2.71
3,708.0	6.11	46.83	3,703.0	83.4	67.4	70.0	0.37	0.26	2.55
3,808.0	5.89	46.59	3,802.4	90.5	74.9	75.6	0.42	-0.42	-0.24
3,908.0	5.81	45.79	3,901.9	97.4	82.1	81.1	0.14	0.12	-0.80
4,008.0	5.86	42.35	4,001.4	104.7	89.2	87.1	0.35	0.05	-3.44
4,108.0	5.46	45.15	4,100.9	111.8	96.0	92.9	0.49	-0.40	2.80
4,208.0	5.70	45.50	4,200.4	118.7	102.9	98.3	0.24	0.24	0.35
4,308.0	5.71	46.24	4,299.9	125.5	110.2	103.7	0.27	0.01	2.74
4,408.0	5.55	49.82	4,399.5	131.9	117.6	108.8	0.21	-0.16	1.38
4,508.0	4.25	42.05	4,499.1	137.8	123.7	113.4	1.45	-1.30	-7.57
4,608.0	4.13	42.19	4,598.8	143.2	128.6	117.9	0.12	-0.12	0.14
4,708.0	3.45	42.67	4,698.6	148.1	133.1	121.9	0.68	-0.68	0.48
4,808.0	2.44	34.66	4,798.5	152.1	136.3	125.2	1.09	-1.01	-8.01
4,908.0	2.36	39.48	4,898.4	155.4	138.9	128.1	0.22	-0.08	4.82
5,008.0	2.20	48.89	4,998.3	158.2	141.8	130.4	0.41	-0.18	9.41
5,108.0	1.25	54.23	5,098.3	160.1	143.9	131.8	0.96	-0.95	5.34
<b>Last SDI Gyro Survey</b>									
5,146.3	0.89	44.98	5,136.6	160.6	144.5	132.2	1.04	-0.94	-24.17
5,183.0	0.44	1.44	5,173.3	160.9	144.7	132.5	1.76	-1.23	-116.74
<b>First SDI MWD Survey</b>									
5,244.0	0.50	354.20	5,234.2	161.4	144.7	133.0	0.14	0.10	-11.87
5,306.0	0.50	326.43	5,298.2	161.9	144.5	133.5	0.39	0.00	-44.79
5,367.0	0.62	321.01	5,357.2	162.4	144.1	134.0	0.21	0.20	-8.89
5,428.0	0.57	314.93	5,418.2	162.9	143.7	134.8	0.13	-0.08	-9.97

103.02713

**Scientific Drilling International  
Survey Report**

<b>Company:</b> Stone Energy	<b>Local Co-ordinate Reference:</b> Well Lemons #7H - Slot Lemons #7H
<b>Project:</b> Mary Prospect	<b>TVD Reference:</b> GL 1327' & KB 18' @ 1345.0usft (Saxon 141)
<b>Site:</b> Lemons Pad - Wetzel County, PA	<b>MD Reference:</b> GL 1327' & KB 18' @ 1345.0usft (Saxon 141)
<b>Well:</b> Lemons #7H	<b>North Reference:</b> Grid
<b>Wellbore:</b> Original Well	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> As Drilled	<b>Database:</b> Northeast DB

