

WELL DETAILS: Mills-Wetzel 22H

+N/+S	+E/+W	Ground Level	1291.00	Latitude	Longitude	Slot	TVD	MD	Inc	Azi	+N/+S	+E/+W	VSet	Departure	Annotation
0.00	0.00	369961.02	1668999.66	39° 30' 35.375" N	80° 40' 23.453" W	MW3#22H	103.00	103.00	0.64	193.33	-0.55	-40.15	0.46	0.58	First SDI Gyro Survey
							6160.16	6193.91	8.55	206.55	-385.41	-233.36	277.36	467.10	Last SDI Gyro Survey
							6192.82	6227.00	9.92	206.29	-390.17	-235.72	280.97	472.41	First SDI MWD Survey
							7373.54	12384.00	86.97	145.48	-5217.40	1695.08	5479.25	6144.80	Last SDI MWD Survey
							7376.61	12442.00	86.97	145.48	-5265.12	1727.90	5535.52	6202.72	Projection to Bit

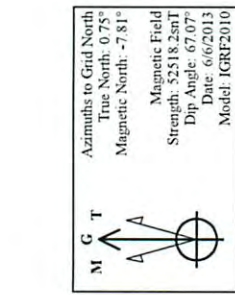
ANNOTATIONS

PROJECT DETAILS: Heather Prospect (NAD 27)

Geodetic System: US State Plane 1927 (Exact solution)  
 Datum: NAD 1927 (NADCON CONUS)  
 Ellipsoid: Clarke 1866  
 Zone: West Virginia North 4701  
 System Datum: Mean Sea Level

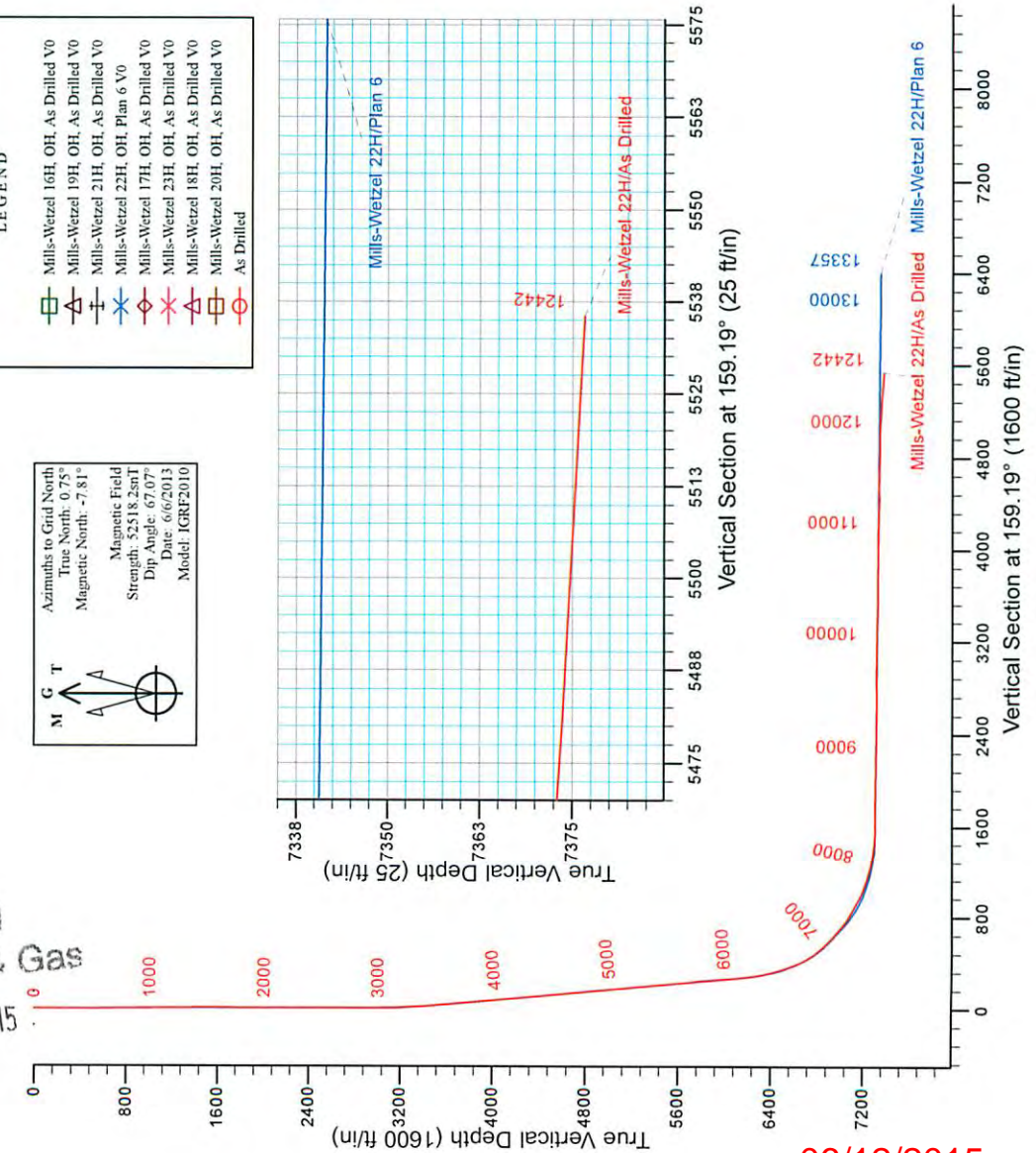
REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well Mills-Wetzel 22H - Slot MW3#22H Grid North  
 Vertical (TVD) Reference: GL 1291' & KB 18' @ 1309.00ft (Saxon 141)  
 Section (VSI) Reference: Slot - MW3#22H(0.00N, 0.00E)  
 Measured Depth Reference: GL 1291' & KB 18' @ 1309.00ft (Saxon 141)  
 Calculation Method: Minimum Curvature



