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 4, 2013
API #: 47-103-02680

Farm name: WV Conservation Commission Operator Well No.: Mills-Wetzel #13

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

District: Grant County: Wetzel
Latitude: 7,520 Feet South of 39 Deg. 32 Min. 30 Sec.
Longitude 9,060 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"	40'	40'	GTS
Agent: Tim McGregor	13.375"	1,259'	1,259'	1,263- CTS
Inspector: Derek Haught	9.625"	2,802'	2,802'	1,066 CTS
Date Permit Issued: 7/6/2011 & 10/28/2011	5.5"		11,281'	1,133 Lead - 1,563 Tail
Date Well Work Commenced: 3/30/2012	2.375"		7,668'	
Date Well Work Completed: 3/10/2013				
Verbal Plugging:				
Date Permission granted on:				
Rotary ☑ Cable ☐ Rig ☐				
Total Vertical Depth (ft): 7,273				
Total Measured Depth (ft): 11,281				
Fresh Water Depth (ft.): None Reported				
Salt Water Depth (ft.): None Reported				
Is coal being mined in area (N/Y)? No				
Coal Depths (ft.): 1,094				
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) 7,724' to 11,209'
Gas: Initial open flow 500 MCF/d Oil: Initial open flow 0 Bbl/d
Final open flow 4,000 MCF/d Final open flow 0 Bbl/d
Time of open flow between initial and final tests 113 Hours
Static rock Pressure 2,428 psig (surface pressure) after 5 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

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 12/4/2013 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 14 intervals from 11,209' to 7,724'. Performed 14 individual stages of slick water stimulation using 5,001,355 gals fresh water, Sand - 553,430 lbs 100 Mesh and 4,233,236 lbs 40/70. AvBDP = 7,428 psi, AvTP = 7,888 psi, AvMTP = 9,152 psi, AvInjRate = 79.3 bpm, and AvISIP = 4,476 psi.

See Attachment for FracFocus information.

Plug Back Details Including Plug Type and Depth(s):

Formations Encountered: Surface: Top Depth / Bottom Depth

See attached sheet for formations encountered and their depths.

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MILLS-WETZEL #13H
API 47-103-02680
Stone Energy Corporation

	Top (ft TVD)	Horizontal Top (ft MD)		Bottom (ft TVD)	Bottom (ft MD)	
Sandstone & Shale	Surface		*	1094		FW @ None Reported
Pittsburgh Coal	1094		*	1099		
Sandstone & Shale	1099		*	2300		SW @ None Reported
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		*	6672	6741	
Rhinestreet	6672	6741	~	6923	7016	
Cashaqua	6923	7016	~	7084	7205	
Middlesex	7084	7205	~	7097	7218	
West River	7097	7218	~	7177	7336	
Geneseo	7177	7336	~	7202	7379	
Tully Limestone	7202	7379	~	7268	7536	
Hamilton	7268	7536	~	7292	7624	
Marcellus	7292	7624	~	7273	11281	
TD	7273	11281				

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

03/07/2014

Hydraulic Fracturing Fluid Product Component Information Disclosure

Fracture Date:	1/9/2013
State:	West Virginia
County/Parish:	Wetzel County
API Number:	4710302680
Operator Name:	Stone Energy
Well Name and Number:	Mills Wetzel #13H
Longitude:	-80.656992
Latitude:	39.521192
Long/Lat Projection:	NAD27
Production Type:	Gas
True Vertical Depth (TVD):	7316
Total Water Volume (gal)*:	5001355