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	N/S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
5,480.0	0.74	298.46	5,480.2	163.3	143.2	135.1	0.41	0.27	-28.56	
5,551.0	0.95	299.33	5,541.2	163.7	142.4	135.6	0.34	0.34	1.43	
5,611.0	0.91	327.73	5,601.2	164.4	141.7	136.4	0.76	-0.07	47.33	
5,672.0	0.81	355.91	5,682.2	165.2	141.4	137.3	0.70	-0.16	46.20	
5,733.0	0.74	346.76	5,723.2	166.0	141.3	138.1	0.23	-0.11	-15.00	
5,795.0	0.74	0.11	5,785.2	168.8	141.2	138.9	0.28	0.00	21.53	
5,825.0	0.83	25.28	5,815.2	167.2	141.3	139.3	1.18	0.30	83.90	
5,858.0	0.80	25.48	5,848.2	167.6	141.5	138.6	0.10	-0.10	0.58	
5,887.0	1.55	30.43	5,877.2	168.2	141.8	140.1	2.44	2.42	16.03	
5,917.0	3.10	33.53	5,907.2	169.2	142.4	141.0	5.18	5.17	10.33	
5,949.0	4.96	33.67	5,939.1	171.1	143.7	142.6	5.81	5.81	0.44	
5,981.0	7.02	37.86	5,970.9	173.8	145.6	144.9	6.58	6.44	13.09	
6,013.0	8.83	42.71	6,002.6	177.1	148.5	147.7	6.03	5.86	15.16	
6,044.0	10.80	48.65	6,033.1	180.8	152.3	150.6	7.14	6.35	18.16	
6,076.0	11.94	52.85	6,064.5	184.7	157.2	153.7	4.44	3.58	13.44	
6,108.0	12.38	53.15	6,095.8	188.8	162.6	156.7	1.38	1.38	0.63	
6,140.0	13.15	50.55	6,127.0	193.2	168.1	160.0	3.00	2.41	-8.13	
6,172.0	14.72	48.88	6,158.1	198.2	174.0	163.9	5.07	4.91	-5.28	
6,203.0	16.71	46.94	6,187.9	203.8	180.2	168.3	6.63	6.42	-6.19	
6,235.0	18.54	43.66	6,218.4	210.6	187.1	173.8	6.50	5.72	-10.25	
6,267.0	20.29	39.91	6,248.6	218.6	194.2	180.3	6.71	5.47	-11.72	
6,299.0	22.00	38.10	6,278.4	227.5	201.4	187.8	5.72	5.34	-5.66	
6,331.0	22.91	35.77	6,308.0	237.3	208.8	196.1	3.98	2.84	-7.28	
6,363.0	25.12	33.02	6,337.2	246.0	216.1	205.4	7.74	6.91	-8.59	
6,394.0	26.91	30.29	6,365.1	258.6	223.2	215.5	6.95	5.77	-8.81	
6,426.0	28.58	28.18	6,393.4	272.6	230.6	228.9	5.46	5.22	-3.47	
6,458.0	31.66	28.11	6,421.1	286.7	238.3	239.4	6.77	9.63	-3.34	
6,490.0	34.51	28.62	6,447.9	302.0	246.6	253.1	8.95	8.91	1.59	
6,522.0	37.86	28.76	6,473.7	318.6	255.7	267.7	10.47	10.47	0.44	
6,554.0	40.88	29.12	6,498.5	336.3	265.5	283.5	9.40	9.38	1.13	
6,586.0	43.88	28.85	6,522.1	355.2	275.9	300.1	9.45	9.44	-0.84	
6,618.0	45.78	29.18	6,544.8	374.9	286.9	317.6	5.92	5.86	1.06	
6,650.0	47.32	29.66	6,566.8	395.2	298.3	335.5	4.99	4.88	1.47	
6,682.0	48.43	30.42	6,588.3	415.7	310.2	353.5	3.89	3.47	2.38	
6,713.0	50.61	29.77	6,608.4	436.1	322.0	371.5	7.21	7.03	-2.10	
6,745.0	52.70	29.85	6,628.2	457.9	334.4	389.7	6.54	6.53	-0.38	
6,777.0	54.84	29.07	6,647.2	480.4	347.1	410.6	6.85	6.69	-1.81	
6,809.0	56.60	28.73	6,665.2	503.8	359.5	431.4	8.17	5.50	-7.31	
6,841.0	57.64	25.59	6,682.6	527.9	371.3	453.0	4.42	3.25	-3.56	
6,873.0	60.04	22.50	6,699.1	552.9	382.5	475.6	11.16	7.50	-9.66	
6,904.0	61.59	20.58	6,714.2	578.1	392.4	498.6	7.36	5.00	-6.19	
6,936.0	62.47	17.70	6,729.2	604.8	401.7	523.2	6.41	2.75	-9.00	
6,968.0	61.95	15.51	6,744.2	631.9	409.7	548.4	6.27	-1.63	-6.84	
6,999.0	62.38	12.41	6,758.6	658.5	418.4	573.4	8.95	1.38	-10.00	

**Scientific Drilling International  
Survey Report**

103-02713

<b>Company:</b>	Stone Energy	<b>Local Co-ordinate Reference:</b>	Well Lemons #7H - Spt Lemons #7H
<b>Project:</b>	Mary Prospect	<b>TVD Reference:</b>	GL 1327' & KB 18' @ 1345.0usft (Saxon 141)
<b>Site:</b>	Lemons Pad - Wetzel County, PA	<b>MD Reference:</b>	GL 1327' & KB 18' @ 1345.0usft (Saxon 141)
<b>Well:</b>	Lemons #7H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Well	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Northeast DB