LEGEND

- Mills-Wetzel 16H, OH, As Drilled VO
- Mills-Wetzel 19H, OH, As Drilled VO
- Mills-Wetzel 21H, OH, As Drilled VO
- Mills-Wetzel 22H, OH, Plan 6 VO
- Mills-Wetzel 17H, OH, As Drilled VO
- Mills-Wetzel 23H, OH, As Drilled VO
- Mills-Wetzel 18H, OH, As Drilled VO
- Mills-Wetzel 20H, OH, As Drilled VO
- As Drilled



Received  
 Office of Oil & Gas  
 FEB 26 2015



## Stone Energy

Heather Prospect (NAD 27)

Mills-Wetzel Pad 3

Mills-Wetzel 22H - Slot MW3#22H

OH

Design: As Drilled

## Standard Survey Report

20 June, 2013



Received  
Office of Oil & Gas  
FEB 26 2015

[www.scientificdrilling.com](http://www.scientificdrilling.com)

06/12/2015





Scientific Drilling International  
Survey Report



<b>Company:</b>	Stone Energy	<b>Local Co-ordinate Reference:</b>	Well Mills-Wetzel 22H - Slot MW3#22H
<b>Project:</b>	Heather Prospect (NAD 27)	<b>TVD Reference:</b>	GL 1291' & KB 18' @ 1309.00ft (Saxon 141)
<b>Site:</b>	Mills-Wetzel Pad 3	<b>MD Reference:</b>	GL 1291' & KB 18' @ 1309.00ft (Saxon 141)
<b>Well:</b>	Mills-Wetzel 22H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Northeast District

<b>Project</b>	Heather Prospect (NAD 27), Wetzel County, 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>	Mills-Wetzel Pad 3				
<b>Site Position:</b>		<b>Northing:</b>	370,004.38 usft	<b>Latitude:</b>	39° 30' 35.809 N
<b>From:</b>	Map	<b>Easting:</b>	1,669,041.12 usft	<b>Longitude:</b>	80° 40' 22.931 W
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	-0.75 °

<b>Well</b>	Mills-Wetzel 22H - Slot MW3#22H					
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	369,961.02 usft	<b>Latitude:</b>	39° 30' 35.375 N
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	1,668,999.66 usft	<b>Longitude:</b>	80° 40' 23.453 W
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	1,291.00 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	4/4/2013	-8.55	67.08	52,539
	IGRF2010	6/6/2013	-8.56	67.07	52,518

<b>Design</b>	As Drilled				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	159.19	

<b>Survey Program</b>	<b>Date</b>	6/20/2013			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
103.00	6,193.92	Survey #3 - Gyro (OH)	SDI Standard Keeper 103	SDI Standard Wireline Keeper ver 1.0.3	
6,227.00	12,442.00	Survey 4 - MWD (OH)	MWD SDI	MWD - Standard ver 1.0.1	

<b>Survey</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
103.00	0.64	195.35	103.00	-0.55	-0.15	0.46	0.62	0.62	0.00	
<b>First SDI Gyro Survey</b>										
203.00	0.43	216.88	202.99	-1.39	-0.53	1.12	0.29	-0.21	21.58	
303.00	0.23	204.27	302.99	-1.88	-0.83	1.46	0.21	-0.20	-12.61	
403.00	0.18	151.36	402.99	-2.20	-0.84	1.76	0.19		-52.91	
503.00	0.06	151.68	502.99	-2.38	-0.74	1.96	0.12	-0.17	0.39	
603.00	0.14	112.77	602.99	-2.47	-0.60	2.10	0.10	0.08	-38.91	

Received  
Office of Oil & Gas  
FEB 26 2015





Scientific Drilling International  
Survey Report



<b>Company:</b>	Stone Energy	<b>Local Co-ordinate Reference:</b>	Well Mills-Wetzel 22H - Slot MW3#22H
<b>Project:</b>	Heather Prospect (NAD 27)	<b>TVD Reference:</b>	GL 1291' & KB 18' @ 1309.00ft (Saxon 141)
<b>Site:</b>	Mills-Wetzel Pad 3	<b>MD Reference:</b>	GL 1291' & KB 18' @ 1309.00ft (Saxon 141)
<b>Well:</b>	Mills-Wetzel 22H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Northeast District

