

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 #: 47-103-02707

Farm name: WV Conservation Commission Operator Well No.: Mills-Wetzel #11

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

District: Grant County: Wetzel
Latitude: 7,550 Feet South of 39 Deg. 32 Min. 30 Sec.
Longitude 9,090 Feet West of 80 Deg. 37 Min. 30 Sec.

Company: Stone Energy Corporation

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
<u>6000 Hampton Center, Suite B Morgantown, WV 26505</u>	<u>20"</u>	<u>48'</u>	<u>48'</u>	<u>GTS</u>
Agent: <u>Tim McGregor</u>	<u>13.375"</u>	<u>1,294'</u>	<u>1,294'</u>	<u>1,227 - CTS</u>
Inspector: <u>Derek Haught</u>	<u>9.625"</u>	<u>2,761'</u>	<u>2,761'</u>	<u>804 Lead - 456 Tail CTS</u>
Date Permit Issued: <u>11/15/2011</u>	<u>5.5"</u>		<u>10,858'</u>	<u>1,222 Lead - 1,409 Tail</u>
Date Well Work Commenced: <u>5/23/2012</u>	<u>2.375"</u>		<u>7,614'</u>	
Date Well Work Completed: <u>12/19/2012</u>				
Verbal Plugging:				
Date Permission granted on:				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): <u>7,283</u>				
Total Measured Depth (ft): <u>10,858</u>				
Fresh Water Depth (ft.): <u>50</u>				
Salt Water Depth (ft.): <u>1,880</u>				
Is coal being mined in area (N/Y)? <u>No</u>				
Coal Depths (ft.): <u>None Reported</u>				
Void(s) encountered (N/Y) Depth(s) <u>N/A</u>				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft) 7,660' to 10,770'

Gas: Initial open flow 220 MCF/d Oil: Initial open flow 0 Bbl/d

Final open flow 3,240 MCF/d Final open flow 0 Bbl/d

Time of open flow between initial and final tests 110 Hours

Static rock Pressure 1,735 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

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 12 intervals from 10,770' to 7,660'. Performed 12 individual stages of slick water stimulation using 4,198,413 gals fresh water, Sand - 479,658 lbs 100 Mesh and 4,147,545 lbs 40/70. AvBDP = 6,305 psi, AvTP = 7,456 psi, AvMTP = 8,869 psi, AvInjRate = 81.9 bpm, and AvISIP = 4,223 psi.

See Attachment for FracFocus information.

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

Formations Encountered:	Top Depth	/	Bottom Depth
Surface:			

See attached sheet for formations encountered and their depths.

MILLS-WETZEL #11H

API 47-103-02707

Stone Energy Corporation

	Top	Horizontal		Bottom (ft	Bottom (ft	
	(ft TVD)	Top (ft MD)	(ft MD)	TVD)	MD)	
Sandstone & Shale	Surface		*	2300		FW @ 50'
Little Lime	2300		*	2330		SW @ 1880'
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		*	6671	6714	
Rhinstreet	6670	6679	~	6904	6958	
Cashaqua	6903	6933	~	7078	7161	
Middlesex	7079	7157	~	7092	7180	
West River	7094	7177	~	7167	7285	
Geneseo	7169	7298	~	7204	7350	
Tully Limestone	7194	7342	~	7271	7500	
Hamilton	7259	7480	~	7294	7580	
Marcellus	7282	7547	~	7283	10858	
TD	7283	10858				

* 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:	4710302707
Operator Name:	Stone Energy
Well Name and Number:	Mills Wetzel #11H
Longitude:	-80.657067
Latitude:	39.521099
Long/Lat Projection:	NAD27
Production Type:	Gas
True Vertical Depth (TVD):	7305
Total Water Volume (gal)*:	4,198,413

