WR-35
Rev (9-11)

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas
Well Operator's Report of Well Work

DATE: December 2, 2013
API #: 47-103-02704

Farm name: WV Conservation Commission Operator Well No.: Mills-Wetzel #8H

LOCATION: Elevation: 1,313' Quadrangle: Pine Grove

District: Grant County: Wetzel
Latitude: 7,600 Feet South of 39 Deg. 32 Min. 30 Sec.
Longitude 9,120 Feet West of 80 Deg. 37 Min. 30 Sec.

Company: Stone Energy Corporation

Address: 6000 Hampton Center, Suite B	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Morgantown, WV 26505	20"	50'	50'	GTS
Agent: Tim McGregor	13.375"	1,286'	1,286'	1,048 - CTS
Inspector: Derek Haught	9.625"	2,776'	2,776'	1,206 - CTS
Date Permit Issued: 11/14/2011	5.5"		10,762'	2,458
Date Well Work Commenced: 3/29/2012	2.375"		7,799'	
Date Well Work Completed: 12/19/2012				
Verbal Plugging:				
Date Permission granted on:				
Rotary ☑ Cable ☐ Rig ☐				
Total Vertical Depth (ft): 7,352				
Total Measured Depth (ft): 10,765				
Fresh Water Depth (ft.): 55				
Salt Water Depth (ft.): 1,946				
Is coal being mined in area (N/Y)? No				
Coal Depths (ft.): 1,162				
Void(s) encountered (N/Y) Depth(s) N/A				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)
Producing formation Marcellus Pay zone depth (ft) 7,880' to 10,685'
Gas: Initial open flow 200 MCF/d Oil: Initial open flow 0 Bbl/d
Final open flow 3,430 MCF/d Final open flow 0 Bbl/d
Time of open flow between initial and final tests 118 Hours
Static rock Pressure 2,024 psig (surface pressure) after 1 Hours

Second producing formation_____ Pay zone depth (ft)_____
Gas: Initial open flow_____MCF/d Oil: Initial open flow_____Bbl/d
Final open flow_____MCF/d Final open flow _____Bbl/d
Time of open flow between initial and final tests_____Hours
Static rock Pressure_____psig (surface pressure) after _____Hours

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Environmental Protection

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Signature 12/2/2013 Date

03/07/2014

Were core samples taken? Yes_____ No X Were cuttings caught during drilling? Yes X No_____

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list MWD Gamma Ray, Mud Log, and CBL

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

Perforated Intervals, Fracturing, or Stimulating:

Perforated 11 intervals from 10,685' to 7,880'. Performed 11 individual stages of slick water stimulation using 4,024,226 gals fresh water, Sand - 468,998 lbs 100 Mesh and 4,058,470 lbs 40/70. AvBDP = 6,569 psi, AvTP = 7,690 psi, AvMTP = 9,082 psi, AvInjRate = 81.5 bpm, and AvISIP = 4,543 psi.

See Attachment for FracFocus information.

Plug Back Details Including Plug Type and Depth(s): N/A

Formations Encountered: Surface: Top Depth / Bottom Depth

See attached sheet for formations encountered and their depths.

MILLS-WETZEL #8H
API 47-103-02704
Stone Energy Corporation

	Top (ft TVD)	Horizontal Top (ft MD)		Bottom (ft TVD)	Bottom (ft MD)	
Sandstone & Shale	Surface		*	1162		FW @ 55'
Pittsburgh Coal	1162		*	1164		
Sandstone & Shale	1164		*	2300		SW @ 1946'
Little Lime	2300		*	2330		
Big Lime	2330		*	2454		
Big Injun	2454		*	2554		
Sandstone & Shale	2654		*	2916		
Berea Sandstone	2916		*	2956		
Shale	2956		*	3130		
Gordon	3130		*	3194		
Undiff Devonian Shale	3194		*	5418		
Riley	5418		*	5474		
Undiff Devonian Shale	5474		*	5512		
Benson	5512		*	5550		
Undiff Devonian Shale	5550		*	5753		
Pipe Creek	5753		*	5765		
Lower Alexander	5765		*	5812		
Undiff Devonian Shale	5812		*	6632	6741	
Rhinestreet	6632	6741	~	6894	7034	
Cashaqua	6894	7034	~	7068	7242	
Middlesex	7068	7242	~	7087	7270	
West River	7087	7270	~	7175	7409	
Geneseo	7175	7409	~	7201	7457	
Tully Limestone	7201	7457	~	7269	7667	
Hamilton	7269	7667	~	7292	7700	
Marcellus	7292	7700	~	7352	10765	
TD	7352	10765				