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
703.00	0.20	110.51	702.99	-2.58	-0.33	2.30	0.06	0.06	-2.26
803.00	0.35	102.01	802.99	-2.71	0.14	2.58	0.16	0.15	-8.50
903.00	0.20	107.31	902.99	-2.82	0.60	2.85	0.15	-0.15	5.30
1,003.00	0.39	124.01	1,002.98	-3.07	1.05	3.24	0.21	0.19	16.70
1,103.00	0.41	123.98	1,102.98	-3.46	1.63	3.81	0.02	0.02	-0.03
1,203.00	0.46	122.10	1,202.98	-3.87	2.27	4.42	0.05	0.05	-1.88
1,303.00	0.53	127.29	1,302.98	-4.36	2.97	5.13	0.08	0.07	5.19
1,403.00	0.40	120.79	1,402.97	-4.82	3.64	5.80	0.14	-0.13	-6.50
1,503.00	0.46	128.03	1,502.97	-5.25	4.26	6.42	0.08	0.06	7.24
1,603.00	0.13	84.81	1,602.97	-5.48	4.69	6.79	0.38	-0.33	-43.22
1,703.00	0.14	50.34	1,702.97	-5.40	4.89	6.78	0.08	0.01	-34.47
1,803.00	0.18	247.05	1,802.97	-5.38	4.84	6.75	0.32	0.04	-163.29
1,903.00	0.43	260.51	1,902.97	-5.50	4.33	6.68	0.26	0.25	13.46
2,003.00	0.72	284.30	2,002.96	-5.41	3.35	6.25	0.37	0.29	23.79
2,103.00	0.93	305.78	2,102.95	-4.78	2.08	5.21	0.37	0.21	21.48
2,203.00	0.34	355.01	2,202.94	-4.01	1.40	4.24	0.75	-0.59	49.23
2,303.00	0.26	32.35	2,302.94	-3.52	1.49	3.82	0.21	-0.08	37.34
2,403.00	0.23	44.53	2,402.94	-3.19	1.76	3.60	0.06	-0.03	12.18
2,503.00	0.13	70.70	2,502.94	-3.01	2.00	3.52	0.13	-0.10	26.17
2,603.00	0.09	17.07	2,602.94	-2.89	2.13	3.46	0.11	-0.04	-53.63
2,703.00	0.11	35.38	2,702.94	-2.74	2.21	3.35	0.04	0.02	18.31
2,803.00	0.09	28.23	2,802.94	-2.59	2.30	3.24	0.02	-0.02	-7.15
2,903.00	0.61	230.32	2,902.94	-2.86	1.93	3.36	0.69	0.52	-157.91
3,003.00	1.86	222.39	3,002.91	-4.40	0.43	4.27	1.26	1.25	-7.93
3,103.00	1.93	218.19	3,102.86	-6.93	-1.71	5.87	0.16	0.07	-4.20
3,203.00	3.30	214.11	3,202.75	-10.63	-4.36	8.39	1.38	1.37	-4.08
3,303.00	5.44	208.54	3,302.46	-17.18	-8.24	13.13	2.18	2.14	-5.57
3,403.00	5.97	205.70	3,401.96	-26.03	-12.76	19.80	0.60	0.53	-2.84
3,503.00	6.74	208.51	3,501.35	-35.87	-17.82	27.20	0.83	0.77	2.81
3,603.00	8.00	215.48	3,600.52	-46.70	-24.66	34.89	1.54	1.26	6.97
3,703.00	9.04	215.77	3,699.42	-58.74	-33.29	43.08	1.04	1.04	0.29
3,803.00	9.57	214.39	3,798.10	-71.97	-42.58	52.15	0.58	0.53	-1.38
3,903.00	9.93	212.58	3,896.66	-86.10	-51.91	62.04	0.47	0.36	-1.81
4,003.00	8.66	211.19	3,995.34	-99.80	-60.46	71.81	1.29	-1.27	-1.39
4,103.00	7.15	210.32	4,094.39	-111.62	-67.50	80.36	1.51	-1.51	-0.87
4,203.00	7.23	208.30	4,193.60	-122.53	-73.62	88.38	0.27	0.08	-2.02
4,303.00	7.45	205.36	4,292.78	-133.93	-79.38	96.99	0.44	0.22	-2.94
4,403.00	7.66	201.19	4,391.91	-146.00	-84.57	106.43	0.59	0.21	-4.17
4,503.00	7.71	195.45	4,491.02	-158.68	-88.76	116.79	0.77	0.05	-5.74
4,603.00	7.84	200.62	4,590.10	-171.53	-92.95	127.32	0.71	0.13	-5.17
4,703.00	8.55	208.10	4,689.08	-184.47	-98.86	137.32	1.28	0.71	-7.48
4,803.00	9.24	215.10	4,787.88	-197.60	-106.98	146.70	1.28	0.69	-7.00
4,903.00	9.70	213.12	4,886.52	-211.22	-116.19	156.16	0.56	0.46	-1.98