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, Sapphire VF	Schlumberger	Corrosion Inhibitor, Bactericide, Scale Inhibitor, Surfactant, Acid, Friction Reducer, Iron Control Agent, Clay Control Agent, Accelerator, Rheology Modifier ClearFRAC XT J589, Gelling Agent, Fluid Loss Additive	Water (Including Mix Water Supplied by Client)*	-		88.15922%	
			Crystalline silica	14808-60-7	98.44496%	11.65665%	
			Hydrochloric acid	7647-01-0	0.77532%	0.09180%	
			Erucic amidopropyl dimethyl betaine	149879-98-1	0.59673%	0.07066%	
			Propan-2-ol	67-63-0	0.41722%	0.04940%	
			Ammonium sulfate	Proprietary	0.23433%	0.02775%	
			Polyethylene glycol monohexyl ether	31726-34-8	0.05147%	0.00609%	
			Glutaraldehyde	111-30-8	0.04693%	0.00556%	
			Calcium chloride	10043-52-4	0.02985%	0.00353%	
			Methanol	67-56-1	0.00349%	0.00041%	
			Trisodium ortho phosphate	7601-54-9	0.00331%	0.00039%	
			Ethane-1,2-diol	107-21-1	0.00331%	0.00039%	
			Sodium erythorbate	6381-77-7	0.00278%	0.00033%	
			Aliphatic alcohols, ethoxylated #2	Proprietary	0.00262%	0.00031%	
			Aliphatic acids	Proprietary	0.00262%	0.00031%	
			Prop-2-yn-1-ol	107-19-7	0.00087%	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-9114 (Generated on 12/11/2012 10:52 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 #11H - Slot MW#11H
Project:	Heather Prospect (NAD 27)	TVD Reference:	18' RKB - 1303' GL @ 1321.0usft (Saxon 141)
Site:	Mills Wetzel Pad 2	MD Reference:	18' RKB - 1303' GL @ 1321.0usft (Saxon 141)
Well:	Mills Wetzel #11H	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 #11H - Slot MW#11H					
Well Position	+N/-S	0.0 usft	Northing:	374,007.38 usft	Latitude:	39° 31' 15.955 N
	+E/-W	0.0 usft	Easting:	1,673,598.84 usft	Longitude:	80° 39' 25.440 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	08/24/12	-8.54	67.15	52,617

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	331.24	

Survey Program	Date	09/02/12			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
108.0	6,492.3	SDI Keeper Gyro (Original Well)	SDI Standard Keeper 103	SDI Standard Wireline Keeper ver 1.0.3	
6,532.0	10,858.0	SDI MWD (Original Well)	MWD SDI	MWD - Standard ver 1.0.1	

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
108.0	0.21	61.67	108.0	0.1	0.2	0.0	0.19	0.19	0.00
208.0	0.12	39.13	208.0	0.3	0.4	0.0	0.11	-0.09	-22.54
308.0	0.18	44.86	308.0	0.5	0.6	0.1	0.06	0.06	5.73
408.0	0.10	341.44	408.0	0.6	0.7	0.3	0.16	-0.08	-63.42
508.0	0.08	14.73	508.0	0.8	0.7	0.4	0.06	-0.02	33.29
608.0	0.13	47.32	608.0	0.9	0.8	0.5	0.08	0.05	32.59
708.0	0.10	328.08	708.0	1.1	0.8	0.6	0.15	-0.03	-79.24
808.0	0.01	320.05	808.0	1.2	0.7	0.7	0.09	-0.09	-8.03
908.0	0.06	182.88	908.0	1.1	0.7	0.6	0.07	0.05	-137.17