* From Pilot Hole Log and Driller's Log
~ From MWD Gamma Log

03/07/2014

Hydraulic Fracturing Fluid Product Component Information Disclosure

Fracture Date:	11/28/2012
State:	West Virginia
County/Parish:	Wetzel County
API Number:	4710302704
Operator Name:	Stone Energy
Well Name and Number:	Mills Wetzel #8H
Longitude:	-80.65718
Latitude:	39.52096
Long/Lat Projection:	NAD27
Production Type:	Gas
True Vertical Depth (TVD):	7,352
Total Water Volume (gal)*:	4,024,226

Hydraulic Fracturing Fluid Composition

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Slickwater, WF115	Schlumberger	Corrosion Inhibitor, Bactericide, Scale Inhibitor, Surfactant , Acid, Breaker, Gelling Agent, Friction Reducer, Iron Control Agent, Clay Control Agent, Rheology Modifier ClearFRAC XT J589, Fluid Loss Additive , Propping Agent	Water (Including Mix Water Supplied by Client)*	-		87.97383%	
			Crystalline silica	14808-60-7	98.59468%	11.85717%	
			Hydrochloric acid	7647-01-0	0.71251%	0.08569%	
			Carbohydrate polymer	Proprietary	0.40749%	0.04901%	
			Ammonium sulfate	Proprietary	0.18115%	0.02179%	
			Polyethylene glycol monohexyl ether	31726-34-8	0.06544%	0.00787%	
			Glutaraldehyde	111-30-8	0.04521%	0.00544%	
			Erucic amidopropyl dimethyl betaine	149879-98-1	0.02181%	0.00262%	
			Diammonium peroxidisulphate	7727-54-0	0.02108%	0.00254%	
			Propan-2-ol	67-63-0	0.01726%	0.00208%	
			Calcium chloride	10043-52-4	0.01047%	0.00126%	
			Methanol	67-56-1	0.00325%	0.00039%	
			Trisodium ortho phosphate	7601-54-9	0.00321%	0.00039%	
			Ethane-1,2-diol	107-21-1	0.00321%	0.00039%	
			Sodium erythorbate	6381-77-7	0.00257%	0.00031%	
			Aliphatic acids	Proprietary	0.00243%	0.00029%	
			Aliphatic alcohols, ethoxylated #2	Proprietary	0.00243%	0.00029%	
			Prop-2-yn-1-ol	107-19-7	0.00081%	0.00010%	

* Total Water Volume sources may include fresh water, produced water, and/or recycled water

** Information is based on the maximum potential for concentration and thus the total may be over 100%

Report ID: RPT-9112 (Generated on 12/11/2012 10:41 AM)

All component information listed was obtained from the supplier's Material Safety Data Sheets (MSDS). As such, the Operator is not responsible for inaccurate and/or incomplete information. Any questions regarding the content of the MSDS should be directed to the supplier who provided it. The Occupational Safety and Health Administration's (OSHA) regulations govern the criteria for the disclosure of this information. Please note that Federal Law protects "proprietary", "trade secret", and "confidential business information" and the criteria for how this information is reported on an MSDS is subject to 29 CFR 1910.1200(i) and Appendix D.

03/07/2014

Company:	Stone Energy	**Local Co-ordinate Reference:**	Well Mills Wetzel #8H - Slot MW#8H
Project:	Heather Prospect (NAD 27)	**TVD Reference:**	Saxon 141 @ 1321.0usft (18' RKB - 1303' GL)
Site:	Mills Wetzel Pad 2	**MD Reference:**	Saxon 141 @ 1321.0usft (18' RKB - 1303' GL)
Well:	Mills Wetzel #8H	**North Reference:**	Grid
Wellbore:	Original Well	**Survey Calculation Method:**	Minimum Curvature
Design:	As Drilled	**Database:**	EDM-Chris Testa