Received  
Office of Oil & Gas  
FEB 26 2015





Scientific Drilling International  
Survey Report



<b>Company:</b> Stone Energy	<b>Local Co-ordinate Reference:</b> Well Mills-Wetzel 22H - Slot MW3#22H
<b>Project:</b> Heather Prospect (NAD 27)	<b>TVD Reference:</b> GL 1291' & KB 18' @ 1309.00ft (Saxon 141)
<b>Site:</b> Mills-Wetzel Pad 3	<b>MD Reference:</b> GL 1291' & KB 18' @ 1309.00ft (Saxon 141)
<b>Well:</b> Mills-Wetzel 22H	<b>North Reference:</b> Grid
<b>Wellbore:</b> OH	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> As Drilled	<b>Database:</b> Northeast District

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,003.00	10.07	210.58	4,985.03	-225.80	-125.25	166.58	0.57	0.37	-2.54
5,103.00	9.48	216.34	5,083.58	-239.96	-134.57	176.50	1.14	-0.59	5.76
5,203.00	9.70	213.50	5,182.19	-253.62	-144.10	185.88	0.52	0.22	-2.84
5,303.00	9.86	211.77	5,280.73	-267.93	-153.26	196.00	0.33	0.16	-1.73
5,403.00	9.01	214.92	5,379.38	-281.63	-162.25	205.61	0.99	-0.85	3.15
5,503.00	9.25	211.62	5,478.11	-294.89	-170.95	214.92	0.58	0.24	-3.30
5,603.00	9.42	214.74	5,576.79	-308.46	-179.83	224.45	0.53	0.17	3.12
5,703.00	9.39	214.56	5,675.45	-321.90	-189.12	233.72	0.04	-0.03	-0.18
5,803.00	9.83	212.34	5,774.04	-335.83	-198.31	243.47	0.58	0.44	-2.22
5,903.00	9.86	220.09	5,872.58	-349.60	-208.39	252.76	1.32	0.03	7.75
6,003.00	7.85	220.32	5,971.38	-361.36	-218.32	260.22	2.01	-2.01	0.23
6,103.00	8.97	210.68	6,070.31	-373.27	-226.72	268.37	1.80	1.12	-9.64
6,193.91	8.55	206.55	6,160.16	-385.41	-233.36	277.36	0.83	-0.46	-4.54
<b>Last SDI Gyro Survey</b>									
6,193.92	8.55	206.55	6,160.17	-385.41	-233.36	277.36	0.83	-0.44	-4.76
6,227.00	9.92	206.29	6,192.82	-390.17	-235.72	280.97	4.14	4.14	-0.79
<b>First SDI MWD Survey</b>									
6,259.00	11.09	206.15	6,224.28	-395.40	-238.30	284.94	3.66	3.66	-0.44
6,290.00	12.64	205.79	6,254.62	-401.13	-241.09	289.31	5.01	5.00	-1.16
6,322.00	14.08	205.64	6,285.75	-407.79	-244.30	294.40	4.50	4.50	-0.47
6,354.00	15.30	207.49	6,316.71	-415.05	-247.93	299.89	4.08	3.81	5.78
6,386.00	17.15	210.44	6,347.43	-422.86	-252.27	305.65	6.33	5.78	9.22
6,418.00	19.43	211.02	6,377.81	-431.49	-257.40	311.89	7.15	7.13	1.81
6,449.00	21.78	210.44	6,406.83	-440.87	-262.97	318.68	7.61	7.58	-1.87
6,481.00	24.39	210.23	6,436.26	-451.70	-269.31	326.55	8.16	8.16	-0.66
6,513.00	27.03	210.12	6,465.09	-463.70	-276.29	335.29	8.25	8.25	-0.34
6,544.00	28.75	211.02	6,492.49	-476.18	-283.66	344.34	5.71	5.55	2.90
6,576.00	29.30	211.32	6,520.47	-489.47	-291.70	353.90	1.78	1.72	0.94
6,608.00	30.29	211.42	6,548.24	-503.04	-299.98	363.65	3.10	3.09	0.31
6,640.00	31.97	212.26	6,575.63	-517.09	-308.71	373.69	5.42	5.25	2.63
6,669.00	34.85	212.63	6,599.84	-530.57	-317.27	383.24	9.96	9.93	1.28
6,701.00	36.72	212.75	6,625.79	-546.31	-327.38	394.37	5.85	5.84	0.38
6,733.00	37.64	212.65	6,651.29	-562.59	-337.83	405.87	2.88	2.88	-0.31
6,765.00	38.34	212.53	6,676.51	-579.18	-348.44	417.61	2.20	2.19	-0.38
6,796.00	41.08	212.33	6,700.36	-595.90	-359.06	429.46	8.85	8.84	-0.65
6,828.00	44.50	211.70	6,723.83	-614.33	-370.57	442.60	10.77	10.69	-1.97
6,860.00	47.19	211.36	6,746.12	-633.90	-382.58	456.63	8.44	8.41	-1.06
6,890.00	48.25	211.38	6,766.31	-652.85	-394.13	470.24	3.53	3.53	0.07
6,920.00	49.38	211.08	6,786.06	-672.15	-405.84	484.12	3.84	3.84	0.00
6,950.00	51.09	211.33	6,805.25	-691.88	-417.79	498.32	5.74	5.74	0.88
6,981.00	52.58	211.40	6,824.40	-712.69	-430.47	513.26	4.81	4.81	0.25
7,011.00	53.86	210.78	6,842.37	-733.26	-442.88	528.09	4.58	4.27	2.07
7,041.00	55.66	210.31	6,859.68	-754.37	-455.33	543.39	6.13	6.00	-1.57
7,072.00	57.26	209.83	6,876.80	-776.73	-468.27	559.69	5.32	5.16	-1.55