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, SAPPHIRE VF	Schlumberger	Corrosion Inhibitor, Bactericide (Myacide GA25), Scale Inhibitor, Antifoam Agent, Surfactant , Acid, Breaker, Gelling Agent, Friction Reducer, Rheology Modifier ClearFRAC XT J589, Iron Control Agent, Clay Control Agent, Accelerator, Propping Agent, Fluid Loss Additive	Water (Including Mix Water Supplied by Client)*	-		89.55046%	
			Crystalline silica	14808-60-7	97.94996%	10.23532%	
			Hydrochloric acid	7647-01-0	0.92883%	0.09706%	
			Carbohydrate polymer	Proprietary	0.49747%	0.05198%	
			Ammonium sulfate	Proprietary	0.29096%	0.03040%	
			Erucic amidopropyl dimethyl betaine	149879-98-1	0.17964%	0.01877%	
			Calcium chloride	10043-52-4	0.16711%	0.01746%	
			Propan-2-ol	67-63-0	0.13184%	0.01378%	
			Polyethylene glycol monohexyl ether	31726-34-8	0.06558%	0.00685%	
			Glutaraldehyde	111-30-8	0.04907%	0.00513%	
			Diammonium peroxidisulphate	7727-54-0	0.02110%	0.00220%	
			Ethane-1,2-diol	107-21-1	0.00600%	0.00063%	
			Trisodium ortho phosphate	7601-54-9	0.00600%	0.00063%	
			Methanol	67-56-1	0.00472%	0.00049%	
			Sodium erythorbate	6381-77-7	0.00380%	0.00040%	
			Aliphatic alcohols, ethoxylated #2	Proprietary	0.00354%	0.00037%	
			Aliphatic acids	Proprietary	0.00354%	0.00037%	
			Prop-2-yn-1-ol	107-19-7	0.00118%	0.00012%	
			Silicane derivative	Proprietary	0.00067%	0.00007%	

* 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-11244 (Generated on 3/5/2013 11:11 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

Scientific Drilling

SDI
Survey Report

STONE ENERGY

Company:	Stone Energy	**Local Co-ordinate Reference:**	Well Mills Wetzel #13H - Slot MW#13H
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 #13H	**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 #13H - Slot MW#13H

Well Position	**+N/-S**	0.0 usft	**Northing:**	374,041.12 usft	**Latitude:**	39° 31' 16.291 N
	+E/-W	0.0 usft	**Easting:**	1,673,620.33 usft	**Longitude:**	80° 39' 25.172 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	08/03/12	-8.54	67.15	52,625

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	340.37

Survey Program **Date** 08/13/12

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
107.0	6,673.0	SDI Keeper Gyro (Original Well)	SDI Standard Keeper 103	SDI Standard Wireline Keeper ver 1.0.3
6,719.0	11,281.0	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	0.42	153.32	107.0	-0.4	0.2	-0.4	0.39	0.39	0.00
207.0	0.11	116.56	207.0	-0.7	0.4	-0.8	0.34	-0.31	-36.76
307.0	0.28	153.23	307.0	-1.0	0.6	-1.1	0.20	0.17	36.67
407.0	0.29	160.55	407.0	-1.4	0.8	-1.6	0.04	0.01	7.32
507.0	0.07	164.47	507.0	-1.7	0.9	-1.9	0.22	-0.22	3.92
607.0	0.06	50.97	607.0	-1.8	1.0	-2.0	0.11	-0.01	-113.50
707.0	0.06	14.10	707.0	-1.7	1.0	-1.9	0.04	0.00	-36.87
807.0	0.03	92.78	807.0	-1.6	1.1	-1.9	0.06	-0.03	78.68
907.0	0.10	163.42	907.0	-1.7	1.1	-2.0	0.09	0.07	70.64