Project	Heather Prospect (NAD 27), Wetzel County, West Virginia		
Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	West Virginia North 4701		

Site	Mills Wetzel Pad 2				
Site Position:		**Northing:**	374,564.00 usft	**Latitude:**	39° 31' 21.507 N
From:	Map	**Easting:**	1,674,001.00 usft	**Longitude:**	80° 39' 20.400 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	-0.74 °

Well	Mills Wetzel #8H - Slot MW#8H					
Well Position	**+N/-S**	0.0 usft	**Northing:**	373,956.80 usft	**Latitude:**	39° 31' 15.451 N
	+E/-W	0.0 usft	**Easting:**	1,673,566.60 usft	**Longitude:**	80° 39' 25.843 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	1,303.0 usft

Wellbore	Original Well			
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	07/15/12	-8.54	67.16	52,631

Design	As Drilled				
Audit Notes:					
Version:	1.0	**Phase:**	ACTUAL	**Tie On Depth:**	0.0

Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**
	0.0	0.0	0.0	172.39

Survey Program **Date** 07/23/12

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
107.0	6,678.0	SDI Keeper Gyro (Original Well)	SDI Standard Keeper 103	SDI Standard Wireline Keeper ver 1.0.3
6,721.0	10,765.0	SDI MWD (Original Well)	MWD SDI	MWD - Standard ver 1.0.1

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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
107.0	0.74	264.80	107.0	-0.1	-0.7	0.0	0.69	0.69	0.00
207.0	0.38	290.89	207.0	0.0	-1.6	-0.2	0.43	-0.36	26.09
307.0	0.25	304.29	307.0	0.2	-2.1	-0.5	0.15	-0.13	13.40
407.0	0.10	333.17	407.0	0.4	-2.4	-0.7	0.17	-0.15	28.88
507.0	0.11	340.03	507.0	0.6	-2.4	-0.9	0.02	0.01	6.86
607.0	0.09	57.85	607.0	0.7	-2.4	-1.0	0.13	-0.02	77.82
707.0	0.03	23.76	707.0	0.8	-2.3	-1.1	0.07	-0.06	-34.09
807.0	0.04	72.28	807.0	0.8	-2.3	-1.1	0.03	0.01	48.52
907.0	0.12	314.10	907.0	0.9	-2.3	-1.2	0.14	0.08	-118.18

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Well:	Mills Wetzel #8H	**North Reference:**	Grid
Wellbore:	Original Well	**Survey Calculation Method:**	Minimum Curvature
Design:	As Drilled	**Database:**	EDM-Chris Testa