Received  
Office of Oil & Gas  
FEB 26 2015





Scientific Drilling International  
Survey Report



<b>Company:</b>	Stone Energy	<b>Local Co-ordinate Reference:</b>	Well Mills-Wetzel 22H - Slot MW3#22H
<b>Project:</b>	Heather Prospect (NAD 27)	<b>TVD Reference:</b>	GL 1291' & KB 18' @ 1309.00ft (Saxon 141)
<b>Site:</b>	Mills-Wetzel Pad 3	<b>MD Reference:</b>	GL 1291' & KB 18' @ 1309.00ft (Saxon 141)
<b>Well:</b>	Mills-Wetzel 22H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Northeast District

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
7,102.00	58.14	209.87	6,892.83	-798.72	-480.90	575.77	2.94	2.93	0.13	
7,133.00	58.86	210.19	6,909.03	-821.60	-494.12	592.46	2.48	2.32	1.03	
7,163.00	59.72	210.35	6,924.35	-843.88	-507.13	608.66	2.90	2.87	0.53	
7,224.00	60.88	210.75	6,954.57	-889.51	-534.06	641.75	1.99	1.90	0.66	
7,286.00	61.39	210.70	6,984.51	-936.19	-561.80	675.52	0.83	0.82	-0.08	
7,347.00	62.47	211.09	7,013.21	-982.37	-589.44	708.88	1.86	1.77	0.64	
7,377.00	63.69	211.38	7,026.79	-1,005.24	-603.31	725.33	4.16	4.07	0.97	
7,408.00	64.33	211.65	7,040.38	-1,029.00	-617.87	742.36	2.21	2.06	0.87	
7,438.00	65.13	210.63	7,053.18	-1,052.22	-631.90	759.08	4.07	2.67	-3.40	
7,468.00	65.80	208.26	7,065.64	-1,075.98	-645.31	776.53	7.53	2.23	-7.90	
7,499.00	66.36	205.21	7,078.21	-1,101.29	-658.06	795.65	9.17	1.81	-9.84	
7,529.00	66.54	202.40	7,090.20	-1,126.44	-669.16	815.23	8.61	0.60	-9.37	
7,559.00	66.13	200.45	7,102.24	-1,152.02	-679.19	835.57	6.11	-1.37	-6.50	
7,590.00	65.78	198.03	7,114.88	-1,178.75	-688.52	857.24	7.22	-1.13	-7.81	
7,620.00	65.92	195.86	7,127.15	-1,204.93	-696.50	878.88	6.62	0.47	-7.23	
7,651.00	65.95	193.30	7,139.79	-1,232.32	-703.63	901.95	7.54	0.10	-8.26	
7,681.00	65.70	190.65	7,152.08	-1,259.09	-709.30	924.96	8.10	-0.83	-8.83	
7,712.00	65.26	188.00	7,164.95	-1,286.92	-713.87	949.35	7.91	-1.42	-8.55	
7,742.00	65.36	185.20	7,177.48	-1,313.99	-717.01	973.54	8.49	0.33	-9.33	
7,772.00	67.02	182.05	7,189.60	-1,341.38	-718.74	998.53	11.09	5.53	-10.50	
7,802.00	69.19	179.88	7,200.78	-1,369.21	-719.20	1,024.38	9.87	7.23	-7.23	
7,833.00	70.80	177.27	7,211.39	-1,398.32	-718.47	1,051.85	9.46	5.19	-8.42	
7,864.00	72.00	174.78	7,221.28	-1,427.63	-716.44	1,079.97	8.54	3.87	-8.03	
7,894.00	73.41	172.65	7,230.20	-1,456.10	-713.30	1,107.70	8.25	4.70	-7.10	
7,926.00	74.56	170.44	7,239.03	-1,486.52	-708.77	1,137.74	7.55	3.59	-6.91	
7,957.00	75.03	169.01	7,247.16	-1,515.95	-703.44	1,167.15	4.70	1.52	-4.61	
7,989.00	76.07	167.37	7,255.14	-1,546.28	-697.10	1,197.75	5.93	3.25	-5.13	
8,021.00	77.25	165.55	7,262.53	-1,576.55	-689.80	1,228.64	6.65	3.69	-5.69	
8,052.00	78.53	162.99	7,269.03	-1,605.72	-681.59	1,258.83	9.07	4.13	-8.26	
8,083.00	79.25	160.45	7,275.01	-1,634.61	-672.05	1,289.21	8.37	2.32	-8.19	
8,115.00	79.36	157.73	7,280.95	-1,663.98	-660.82	1,320.65	8.36	0.34	-8.50	
8,147.00	79.41	155.61	7,286.84	-1,692.86	-648.37	1,352.07	6.51	0.16	-6.63	
8,178.00	80.47	153.93	7,292.26	-1,720.47	-635.36	1,382.50	6.34	3.42	-5.42	
8,210.00	83.67	151.27	7,296.67	-1,748.60	-620.77	1,413.98	12.95	10.00	-8.31	
8,242.00	86.27	148.80	7,299.48	-1,776.21	-604.85	1,445.45	11.19	8.13	-7.72	
8,274.00	86.37	147.33	7,301.53	-1,803.31	-587.96	1,476.78	4.59	0.31	-4.59	
8,306.00	86.84	147.11	7,303.43	-1,830.16	-570.67	1,508.03	1.62	1.47	-0.69	
8,337.00	88.25	146.29	7,304.75	-1,856.05	-553.66	1,538.27	5.26	4.55	-2.65	
8,401.00	89.66	145.44	7,305.92	-1,909.01	-517.76	1,600.53	2.57	2.29	1.33	
8,464.00	90.03	145.79	7,306.09	-1,961.00	-482.18	1,661.77	0.81	0.59	0.56	
8,527.00	89.50	145.11	7,306.35	-2,012.89	-446.45	1,722.97	1.37	0.04	-1.09	
8,590.00	89.33	144.91	7,306.99	-2,064.50	-410.33	1,784.04	0.42	-0.27	-0.32	
8,654.00	89.09	145.29	7,307.88	-2,116.99	-373.71	1,846.11	0.70	0.38	0.59	