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Well:	Mills Wetzel #13H	**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	0.08	327.48	1,007.0	-1.7	1.1	-2.0	0.18	-0.02	164.06
1,107.0	0.06	126.77	1,107.0	-1.7	1.1	-2.0	0.14	-0.02	159.29
1,207.0	0.17	206.71	1,207.0	-1.9	1.1	-2.1	0.17	0.11	79.94
1,307.0	0.19	190.24	1,307.0	-2.2	1.0	-2.4	0.06	0.02	-16.47
1,407.0	0.35	165.64	1,407.0	-2.6	1.0	-2.8	0.19	0.16	-24.60
1,507.0	0.27	153.19	1,507.0	-3.1	1.2	-3.4	0.10	-0.08	-12.45
1,607.0	0.35	156.58	1,607.0	-3.6	1.4	-3.9	0.08	0.08	3.39
1,707.0	0.27	158.29	1,707.0	-4.1	1.7	-4.4	0.08	-0.08	1.71
1,807.0	0.41	144.28	1,807.0	-4.6	1.9	-5.0	0.16	0.14	-14.01
1,907.0	0.67	147.92	1,907.0	-5.4	2.5	-5.9	0.26	0.26	3.64
2,007.0	1.03	149.26	2,007.0	-6.7	3.2	-7.4	0.36	0.36	1.34
2,107.0	1.08	144.55	2,107.0	-8.2	4.2	-9.2	0.10	0.05	-4.71
2,207.0	1.08	144.06	2,206.9	-9.8	5.3	-11.0	0.01	0.00	-0.49
2,307.0	1.14	151.81	2,306.9	-11.4	6.4	-12.9	0.16	0.06	7.75
2,407.0	1.65	162.32	2,406.9	-13.6	7.3	-15.3	0.57	0.51	10.51
2,507.0	2.12	162.61	2,506.8	-16.8	8.3	-18.6	0.47	0.47	0.29
2,607.0	2.12	167.19	2,606.8	-20.4	9.2	-22.3	0.17	0.00	4.58
2,707.0	2.27	167.84	2,706.7	-24.1	10.1	-26.1	0.15	0.15	0.65
2,807.0	2.07	171.84	2,806.6	-27.8	10.7	-29.8	0.25	-0.20	4.00
2,907.0	1.46	181.47	2,906.6	-30.9	11.0	-32.8	0.68	-0.61	9.63
3,007.0	0.75	255.21	3,006.6	-32.3	10.3	-33.9	1.44	-0.71	73.74
3,107.0	1.45	357.76	3,106.5	-31.2	9.6	-32.6	1.77	0.70	102.55
3,207.0	2.69	8.40	3,206.5	-27.6	9.9	-29.4	1.29	1.24	10.64
3,307.0	3.93	15.15	3,306.3	-22.0	11.1	-24.5	1.30	1.24	6.75
3,407.0	4.43	22.83	3,406.0	-15.1	13.5	-18.8	0.75	0.50	7.68
3,507.0	4.67	22.66	3,505.7	-7.8	16.6	-12.9	0.24	0.24	-0.17
3,607.0	5.55	24.20	3,605.3	0.3	20.1	-6.4	0.89	0.88	1.54
3,707.0	6.54	28.38	3,704.8	9.8	24.8	0.9	1.08	0.99	4.18
3,807.0	7.13	27.87	3,804.1	20.3	30.4	8.9	0.59	0.59	-0.51
3,907.0	5.98	25.19	3,903.4	30.5	35.6	16.7	1.19	-1.15	-2.68
4,007.0	7.09	14.38	4,002.8	41.2	39.3	25.6	1.65	1.11	-10.81
4,107.0	9.03	12.72	4,101.8	54.8	42.6	37.3	1.95	1.94	-1.66
4,207.0	11.06	14.92	4,200.2	71.7	46.8	51.8	2.07	2.03	2.20
4,307.0	12.41	16.41	4,298.1	91.3	52.3	68.4	1.38	1.35	1.49
4,407.0	12.38	18.91	4,395.8	111.7	58.8	85.5	0.54	-0.03	2.50
4,507.0	12.03	22.20	4,493.5	131.5	66.2	101.6	0.78	-0.35	3.29
4,607.0	11.72	24.36	4,591.4	150.4	74.3	116.7	0.54	-0.31	2.16
4,707.0	11.58	26.95	4,689.3	168.6	83.1	130.9	0.54	-0.14	2.59
4,807.0	12.40	29.62	4,787.2	186.9	92.9	144.8	0.99	0.82	2.67
4,907.0	13.35	27.09	4,884.7	206.5	103.5	159.8	1.10	0.95	-2.53
5,007.0	13.13	26.15	4,982.0	227.0	113.7	175.6	0.31	-0.22	-0.94
5,107.0	13.19	25.43	5,079.4	247.5	123.7	191.6	0.17	0.06	-0.72
5,207.0	13.57	26.18	5,176.7	268.3	133.7	207.8	0.42	0.38	0.75