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)
1,007.0	0.14	338.67	1,007.0	1.1	-2.4	-1.4	0.06	0.02	24.57
1,107.0	0.04	38.49	1,107.0	1.3	-2.5	-1.6	0.12	-0.10	59.82
1,207.0	0.08	42.27	1,207.0	1.3	-2.4	-1.6	0.04	0.04	3.78
1,307.0	0.39	308.19	1,307.0	1.6	-2.6	-1.9	0.40	0.31	-94.08
1,407.0	0.49	302.84	1,407.0	2.0	-3.2	-2.4	0.11	0.10	-5.35
1,507.0	0.41	306.44	1,507.0	2.5	-3.9	-3.0	0.08	-0.08	3.60
1,607.0	0.80	294.35	1,607.0	3.0	-4.8	-3.6	0.41	0.39	-12.09
1,707.0	0.46	288.74	1,707.0	3.4	-5.8	-4.1	0.35	-0.34	-5.61
1,807.0	0.09	221.52	1,807.0	3.5	-6.3	-4.3	0.43	-0.37	-67.22
1,907.0	0.20	218.30	1,907.0	3.3	-6.4	-4.1	0.11	0.11	-3.22
2,007.0	0.26	212.01	2,007.0	2.9	-6.6	-3.8	0.07	0.06	-6.29
2,107.0	0.11	108.58	2,107.0	2.7	-6.7	-3.6	0.30	-0.15	-103.43
2,207.0	0.17	85.43	2,207.0	2.7	-6.4	-3.5	0.08	0.06	-23.15
2,307.0	0.21	242.42	2,307.0	2.6	-6.4	-3.5	0.37	0.04	156.99
2,407.0	0.38	257.71	2,407.0	2.5	-6.9	-3.4	0.19	0.17	15.29
2,507.0	0.37	269.20	2,507.0	2.4	-7.6	-3.4	0.08	-0.01	11.49
2,607.0	0.62	309.76	2,607.0	2.7	-8.3	-3.8	0.42	0.25	40.56
2,707.0	0.49	313.92	2,707.0	3.4	-9.0	-4.5	0.14	-0.13	4.16
2,807.0	0.80	309.70	2,806.9	4.1	-9.9	-5.4	0.31	0.31	-4.22
2,907.0	1.30	262.86	2,906.9	4.4	-11.5	-5.9	0.95	0.50	-46.84
3,007.0	3.67	230.33	3,006.8	2.2	-15.1	-4.2	2.67	2.37	-32.53
3,107.0	5.73	231.58	3,106.5	-2.9	-21.5	0.0	2.06	2.06	1.25
3,207.0	6.43	228.99	3,205.9	-9.7	-29.6	5.7	0.75	0.70	-2.59
3,307.0	6.58	227.98	3,305.3	-17.2	-38.1	12.0	0.19	0.15	-1.01
3,407.0	6.54	226.48	3,404.6	-24.9	-46.5	18.6	0.18	-0.04	-1.50
3,507.0	7.08	225.56	3,503.9	-33.2	-55.0	25.6	0.55	0.54	-0.92
3,607.0	8.03	222.21	3,603.1	-42.7	-64.1	33.8	1.05	0.95	-3.35
3,707.0	8.51	223.14	3,702.0	-53.2	-73.9	43.0	0.50	0.48	0.93
3,807.0	9.99	224.82	3,800.7	-64.8	-85.1	53.0	1.50	1.48	1.68
3,907.0	9.85	230.58	3,899.2	-76.4	-97.8	62.8	1.00	-0.14	5.76
4,007.0	11.47	230.12	3,997.5	-88.2	-112.0	72.6	1.62	1.62	-0.46
4,107.0	11.95	229.36	4,095.4	-101.3	-127.5	83.5	0.50	0.48	-0.76
4,207.0	12.31	229.13	4,193.2	-115.0	-143.4	95.0	0.36	0.36	-0.23
4,307.0	12.89	228.64	4,290.8	-129.4	-159.9	107.1	0.59	0.58	-0.49
4,407.0	13.75	228.11	4,388.1	-144.7	-177.1	120.0	0.87	0.86	-0.53
4,507.0	14.39	223.40	4,485.1	-161.6	-194.5	134.5	1.31	0.64	-4.71
4,607.0	15.77	222.44	4,581.6	-180.7	-212.2	151.0	1.40	1.38	-0.96
4,707.0	16.36	220.90	4,677.7	-201.4	-230.6	169.1	0.73	0.59	-1.54
4,807.0	15.91	221.80	4,773.8	-222.2	-248.9	187.3	0.51	-0.45	0.90
4,907.0	15.63	224.66	4,870.0	-242.0	-267.5	204.5	0.83	-0.28	2.86
5,007.0	15.27	227.24	4,966.4	-260.6	-286.7	220.3	0.78	-0.36	2.58
5,107.0	15.49	227.23	5,062.8	-278.6	-306.1	235.6	0.22	0.22	-0.01
5,207.0	15.62	226.69	5,159.2	-296.9	-325.7	251.1	0.19	0.13	-0.54

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Wellbore:	Original Well	**Survey Calculation Method:**	Minimum Curvature
Design:	As Drilled	**Database:**	EDM-Chris Testa