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Site:	Mills Wetzel Pad 2	MD Reference:	18' RKB - 1303' GL @ 1321.0usft (Saxon 141)
Well:	Mills Wetzel #11H	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)
1,008.0	0.11	239.04	1,008.0	1.0	0.6	0.6	0.09	0.05	56.16
1,108.0	0.03	220.77	1,108.0	1.0	0.5	0.6	0.08	-0.08	-18.27
1,208.0	0.05	277.56	1,208.0	0.9	0.5	0.6	0.04	0.02	56.79
1,308.0	0.10	229.55	1,308.0	0.9	0.4	0.6	0.08	0.05	-48.01
1,408.0	0.09	226.38	1,408.0	0.8	0.3	0.6	0.01	-0.01	-3.17
1,508.0	0.32	302.31	1,508.0	0.9	0.0	0.8	0.31	0.23	75.93
1,608.0	0.31	326.60	1,608.0	1.3	-0.4	1.3	0.13	-0.01	24.29
1,708.0	0.19	332.87	1,708.0	1.6	-0.7	1.7	0.12	-0.12	6.27
1,808.0	0.12	342.20	1,808.0	1.9	-0.8	2.0	0.07	-0.07	9.33
1,908.0	0.17	326.55	1,908.0	2.1	-0.9	2.3	0.06	0.05	-15.65
2,008.0	0.08	242.65	2,008.0	2.2	-1.0	2.4	0.18	-0.09	-83.90
2,108.0	0.15	279.40	2,108.0	2.2	-1.2	2.5	0.10	0.07	36.75
2,208.0	0.14	294.94	2,208.0	2.3	-1.4	2.7	0.04	-0.01	15.54
2,308.0	0.30	278.97	2,308.0	2.3	-1.8	2.9	0.17	0.16	-15.97
2,408.0	0.39	283.91	2,408.0	2.5	-2.4	3.3	0.09	0.09	4.94
2,508.0	0.27	283.70	2,508.0	2.6	-3.0	3.7	0.12	-0.12	-0.21
2,608.0	0.22	293.96	2,608.0	2.7	-3.4	4.0	0.07	-0.05	10.26
2,708.0	0.24	295.72	2,708.0	2.9	-3.7	4.3	0.02	0.02	1.76
2,808.0	0.29	269.18	2,808.0	3.0	-4.2	4.6	0.13	0.05	-26.54
2,908.0	0.49	293.76	2,908.0	3.2	-4.8	5.1	0.26	0.20	24.58
3,008.0	1.33	281.56	3,008.0	3.6	-6.3	6.2	0.86	0.84	-12.20
3,108.0	2.67	271.99	3,107.9	3.9	-9.8	8.1	1.38	1.34	-9.57
3,208.0	3.24	275.59	3,207.8	4.2	-15.0	10.9	0.60	0.57	3.60
3,308.0	4.14	283.77	3,307.6	5.4	-21.3	14.9	1.04	0.90	8.18
3,408.0	5.03	276.26	3,407.2	6.7	-29.1	19.9	1.07	0.89	-7.51
3,508.0	5.48	277.11	3,506.8	7.8	-38.2	25.2	0.46	0.45	0.85
3,608.0	5.79	283.81	3,606.3	9.6	-47.9	31.4	0.73	0.31	6.70
3,708.0	5.92	282.62	3,705.8	11.9	-57.8	38.2	0.18	0.13	-1.19
3,808.0	6.30	278.46	3,805.3	13.8	-68.3	45.0	0.58	0.38	-4.16
3,908.0	6.46	279.26	3,904.6	15.5	-79.2	51.8	0.18	0.16	0.80
4,008.0	6.52	280.35	4,004.0	17.5	-90.4	58.8	0.14	0.06	1.09
4,108.0	6.26	280.49	4,103.4	19.5	-101.3	65.8	0.26	-0.26	0.14
4,208.0	5.38	276.66	4,202.9	21.0	-111.3	72.0	0.96	-0.88	-3.83
4,308.0	5.04	276.42	4,302.4	22.1	-120.4	77.2	0.34	-0.34	-0.24
4,408.0	5.10	270.94	4,402.1	22.6	-129.2	82.0	0.49	0.06	-5.48
4,508.0	4.71	267.49	4,501.7	22.5	-137.7	86.0	0.49	-0.39	-3.45
4,608.0	3.67	255.17	4,601.4	21.5	-144.9	88.6	1.37	-1.04	-12.32
4,708.0	2.92	252.78	4,701.3	19.9	-150.4	89.9	0.76	-0.75	-2.39
4,808.0	1.71	241.89	4,801.2	18.5	-154.2	90.4	1.28	-1.21	-10.89
4,908.0	0.42	203.36	4,901.2	17.4	-155.6	90.2	1.41	-1.29	-38.53
5,008.0	0.68	24.63	5,001.2	17.7	-155.5	90.3	1.10	0.26	-178.73
5,108.0	0.80	10.05	5,101.1	18.9	-155.2	91.2	0.22	0.12	-14.58
5,208.0	0.67	29.56	5,201.1	20.1	-154.8	92.1	0.28	-0.13	19.51