Received  
Office of Oil & Gas  
FEB 26 2015





Scientific Drilling International  
Survey Report



<b>Company:</b>	Stone Energy	<b>Local Co-ordinate Reference:</b>	Well Mills-Wetzel 22H - Slot MW3#22H
<b>Project:</b>	Heather Prospect (NAD 27)	<b>TVD Reference:</b>	GL 1291' & KB 18' @ 1309.00ft (Saxon 141)
<b>Site:</b>	Mills-Wetzel Pad 3	<b>MD Reference:</b>	GL 1291' & KB 18' @ 1309.00ft (Saxon 141)
<b>Well:</b>	Mills-Wetzel 22H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Northeast District

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
8,717.00	89.16	145.55	7,308.84	-2,168.85	-337.96	1,907.29	0.43	0.11	0.41	
8,781.00	88.69	145.73	7,310.04	-2,221.67	-301.85	1,969.50	0.79	-0.73	0.28	
8,844.00	88.42	145.49	7,311.63	-2,273.64	-266.27	2,030.72	0.57	-0.43	-0.38	
8,908.00	88.96	145.57	7,313.09	-2,326.39	-230.06	2,092.89	0.85	0.84	0.13	
8,969.00	89.43	145.25	7,313.95	-2,376.61	-195.43	2,152.13	0.93	0.77	-0.52	
9,033.00	89.80	145.04	7,314.38	-2,429.12	-158.86	2,214.22	0.66	0.58	-0.33	
9,097.00	90.00	144.23	7,314.49	-2,481.31	-121.82	2,276.16	1.30	0.31	-1.27	
9,160.00	90.00	143.95	7,314.49	-2,532.34	-84.87	2,336.99	0.44	0.00	-0.44	
9,224.00	89.93	143.14	7,314.53	-2,583.82	-46.84	2,398.62	1.27	-0.11	-1.27	
9,288.00	89.60	143.69	7,314.79	-2,635.21	-8.69	2,460.21	1.00	-0.52	0.86	
9,351.00	89.36	144.05	7,315.36	-2,686.09	28.45	2,520.96	0.69	-0.38	0.57	
9,414.00	88.89	143.40	7,316.32	-2,736.87	65.72	2,581.68	1.27	-0.75	-1.03	
9,478.00	88.62	143.67	7,317.72	-2,788.33	103.75	2,643.29	0.60	-0.42	0.42	
9,541.00	89.80	144.54	7,318.58	-2,839.36	140.68	2,704.11	2.33	1.87	1.38	
9,603.00	90.57	145.52	7,318.38	-2,890.16	176.21	2,764.22	2.01	1.24	1.58	
9,667.00	91.31	146.29	7,317.33	-2,943.15	212.09	2,826.50	1.67	1.16	1.20	
9,730.00	91.92	146.86	7,315.56	-2,995.71	246.77	2,887.95	1.32	0.97	0.90	
9,794.00	90.71	147.72	7,314.09	-3,049.55	281.35	2,950.56	2.32	-1.89	1.34	
9,858.00	89.09	147.99	7,314.20	-3,103.73	315.40	3,013.31	2.57	-2.53	0.42	
9,921.00	88.59	147.29	7,315.48	-3,156.94	349.11	3,075.02	1.37	-0.79	-1.11	
9,984.00	88.42	146.73	7,317.12	-3,209.76	383.40	3,136.58	0.93	-0.27	-0.89	
10,048.00	88.15	146.06	7,319.04	-3,263.04	418.81	3,198.96	1.13	-0.42	-1.05	