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,031.0	63.52	9.32	6,773.2	886.5	421.7	600.0	9.31	3.58	-9.88
7,063.0	64.45	7.16	6,787.2	714.9	425.8	627.3	6.73	2.91	-6.75
7,095.0	66.12	5.75	6,800.8	743.8	429.1	655.1	6.58	5.22	-4.41
7,127.0	67.92	3.65	6,813.1	773.2	431.5	683.6	8.25	5.83	-6.56
7,159.0	70.43	1.72	6,824.5	803.0	432.9	712.7	9.66	7.84	-6.03
7,190.0	72.17	0.28	6,834.4	832.4	433.4	741.5	7.13	5.61	-4.65
7,222.0	73.38	358.50	6,843.9	863.0	433.1	771.8	6.52	3.78	-5.56
7,254.0	75.05	355.97	6,852.6	893.7	431.6	802.1	9.24	5.25	-7.91
7,288.0	77.00	354.40	6,860.3	924.7	429.0	833.1	7.71	6.06	-4.91
7,318.0	78.99	353.79	6,867.0	955.8	425.8	864.3	6.49	6.22	-1.91
7,349.0	80.85	352.75	6,872.4	986.1	422.2	894.7	6.85	6.00	-3.35
7,381.0	82.83	350.68	6,876.9	1,017.4	417.6	926.4	8.90	6.19	-6.47
7,413.0	83.54	350.35	6,880.7	1,048.8	412.4	958.1	2.44	2.22	-1.03
7,445.0	84.12	350.27	6,884.2	1,080.1	407.0	990.0	1.83	1.81	-0.25
7,477.0	85.20	348.73	6,887.2	1,111.5	401.2	1,021.8	5.86	3.38	-4.81
7,508.0	86.30	347.23	6,889.5	1,141.7	394.8	1,052.7	5.99	3.55	-4.84
7,572.0	88.78	346.01	6,892.2	1,203.9	380.0	1,116.8	4.33	3.89	-1.91
7,636.0	90.00	346.39	6,892.9	1,266.0	364.7	1,180.4	1.98	1.89	0.59
7,699.0	90.80	346.04	6,892.4	1,327.2	349.7	1,243.3	1.39	1.27	-0.56
7,763.0	90.77	346.53	6,891.6	1,389.4	334.6	1,307.2	0.77	-0.05	0.77
7,826.0	90.40	346.05	6,890.9	1,450.6	319.6	1,370.1	0.96	-0.59	-0.76
7,890.0	90.27	344.54	6,890.5	1,512.5	303.4	1,433.9	2.37	-0.20	-2.36
7,954.0	89.77	344.11	6,890.5	1,574.1	288.1	1,497.6	1.03	-0.78	-0.67
8,017.0	90.60	344.18	6,890.3	1,634.7	268.9	1,560.3	1.32	1.32	0.13
8,081.0	91.74	343.45	6,889.0	1,696.2	251.1	1,624.0	2.12	1.78	-1.16
8,144.0	91.51	342.02	6,887.2	1,756.3	232.4	1,686.5	2.30	-0.37	-2.27
8,207.0	91.54	341.85	6,885.5	1,816.2	212.7	1,748.9	0.59	0.05	-0.59
8,270.0	91.44	340.97	6,883.9	1,875.8	192.5	1,811.2	1.09	-0.18	-1.08
8,334.0	90.94	339.86	6,882.6	1,936.1	171.1	1,874.3	1.90	-0.78	-1.73
8,397.0	90.54	340.85	6,881.8	1,995.4	149.9	1,936.5	1.69	-0.63	1.57
8,461.0	90.00	340.57	6,881.5	2,055.8	128.8	1,999.7	0.95	-0.64	-0.44
8,525.0	90.74	340.07	6,881.0	2,116.1	107.2	2,062.8	1.40	1.16	-0.78
8,589.0	92.55	339.42	6,879.2	2,176.1	85.1	2,125.8	3.00	2.83	-1.02
8,652.0	93.56	338.82	6,875.9	2,234.8	62.6	2,187.6	2.04	1.60	-1.27
8,716.0	92.28	338.40	6,872.6	2,293.9	38.1	2,250.1	4.00	-2.00	-3.47
8,779.0	92.48	338.03	6,870.0	2,351.5	12.7	2,311.3	0.67	0.32	-0.59
8,843.0	92.61	338.07	6,867.1	2,409.9	-13.2	2,373.5	0.21	0.20	0.06
8,906.0	90.97	336.29	6,865.2	2,467.5	-38.7	2,434.7	2.63	-2.60	0.35
8,970.0	90.84	336.51	6,864.2	2,526.2	-64.3	2,488.9	0.40	-0.20	0.34
9,034.0	90.94	336.14	6,863.2	2,584.8	-90.0	2,559.2	0.60	0.16	-0.58
9,097.0	90.50	337.05	6,862.4	2,642.6	-115.0	2,620.6	1.60	-0.70	1.44
9,161.0	92.32	337.93	6,860.8	2,701.7	-139.5	2,683.1	3.16	2.84	1.38
9,225.0	92.41	338.22	6,858.2	2,761.0	-163.4	2,745.7	0.47	0.14	0.45

**Scientific Drilling International  
Survey Report**

103-02713

<b>Company:</b>	Stone Energy	<b>Local Co-ordinate Reference:</b>	Well Lemons #7H - Slot Lemons #7H
<b>Project:</b>	Mary Prospect	<b>TVD Reference:</b>	GL 1327' & KB 18' @ 1345.0usft (Saxon 141)
<b>Site:</b>	Lemons Pad - Wetzel County, PA	<b>MD Reference:</b>	GL 1327' & KB 18' @ 1345.0usft (Saxon 141)
<b>Well:</b>	Lemons #7H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Well	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Northeast DB