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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	12.71	26.29	5,274.0	288.7	143.8	223.6	0.86	-0.86	0.11
5,407.0	12.01	24.43	5,371.7	308.1	153.0	238.8	0.81	-0.70	-1.86
5,507.0	12.30	24.36	5,469.5	327.2	161.6	253.9	0.29	0.29	-0.07
5,607.0	12.72	24.95	5,567.1	346.9	170.7	269.4	0.44	0.42	0.59
5,707.0	12.26	24.61	5,664.7	366.6	179.8	284.9	0.47	-0.46	-0.34
5,807.0	13.02	25.09	5,762.3	386.4	188.9	300.5	0.77	0.76	0.48
5,907.0	13.50	25.70	5,859.6	407.1	198.8	316.7	0.50	0.48	0.61
6,007.0	12.44	26.01	5,957.1	427.3	208.6	332.4	1.06	-1.06	0.31
6,107.0	11.44	28.46	6,054.9	445.7	218.0	346.6	1.12	-1.00	2.45
6,207.0	12.00	28.89	6,152.8	463.5	227.8	360.1	0.57	0.56	0.43
6,307.0	12.86	29.74	6,250.5	482.3	238.3	374.2	0.88	0.86	0.85
6,407.0	13.32	29.57	6,347.9	502.0	249.5	389.0	0.46	0.46	-0.17
6,507.0	12.56	27.40	6,445.4	521.7	260.2	403.9	0.90	-0.76	-2.17
6,607.0	13.33	27.25	6,542.8	541.6	270.5	419.2	0.77	0.77	-0.15
6,673.0	13.80	27.24	6,607.0	555.3	277.6	429.8	0.71	0.71	-0.02
6,719.0	16.80	20.52	6,651.3	566.4	282.4	438.6	7.57	6.52	-14.62
6,750.0	18.86	16.97	6,680.9	575.4	285.5	446.1	7.51	6.65	-11.45
6,782.0	21.09	14.76	6,710.9	585.9	288.4	455.0	7.36	6.97	-6.91
6,814.0	22.31	13.09	6,740.7	597.4	291.3	464.9	4.27	3.81	-5.22
6,846.0	24.27	10.56	6,770.1	609.8	293.9	475.6	6.88	6.13	-7.91
6,877.0	25.02	6.82	6,798.2	622.6	295.8	487.0	5.58	2.42	-12.06
6,909.0	26.14	1.50	6,827.1	636.4	296.8	499.7	7.98	3.50	-16.63
6,941.0	27.21	356.17	6,855.7	650.7	296.5	513.3	8.19	3.34	-16.66
6,972.0	28.21	354.07	6,883.1	665.1	295.3	527.2	4.51	3.23	-6.77
7,004.0	28.04	351.14	6,911.4	680.0	293.3	542.0	4.35	-0.53	-9.16
7,036.0	27.49	347.39	6,939.7	694.7	290.5	556.7	5.72	-1.72	-11.72
7,068.0	28.20	343.66	6,968.0	709.1	286.8	571.6	5.88	2.22	-11.66
7,099.0	29.72	339.83	6,995.1	723.4	282.1	586.6	7.73	4.90	-12.35
7,131.0	31.05	337.38	7,022.7	738.4	276.2	602.7	5.68	4.16	-7.66
7,163.0	32.53	336.07	7,049.9	753.9	269.5	619.6	5.10	4.63	-4.09
7,195.0	34.83	336.28	7,076.5	770.1	262.4	637.2	7.20	7.19	0.66
7,227.0	38.47	337.23	7,102.2	787.7	254.8	656.3	11.51	11.38	2.97
7,259.0	43.15	338.18	7,126.4	807.0	246.9	677.2	14.75	14.63	2.97
7,290.0	47.62	338.78	7,148.2	827.6	238.8	699.2	14.48	14.42	1.94
7,322.0	52.42	338.98	7,168.7	850.4	230.0	723.7	15.01	15.00	0.63
7,354.0	55.68	338.47	7,187.5	874.6	220.6	749.6	10.27	10.19	-1.59
7,385.0	58.00	337.93	7,204.5	898.7	210.9	775.6	7.62	7.48	-1.74
7,417.0	61.62	336.65	7,220.6	924.2	200.3	803.2	11.83	11.31	-4.00
7,449.0	64.27	335.88	7,235.1	950.3	188.8	831.6	8.55	8.28	-2.41
7,481.0	67.70	335.25	7,248.1	976.9	176.7	860.7	10.87	10.72	-1.97
7,512.0	69.59	335.74	7,259.4	1,003.1	164.7	889.5	6.27	6.10	1.58
7,544.0	71.40	335.37	7,270.1	1,030.6	152.2	919.5	5.76	5.66	-1.16
7,576.0	73.22	335.08	7,279.8	1,058.3	139.5	949.9	5.75	5.69	-0.91