10,111.00	88.96	146.44	7,320.62	-3,315.41	453.80	3,260.34	1.42	1.29	0.60	
10,174.00	88.82	145.56	7,321.84	-3,367.63	489.02	3,321.67	1.41	-0.22	-1.40	
10,238.00	89.09	144.89	7,323.01	-3,420.19	525.52	3,383.77	1.13	0.42	-1.05	
10,301.00	89.16	145.86	7,323.97	-3,472.02	561.31	3,444.94	1.54	0.11	1.54	
10,364.00	88.56	146.68	7,325.23	-3,524.41	596.29	3,506.33	1.61	-0.95	1.30	
10,427.00	89.36	147.10	7,326.37	-3,577.17	630.69	3,567.87	1.43	1.27	0.67	
10,490.00	89.76	147.11	7,326.85	-3,630.07	664.91	3,629.47	0.64	0.63	0.02	
10,553.00	89.63	147.07	7,327.19	-3,682.95	699.14	3,691.07	0.22	-0.21	-0.06	
10,617.00	90.50	147.35	7,327.12	-3,736.76	733.80	3,753.68	1.43	1.36	0.44	
10,680.00	88.93	147.56	7,327.43	-3,789.86	767.69	3,815.36	2.51	-2.49	0.33	
10,744.00	88.35	147.15	7,328.95	-3,843.74	802.20	3,877.98	1.11	-0.91	-0.64	
10,807.00	89.33	146.81	7,330.23	-3,896.55	836.52	3,939.54	1.65	1.56	-0.54	
10,871.00	90.13	146.85	7,330.53	-3,950.12	871.54	4,002.06	1.25	1.25	0.06	
10,934.00	89.83	146.56	7,330.55	-4,002.78	906.12	4,063.57	0.66	-0.48	-0.46	
10,998.00	89.53	146.55	7,330.91	-4,056.18	941.39	4,126.02	0.47	-0.47	-0.02	
11,061.00	89.33	146.46	7,331.53	-4,108.71	976.16	4,187.48	0.35	-0.32	-0.14	
11,093.00	87.95	145.86	7,332.29	-4,135.28	993.97	4,218.64	4.70	-4.38	0.88	
11,124.00	88.08	145.60	7,333.37	-4,160.89	1,011.42	4,248.77	0.94	0.42	-0.84	
11,156.00	88.55	145.36	7,334.31	-4,187.24	1,029.55	4,279.85	1.65	1.47	-0.75	
11,187.00	89.16	145.38	7,334.93	-4,212.74	1,047.16	4,309.94	1.97	1.97	0.065	
11,219.00	88.92	146.10	7,335.46	-4,239.19	1,065.17	4,341.06	2.37	-0.75	2.25	
11,251.00	88.32	146.10	7,336.23	-4,265.74	1,083.01	4,372.22	1.88	-1.88	0.00	

Received  
Office of Oil & Gas  
FEB 26 2015





Scientific Drilling International  
Survey Report



<b>Company:</b>	Stone Energy	<b>Local Co-ordinate Reference:</b>	Well Mills-Wetzel 22H - Slot MW3#22H
<b>Project:</b>	Heather Prospect (NAD 27)	<b>TVD Reference:</b>	GL 1291' & KB 18' @ 1309.00ft (Saxon 141)
<b>Site:</b>	Mills-Wetzel Pad 3	<b>MD Reference:</b>	GL 1291' & KB 18' @ 1309.00ft (Saxon 141)
<b>Well:</b>	Mills-Wetzel 22H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Northeast District