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)
5,307.0	15.58	224.15	5,255.5	-315.7	-344.9	267.3	0.68	-0.04	-2.54
5,407.0	14.89	222.24	5,352.0	-334.9	-362.9	283.9	0.85	-0.69	-1.91
5,507.0	14.49	230.55	5,448.7	-352.3	-381.2	298.8	2.14	-0.40	8.31
5,607.0	16.00	230.56	5,545.2	-369.1	-401.5	312.6	1.51	1.51	0.01
5,707.0	16.39	227.83	5,641.2	-387.3	-422.6	327.9	0.86	0.39	-2.73
5,807.0	16.25	226.97	5,737.2	-406.3	-443.3	344.0	0.28	-0.14	-0.86
5,907.0	16.89	227.52	5,833.0	-425.7	-464.2	360.4	0.66	0.64	0.55
6,007.0	16.32	226.69	5,928.9	-445.1	-485.1	376.9	0.62	-0.57	-0.83
6,107.0	16.13	227.10	6,024.9	-464.2	-505.5	393.2	0.22	-0.19	0.41
6,207.0	16.24	226.93	6,120.9	-483.2	-525.9	409.3	0.12	0.11	-0.17
6,307.0	17.65	226.43	6,216.6	-503.2	-547.1	426.3	1.42	1.41	-0.50
6,407.0	17.41	224.29	6,311.9	-524.4	-568.6	444.4	0.69	-0.24	-2.14
6,507.0	16.90	223.01	6,407.5	-545.7	-588.9	462.9	0.63	-0.51	-1.28
6,607.0	16.27	228.27	6,503.3	-565.7	-609.3	480.0	1.63	-0.63	5.26
6,678.0	16.51	227.73	6,571.4	-579.1	-624.2	491.3	0.40	0.34	-0.76
6,721.0	18.26	229.80	6,612.5	-587.5	-633.9	498.4	4.31	4.07	4.81
6,752.0	21.53	231.33	6,641.6	-594.2	-642.0	504.0	10.68	10.55	4.94
6,784.0	24.41	231.76	6,671.1	-602.0	-651.8	510.4	9.02	9.00	1.34
6,816.0	25.52	229.21	6,700.1	-610.6	-662.2	517.5	4.83	3.47	-7.97
6,848.0	26.16	223.37	6,728.9	-620.2	-672.3	525.7	8.20	2.00	-18.25
6,880.0	27.16	216.30	6,757.5	-631.2	-681.4	535.4	10.39	3.13	-22.09
6,912.0	27.60	207.11	6,785.9	-643.7	-689.1	546.8	13.27	1.38	-28.72
6,944.0	27.60	200.85	6,814.3	-657.2	-695.2	559.4	9.06	0.00	-19.56
6,976.0	27.01	194.42	6,842.7	-671.2	-699.6	572.6	9.40	-1.84	-20.09
7,008.0	26.76	187.58	6,871.3	-685.4	-702.4	586.3	9.69	-0.78	-21.38
7,040.0	27.61	184.62	6,899.8	-699.9	-703.9	600.5	4.99	2.66	-9.25
7,071.0	29.33	184.54	6,927.0	-714.7	-705.1	615.0	5.55	5.55	-0.26
7,102.0	31.62	184.03	6,953.7	-730.3	-706.3	630.4	7.43	7.39	-1.65
7,134.0	33.52	182.06	6,980.7	-747.5	-707.2	647.3	6.80	5.94	-6.16
7,166.0	36.23	178.61	7,006.9	-765.8	-707.3	665.4	10.47	8.47	-10.78
7,198.0	37.92	176.06	7,032.5	-785.1	-706.4	684.6	7.14	5.28	-7.97
7,229.0	40.63	174.82	7,056.5	-804.6	-704.8	704.2	9.10	8.74	-4.00
7,261.0	42.67	173.52	7,080.4	-825.8	-702.6	725.5	6.92	6.38	-4.06
7,293.0	45.96	172.59	7,103.3	-848.0	-699.9	747.8	10.48	10.28	-2.91
7,324.0	48.95	171.48	7,124.2	-870.6	-696.8	770.7	10.00	9.65	-3.58
7,356.0	52.24	170.27	7,144.5	-895.0	-692.8	795.4	10.69	10.28	-3.78
7,388.0	54.97	169.55	7,163.5	-920.4	-688.3	821.1	8.72	8.53	-2.25
7,420.0	56.17	169.28	7,181.6	-946.3	-683.5	847.5	3.81	3.75	-0.84
7,452.0	57.78	168.49	7,199.1	-972.6	-678.3	874.2	5.44	5.03	-2.47
7,483.0	60.56	167.58	7,215.0	-998.7	-672.8	900.8	9.32	8.97	-2.94
7,515.0	63.93	166.44	7,229.9	-1,026.3	-666.4	929.0	10.99	10.53	-3.56
7,547.0	66.62	165.70	7,243.2	-1,054.5	-659.4	957.9	8.66	8.41	-2.31
7,579.0	69.02	164.71	7,255.3	-1,083.1	-651.8	987.3	8.03	7.50	-3.09