03/07/2014

Company:	Stone Energy	**Local Co-ordinate Reference:**	Well Mills Wetzel #13H - Slot MW#13H
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 #13H	**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)
7,608.0	75.18	334.91	7,288.5	1,086.2	126.4	980.6	6.15	6.13	-0.53
7,640.0	76.77	334.92	7,296.3	1,114.3	113.3	1,011.5	4.97	4.97	0.03
7,671.0	79.58	333.56	7,302.7	1,141.6	100.1	1,041.6	10.03	9.06	-4.39
7,702.0	81.82	332.71	7,307.7	1,168.9	86.3	1,072.0	7.72	7.23	-2.74
7,734.0	83.98	332.25	7,311.6	1,197.1	71.6	1,103.4	6.90	6.75	-1.44
7,766.0	86.51	331.70	7,314.3	1,225.2	56.6	1,135.0	8.09	7.91	-1.72
7,798.0	87.95	331.46	7,315.8	1,253.3	41.4	1,166.6	4.56	4.50	-0.75
7,830.0	90.13	331.34	7,316.4	1,281.4	26.1	1,198.2	6.82	6.81	-0.38
7,893.0	92.82	330.69	7,314.7	1,336.5	-4.4	1,260.3	4.39	4.27	-1.03
7,957.0	93.36	331.35	7,311.3	1,392.4	-35.4	1,323.4	1.33	0.84	1.03
8,020.0	91.81	332.71	7,308.4	1,448.0	-64.9	1,385.6	3.27	-2.46	2.16
8,083.0	90.50	333.59	7,307.2	1,504.2	-93.3	1,448.1	2.50	-2.08	1.40
8,147.0	89.30	332.84	7,307.3	1,561.3	-122.2	1,511.6	2.21	-1.88	-1.17
8,211.0	89.06	332.41	7,308.2	1,618.1	-151.6	1,575.0	0.77	-0.38	-0.67
8,275.0	89.56	333.01	7,309.0	1,675.0	-181.0	1,638.4	1.22	0.78	0.94
8,338.0	90.24	333.19	7,309.1	1,731.2	-209.5	1,700.9	1.12	1.08	0.29
8,402.0	90.84	332.35	7,308.5	1,788.1	-238.7	1,764.4	1.61	0.94	-1.31
8,465.0	91.21	332.43	7,307.4	1,843.9	-267.9	1,826.8	0.60	0.59	0.13
8,529.0	91.21	332.34	7,306.0	1,900.6	-297.6	1,890.1	0.14	0.00	-0.14
8,592.0	91.24	332.24	7,304.7	1,956.4	-326.9	1,952.5	0.17	0.05	-0.16
8,656.0	90.84	332.36	7,303.5	2,013.0	-356.6	2,015.8	0.65	-0.63	0.19
8,720.0	91.24	332.10	7,302.3	2,069.6	-386.4	2,079.2	0.75	0.63	-0.41
8,784.0	91.18	332.77	7,301.0	2,126.4	-416.0	2,142.6	1.05	-0.09	1.05
8,847.0	91.48	331.71	7,299.5	2,182.1	-445.4	2,204.9	1.75	0.48	-1.68
8,911.0	90.74	332.62	7,298.3	2,238.7	-475.3	2,268.2	1.83	-1.16	1.42
8,973.0	91.21	332.54	7,297.2	2,293.7	-503.8	2,329.7	0.77	0.76	-0.13
9,037.0	91.21	332.12	7,295.9	2,350.4	-533.5	2,393.0	0.66	0.00	-0.66
9,101.0	90.20	333.59	7,295.1	2,407.3	-562.7	2,456.5	2.79	-1.58	2.30
9,164.0	90.03	332.72	7,295.0	2,463.5	-591.2	2,519.0	1.41	-0.27	-1.38
9,227.0	89.63	333.07	7,295.1	2,519.6	-619.9	2,581.4	0.84	-0.63	0.56
9,291.0	90.30	333.43	7,295.2	2,576.8	-648.7	2,644.9	1.19	1.05	0.56
9,355.0	91.14	332.86	7,294.4	2,633.9	-677.6	2,708.4	1.59	1.31	-0.89
9,418.0	90.97	333.27	7,293.2	2,690.0	-706.1	2,770.9	0.70	-0.27	0.65
9,482.0	90.47	332.66	7,292.4	2,747.0	-735.2	2,834.3	1.23	-0.78	-0.95
9,546.0	90.44	332.95	7,291.9	2,803.9	-764.5	2,897.8	0.46	-0.05	0.45
9,609.0	89.56	333.16	7,291.9	2,860.1	-793.0	2,960.3	1.44	-1.40	0.33
9,673.0	90.37	332.95	7,291.9	2,917.1	-822.0	3,023.8	1.31	1.27	-0.33
9,737.0	90.64	333.24	7,291.4	2,974.2	-851.0	3,087.2	0.62	0.42	0.45
9,800.0	89.87	334.05	7,291.1	3,030.7	-878.9	3,149.8	1.77	-1.22	1.29
9,864.0	90.47	334.24	7,290.9	3,088.3	-906.8	3,213.4	0.98	0.94	0.30
9,927.0	90.94	334.14	7,290.1	3,145.0	-934.3	3,276.1	0.76	0.75	-0.16
9,991.0	90.13	334.68	7,289.5	3,202.7	-961.9	3,339.7	1.52	-1.27	0.84
10,055.0	90.57	333.99	7,289.1	3,260.4	-989.6	3,403.3	1.28	0.69	-1.08
10,119.0	89.87	334.48	7,288.9	3,318.0	-1,017.4	3,467.0	1.34	-1.09	0.77