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dog/bg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
9,288.0	92.07	338.41	6,855.7	2,819.5	-188.6	2,807.4	0.62	-0.54	0.30	
9,352.0	92.84	338.10	6,853.0	2,878.9	-210.3	2,870.1	1.30	1.20	-0.48	
9,416.0	92.35	337.44	6,850.1	2,938.1	-234.5	2,932.7	1.28	-0.77	-1.03	
9,480.0	91.88	338.93	6,847.6	2,997.4	-258.3	2,995.3	2.40	-0.58	2.33	
9,543.0	92.38	339.00	6,845.2	3,058.2	-280.9	3,057.2	0.64	0.63	0.11	
9,607.0	92.35	338.80	6,842.8	3,115.9	-303.9	3,120.0	0.32	-0.05	-0.31	
9,671.0	91.21	338.04	6,840.6	3,175.3	-327.4	3,182.7	2.14	-1.78	-1.19	
9,734.0	91.58	337.66	6,839.1	3,233.7	-351.2	3,244.4	0.84	0.59	-0.60	
9,798.0	91.47	338.62	6,837.4	3,293.1	-375.0	3,307.0	1.51	-0.17	1.50	
9,861.0	91.71	339.32	6,835.6	3,351.8	-397.6	3,388.9	1.17	0.38	1.11	
9,925.0	91.58	339.22	6,833.8	3,411.7	-420.2	3,431.8	0.28	-0.20	-0.16	
9,989.0	91.48	339.37	6,832.1	3,471.5	-442.8	3,494.7	0.28	-0.16	0.23	
10,053.0	91.34	340.15	6,830.5	3,531.5	-465.0	3,557.8	1.24	-0.22	1.22	
10,118.0	91.04	341.05	6,828.2	3,590.9	-485.9	3,620.0	1.51	-0.48	1.43	
10,180.0	91.74	340.53	6,827.6	3,651.4	-507.0	3,683.2	1.38	1.09	-0.81	
10,243.0	91.54	340.79	6,825.8	3,710.8	-527.8	3,745.4	0.52	-0.32	0.41	
10,307.0	91.47	340.35	6,824.2	3,771.1	-549.1	3,808.5	0.70	-0.11	-0.69	
10,370.0	92.32	340.17	6,822.1	3,830.4	-570.4	3,870.6	1.38	1.35	-0.29	
10,434.0	92.51	340.07	6,819.4	3,890.5	-592.1	3,933.7	0.34	0.30	-0.16	
10,498.0	92.52	340.74	6,818.6	3,950.8	-613.5	3,996.8	1.05	0.02	1.05	
10,561.0	92.31	340.51	6,813.9	4,010.1	-634.4	4,058.9	0.49	-0.33	-0.37	
10,625.0	92.19	342.16	6,811.4	4,070.7	-654.9	4,122.2	2.58	-0.19	2.58	
10,688.0	92.32	342.56	6,808.9	4,130.7	-674.0	4,184.6	0.67	0.21	0.63	
10,751.0	92.21	341.94	6,808.4	4,190.7	-693.2	4,247.1	1.00	-0.17	-0.98	
10,814.0	92.11	342.32	6,804.1	4,250.6	-712.5	4,309.5	0.82	-0.16	0.60	
10,878.0	92.25	341.92	6,801.6	4,311.4	-732.1	4,372.9	0.66	0.22	-0.63	
10,941.0	91.34	341.84	6,799.7	4,371.3	-751.7	4,435.3	1.45	-1.44	-0.13	
11,005.0	90.77	341.99	6,798.5	4,432.1	-771.6	4,498.7	0.92	-0.69	0.23	
11,068.0	90.81	341.77	6,797.6	4,492.0	-791.2	4,561.1	0.35	0.06	-0.35	
11,131.0	90.70	341.84	6,798.8	4,551.8	-810.8	4,623.5	0.21	-0.17	0.11	
11,189.0	91.11	342.76	6,795.9	4,607.1	-828.5	4,681.0	1.74	0.71	1.59	
Last SDI MWD Survey										
11,248.0	91.11	342.76	6,794.7	4,663.4	-845.9	4,739.5	0.00	0.00	0.00	

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N-S (usft)	+E-W (usft)	
108.0	108.0	0.1	0.5	First SDI Gyro Survey
5,108.0	5,098.3	180.1	143.9	Last SDI Gyro Survey
5,183.0	5,173.3	180.9	144.7	First SDI MWD Survey
11,189.0	6,795.9	4,607.1	-828.5	Last SDI MWD Survey
11,248.0	6,794.7	4,663.4	-845.9	Projection to Bit