Company:	Stone Energy	**Local Co-ordinate Reference:**	Well Mills Wetzel #8H - Slot MW#8H
Project:	Heather Prospect (NAD 27)	**TVD Reference:**	Saxon 141 @ 1321.0usft (18' RKB - 1303' GL)
Site:	Mills Wetzel Pad 2	**MD Reference:**	Saxon 141 @ 1321.0usft (18' RKB - 1303' GL)
Well:	Mills Wetzel #8H	**North Reference:**	Grid
Wellbore:	Original Well	**Survey Calculation Method:**	Minimum Curvature
Design:	As Drilled	**Database:**	EDM-Chris Testa

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)
7,610.0	70.19	164.47	7,266.1	-1,111.1	-644.1	1,016.0	3.84	3.77	-0.77
7,642.0	72.03	163.75	7,276.5	-1,140.2	-635.8	1,046.0	6.13	5.75	-2.25
7,674.0	75.48	163.10	7,285.4	-1,169.7	-627.1	1,076.3	10.96	10.78	-2.03
7,706.0	77.35	162.32	7,292.9	-1,199.4	-617.8	1,107.0	6.31	5.84	-2.44
7,738.0	78.89	161.98	7,299.5	-1,229.2	-608.2	1,137.8	4.92	4.81	-1.06
7,769.0	81.57	160.79	7,304.8	-1,258.1	-598.5	1,167.8	9.44	8.65	-3.84
7,801.0	84.93	159.78	7,308.6	-1,288.0	-587.7	1,198.9	10.96	10.50	-3.16
7,833.0	85.97	159.53	7,311.1	-1,318.0	-576.7	1,230.0	3.34	3.25	-0.78
7,897.0	87.72	160.13	7,314.6	-1,377.9	-554.6	1,292.4	2.89	2.73	0.94
7,960.0	87.11	159.24	7,317.5	-1,437.0	-532.8	1,353.7	1.71	-0.97	-1.41
8,024.0	87.61	158.92	7,320.4	-1,496.7	-509.9	1,416.0	0.93	0.78	-0.50
8,087.0	88.02	159.22	7,322.8	-1,555.5	-487.5	1,477.2	0.81	0.65	0.48
8,150.0	88.72	159.89	7,324.6	-1,614.5	-465.5	1,538.6	1.54	1.11	1.06
8,214.0	89.43	159.80	7,325.6	-1,674.6	-443.4	1,601.1	1.12	1.11	-0.14
8,277.0	89.93	159.50	7,326.0	-1,733.6	-421.5	1,662.5	0.93	0.79	-0.48
8,340.0	90.03	158.42	7,326.0	-1,792.4	-398.9	1,723.8	1.72	0.16	-1.71
8,404.0	89.03	157.92	7,326.5	-1,851.8	-375.1	1,785.8	1.75	-1.56	-0.78
8,467.0	89.76	157.87	7,327.2	-1,910.2	-351.4	1,846.8	1.16	1.16	-0.08
8,531.0	89.60	157.15	7,327.6	-1,969.3	-326.9	1,908.7	1.15	-0.25	-1.13
8,595.0	88.99	156.38	7,328.3	-2,028.1	-301.6	1,970.3	1.53	-0.95	-1.20
8,658.0	89.80	156.80	7,329.0	-2,085.9	-276.6	2,030.9	1.45	1.29	0.67
8,721.0	89.33	156.57	7,329.5	-2,143.8	-251.7	2,091.6	0.83	-0.75	-0.37
8,785.0	88.29	155.98	7,330.8	-2,202.4	-225.9	2,153.0	1.87	-1.63	-0.92
8,848.0	88.89	155.87	7,332.4	-2,259.9	-200.3	2,213.4	0.97	0.95	-0.17
8,912.0	89.97	155.86	7,333.0	-2,318.3	-174.1	2,274.8	1.69	1.69	-0.02
8,975.0	89.40	156.17	7,333.3	-2,375.8	-148.5	2,335.2	1.03	-0.90	0.49
9,039.0	88.56	156.53	7,334.5	-2,434.4	-122.8	2,396.7	1.43	-1.31	0.56
9,103.0	89.33	156.62	7,335.7	-2,493.2	-97.4	2,458.3	1.21	1.20	0.14
9,166.0	89.36	157.27	7,336.4	-2,551.1	-72.7	2,519.0	1.03	0.05	1.03
9,230.0	88.19	157.14	7,337.8	-2,610.1	-47.9	2,580.8	1.84	-1.83	-0.20
9,294.0	87.68	156.79	7,340.1	-2,669.0	-22.9	2,642.4	0.97	-0.80	-0.55
9,357.0	88.39	156.93	7,342.2	-2,726.9	1.9	2,703.1	1.15	1.13	0.22
9,421.0	89.03	156.91	7,343.7	-2,785.7	26.9	2,764.8	1.00	1.00	-0.03
9,485.0	89.87	156.63	7,344.3	-2,844.5	52.2	2,826.4	1.38	1.31	-0.44
9,548.0	89.53	156.40	7,344.6	-2,902.3	77.3	2,887.0	0.65	-0.54	-0.37
9,612.0	88.66	155.60	7,345.6	-2,960.8	103.3	2,948.4	1.85	-1.36	-1.25
9,676.0	89.13	154.10	7,346.8	-3,018.7	130.5	3,009.4	2.46	0.73	-2.34
9,739.0	89.83	153.96	7,347.4	-3,075.3	158.1	3,069.2	1.13	1.11	-0.22
9,803.0	90.20	155.51	7,347.4	-3,133.2	185.4	3,130.2	2.49	0.58	2.42
9,866.0	89.50	157.26	7,347.6	-3,190.9	210.7	3,190.7	2.99	-1.11	2.78
9,930.0	89.09	157.63	7,348.4	-3,250.0	235.2	3,252.6	0.86	-0.64	0.58
9,994.0	89.73	157.56	7,349.0	-3,309.2	259.6	3,314.4	1.01	1.00	-0.11
10,057.0	90.74	157.95	7,348.8	-3,367.5	283.4	3,375.4	1.72	1.60	0.62
10,121.0	90.40	159.09	7,348.1	-3,427.1	306.9	3,437.5	1.86	-0.53	1.78