03/07/2014

Scientific Drilling

SDI
Survey Report

STONE ENERGY

Company:	Stone Energy	**Local Co-ordinate Reference:**	Well Mills Wetzel #13H - Slot MW#13H
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 #13H	**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)
10,182.0	90.87	333.85	7,288.5	3,374.7	-1,044.9	3,529.6	1.88	1.59	-1.00
10,246.0	91.31	334.41	7,287.3	3,432.3	-1,072.8	3,593.2	1.11	0.69	0.88
10,309.0	90.13	334.31	7,286.5	3,489.1	-1,100.1	3,655.9	1.88	-1.87	-0.16
10,373.0	90.97	333.79	7,285.9	3,546.6	-1,128.1	3,719.5	1.54	1.31	-0.81
10,436.0	91.41	333.28	7,284.6	3,603.0	-1,156.2	3,782.0	1.07	0.70	-0.81
10,499.0	90.20	332.99	7,283.7	3,659.2	-1,184.6	3,844.5	1.98	-1.92	-0.46
10,563.0	91.65	333.80	7,282.6	3,716.4	-1,213.3	3,908.0	2.60	2.27	1.27
10,626.0	91.44	332.39	7,280.9	3,772.6	-1,241.8	3,970.5	2.26	-0.33	-2.24
10,689.0	90.03	332.05	7,280.1	3,828.3	-1,271.1	4,032.8	2.30	-2.24	-0.54
10,753.0	89.77	332.21	7,280.2	3,884.9	-1,301.0	4,096.2	0.48	-0.41	0.25
10,816.0	90.47	332.32	7,280.1	3,940.6	-1,330.4	4,158.6	1.12	1.11	0.17
10,880.0	90.91	333.31	7,279.3	3,997.6	-1,359.6	4,222.0	1.69	0.69	1.55
10,943.0	90.00	333.18	7,278.8	4,053.8	-1,388.0	4,284.5	1.46	-1.44	-0.21
11,006.0	90.81	333.34	7,278.4	4,110.1	-1,416.3	4,347.0	1.31	1.29	0.25
11,070.0	91.27	333.81	7,277.2	4,167.4	-1,444.8	4,410.6	1.03	0.72	0.73
11,134.0	90.47	334.66	7,276.3	4,225.0	-1,472.6	4,474.2	1.82	-1.25	1.33
11,197.0	91.41	334.53	7,275.2	4,281.9	-1,499.6	4,536.8	1.51	1.49	-0.21
11,218.0	91.91	334.99	7,274.6	4,300.9	-1,508.6	4,557.7	3.23	2.38	2.19
11,281.0	91.91	334.99	7,272.5	4,358.0	-1,535.2	4,620.4	0.00	0.00	0.00

Checked By: _____ Approved By: _____ Date: _____

03/07/2014