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
11,283.00	88.55	145.79	7,337.11	-4,292.24	1,100.93	4,403.36	1.21	0.72	-0.97	
11,315.00	88.96	145.74	7,337.80	-4,318.69	1,118.92	4,434.48	1.29	1.28	-0.16	
11,346.00	90.24	146.34	7,338.02	-4,344.40	1,136.24	4,464.66	4.56	4.13	1.94	
11,378.00	91.78	146.35	7,337.45	-4,371.03	1,153.97	4,495.86	4.81	4.81	0.03	
11,410.00	91.81	146.50	7,336.45	-4,397.68	1,171.66	4,527.05	0.48	0.09	0.47	
11,442.00	91.14	145.83	7,335.63	-4,424.25	1,189.47	4,558.22	2.96	-2.09	-2.09	
11,474.00	90.00	145.93	7,335.31	-4,450.74	1,207.42	4,589.35	3.58	-3.56	0.31	
11,505.00	88.76	146.41	7,335.65	-4,476.49	1,224.68	4,619.56	4.29	-4.00	1.55	
11,537.00	88.12	146.19	7,336.52	-4,503.11	1,242.43	4,650.74	2.11	-2.00	-0.69	
11,569.00	88.42	146.37	7,337.48	-4,529.71	1,260.18	4,681.91	1.09	0.94	0.56	
11,600.00	88.86	146.11	7,338.22	-4,555.48	1,277.40	4,712.12	1.65	1.42	-0.84	
11,632.00	88.49	146.13	7,338.96	-4,582.04	1,295.24	4,743.28	1.16	-1.16	0.06	
11,664.00	87.78	145.84	7,340.00	-4,608.55	1,313.13	4,774.42	2.40	-2.22	-0.91	
11,696.00	87.81	145.60	7,341.23	-4,634.97	1,331.14	4,805.51	0.76	0.09	-0.75	
11,728.00	88.76	146.00	7,342.19	-4,661.42	1,349.12	4,836.63	3.22	2.97	1.25	
11,760.00	89.43	147.47	7,342.69	-4,688.17	1,366.67	4,867.87	5.05	2.09	4.59	
11,791.00	89.70	148.31	7,342.93	-4,714.43	1,383.14	4,898.27	2.85	0.87	2.71	
11,823.00	89.63	148.71	7,343.12	-4,741.72	1,399.86	4,929.71	1.27	-0.22	1.25	
11,855.00	89.09	149.44	7,343.47	-4,769.17	1,416.30	4,961.21	2.84	-1.69	2.28	
11,887.00	88.55	150.40	7,344.13	-4,796.85	1,432.34	4,992.79	3.44	-1.69	3.00	
11,918.00	87.21	150.53	7,345.28	-4,823.80	1,447.61	5,023.41	4.34	-4.32	0.42	
11,950.00	87.28	150.48	7,346.82	-4,851.62	1,463.35	5,055.01	0.27	0.22	-0.16	
11,982.00	87.21	150.35	7,348.36	-4,879.42	1,479.13	5,086.59	0.46	-0.22	-0.41	
12,013.00	87.41	149.79	7,349.81	-4,906.26	1,494.58	5,117.17	1.92	0.65	-1.81	
12,045.00	86.91	148.33	7,351.40	-4,933.67	1,511.01	5,148.63	4.82	-1.56	-4.56	
12,077.00	86.90	147.37	7,353.12	-4,960.72	1,528.01	5,179.96	3.00	-0.03	-3.00	
12,109.00	87.54	147.75	7,354.68	-4,987.70	1,545.16	5,211.26	2.33	2.00	1.19	
12,140.00	87.78	147.50	7,355.94	-5,013.86	1,561.74	5,241.61	1.12	0.77	-0.81	
12,204.00	85.42	146.96	7,359.74	-5,067.57	1,596.32	5,304.11	3.78	-3.69	-0.84	
12,267.00	84.68	146.89	7,365.17	-5,120.17	1,630.57	5,365.44	1.18	-1.17	-0.11	
12,330.00	86.06	146.64	7,370.26	-5,172.69	1,664.99	5,426.76	2.23	2.19	-0.40	
12,384.00	86.97	145.48	7,373.54	-5,217.40	1,695.08	5,479.25	2.73	1.69	-2.15	
<b>Last SDI MWD Survey</b>										
12,442.00	86.97	145.48	7,376.61	-5,265.12	1,727.90	5,535.52	0.00	0.00	0.00	
<b>Projection to Bit</b>										

Received  
Office of Oil & Gas  
FEB 26 2015





**Scientific Drilling International**  
Survey Report



<b>Company:</b>	Stone Energy	<b>Local Co-ordinate Reference:</b>	Well Mills-Wetzel 22H - Slot MW3#22H
<b>Project:</b>	Heather Prospect (NAD 27)	<b>TVD Reference:</b>	GL 1291' & KB 18' @ 1309.00ft (Saxon 141)
<b>Site:</b>	Mills-Wetzel Pad 3	<b>MD Reference:</b>	GL 1291' & KB 18' @ 1309.00ft (Saxon 141)
<b>Well:</b>	Mills-Wetzel 22H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Northeast District

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
103.00	103.00	-0.55	-0.15	First SDI Gyro Survey	
6,193.91	6,160.16	-385.41	-233.36	Last SDI Gyro Survey	
6,227.00	6,192.82	-390.17	-235.72	First SDI MWD Survey	
12,384.00	7,373.54	-5,217.40	1,695.08	Last SDI MWD Survey	
12,442.00	7,376.61	-5,265.12	1,727.90	Projection to Bit	

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

Received  
Office of Oil & Gas  
FEB 26 2015