Scientific Drilling

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Survey Report

STONE ENERGY

Company:	Stone Energy	**Local Co-ordinate Reference:**	Well Mills Wetzel #8H - Slot MW#8H
Project:	Heather Prospect (NAD 27)	**TVD Reference:**	Saxon 141 @ 1321.0usft (18' RKB - 1303' GL)
Site:	Mills Wetzel Pad 2	**MD Reference:**	Saxon 141 @ 1321.0usft (18' RKB - 1303' GL)
Well:	Mills Wetzel #8H	**North Reference:**	Grid
Wellbore:	Original Well	**Survey Calculation Method:**	Minimum Curvature
Design:	As Drilled	**Database:**	EDM-Chris Testa

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)
10,184.0	90.24	159.49	7,347.8	-3,486.0	329.2	3,498.9	0.68	-0.25	0.63
10,248.0	89.76	160.39	7,347.8	-3,546.1	351.1	3,561.4	1.59	-0.75	1.41
10,312.0	88.72	160.10	7,348.6	-3,606.3	372.7	3,623.9	1.69	-1.63	-0.45
10,375.0	89.53	160.19	7,349.6	-3,665.6	394.1	3,685.5	1.29	1.29	0.14
10,438.0	90.40	159.93	7,349.6	-3,724.8	415.6	3,747.0	1.44	1.38	-0.41
10,501.0	89.73	160.28	7,349.5	-3,784.0	437.1	3,808.6	1.20	-1.06	0.56
10,565.0	88.99	160.61	7,350.3	-3,844.3	458.5	3,871.2	1.27	-1.16	0.52
10,628.0	89.76	159.12	7,350.9	-3,903.5	480.2	3,932.7	2.66	1.22	-2.37
10,692.0	89.26	159.18	7,351.5	-3,963.3	502.9	3,995.0	0.79	-0.78	0.09
10,765.0	89.26	159.18	7,352.4	-4,031.5	528.9	4,066.1	0.00	0.00	0.00

Checked By: _____ Approved By: _____ Date: _____

03/07/2014