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Well:	Mills Wetzel #11H	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)	
5,308.0	0.72	73.07	5,301.1	20.8	-153.9	92.2	0.52	0.05	43.51	
5,408.0	0.67	87.08	5,401.1	21.0	-152.7	91.9	0.18	-0.05	14.01	
5,508.0	0.58	82.18	5,501.1	21.1	-151.6	91.4	0.10	-0.09	-4.90	
5,608.0	0.29	109.77	5,601.1	21.1	-150.9	91.0	0.35	-0.29	27.59	
5,708.0	0.34	257.87	5,701.1	20.9	-150.9	90.9	0.61	0.05	148.10	
5,808.0	0.49	245.82	5,801.1	20.7	-151.6	91.1	0.17	0.15	-12.05	
5,908.0	0.31	216.21	5,901.1	20.3	-152.1	91.0	0.27	-0.18	-29.61	
6,008.0	0.22	245.69	6,001.1	20.0	-152.5	90.9	0.16	-0.09	29.48	
6,108.0	0.34	197.15	6,101.1	19.6	-152.7	90.7	0.25	0.12	-48.54	
6,208.0	0.26	184.24	6,201.1	19.1	-152.9	90.3	0.10	-0.08	-12.91	
6,308.0	0.39	184.37	6,301.1	18.5	-152.9	89.8	0.13	0.13	0.13	
6,408.0	0.43	147.43	6,401.1	17.9	-152.7	89.2	0.26	0.04	-36.94	
6,492.3	0.69	102.20	6,485.4	17.5	-152.1	88.5	0.58	0.31	-53.65	
6,532.0	3.60	343.39	6,525.1	18.7	-152.2	89.6	10.02	7.33	-299.34	
6,564.0	6.64	340.99	6,556.9	21.4	-153.1	92.4	9.52	9.50	-7.50	
6,595.0	8.86	343.47	6,587.7	25.4	-154.3	96.5	7.24	7.16	8.00	
6,627.0	10.92	342.49	6,619.2	30.6	-155.9	101.9	6.46	6.44	-3.06	
6,659.0	13.47	340.79	6,650.5	37.0	-158.1	108.5	8.05	7.97	-5.31	
6,691.0	16.10	338.88	6,681.4	44.7	-160.9	116.6	8.36	8.22	-5.97	
6,723.0	18.13	337.60	6,712.0	53.4	-164.4	125.9	6.45	6.34	-4.00	
6,754.0	19.71	337.14	6,741.3	62.7	-168.3	135.9	5.12	5.10	-1.48	
6,786.0	21.00	341.24	6,771.3	73.1	-172.2	146.9	6.01	4.03	12.81	
6,818.0	23.51	342.75	6,800.9	84.6	-175.9	158.8	8.04	7.84	4.72	
6,850.0	26.19	342.32	6,829.9	97.5	-180.0	172.0	8.39	8.38	-1.34	
6,882.0	28.33	341.19	6,858.4	111.4	-184.6	186.4	6.88	6.69	-3.53	
6,913.0	29.54	340.43	6,885.5	125.5	-189.5	201.2	4.08	3.90	-2.45	
6,945.0	31.15	339.68	6,913.1	140.7	-195.0	217.2	5.17	5.03	-2.34	
6,976.0	33.86	338.99	6,939.3	156.3	-200.9	233.7	8.82	8.74	-2.23	
7,008.0	36.50	337.29	6,965.4	173.4	-207.8	252.0	8.80	8.25	-5.31	
7,040.0	38.39	336.11	6,990.8	191.3	-215.5	271.4	6.32	5.91	-3.69	
7,072.0	39.89	334.51	7,015.7	209.6	-223.9	291.5	5.65	4.69	-5.00	
7,103.0	41.34	333.23	7,039.2	227.7	-232.8	311.7	5.39	4.68	-4.13	
7,135.0	43.00	331.78	7,062.9	246.8	-242.7	333.1	6.01	5.19	-4.53	
7,167.0	45.15	332.02	7,085.9	266.4	-253.2	355.4	6.74	6.72	0.75	
7,199.0	47.96	332.06	7,107.9	287.0	-264.1	378.6	8.78	8.78	0.13	
7,231.0	50.47	332.33	7,128.8	308.4	-275.4	402.9	7.87	7.84	0.84	
7,263.0	52.17	332.95	7,148.8	330.6	-286.9	427.8	5.52	5.31	1.94	
7,294.0	54.35	333.83	7,167.3	352.8	-298.0	452.6	7.39	7.03	2.84	
7,326.0	56.63	334.56	7,185.5	376.5	-309.5	479.0	7.37	7.13	2.28	
7,358.0	58.81	334.93	7,202.6	401.0	-321.0	506.0	6.88	6.81	1.16	
7,390.0	60.12	333.70	7,218.8	425.8	-333.0	533.5	5.26	4.09	-3.84	
7,422.0	62.31	335.31	7,234.2	451.1	-345.0	561.5	8.14	6.84	5.03	
7,454.0	65.05	334.93	7,248.4	477.2	-357.1	590.1	8.63	8.56	-1.19	

Company:	Stone Energy	Local Co-ordinate Reference:	Well Mills Wetzel #11H - Slot MW#11H
Project:	Heather Prospect (NAD 27)	TVD Reference:	18' RKB - 1303' GL @ 1321.0usft (Saxon 141)
Site:	Mills Wetzel Pad 2	MD Reference:	18' RKB - 1303' GL @ 1321.0usft (Saxon 141)
Well:	Mills Wetzel #11H	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)	
7,485.0	66.98	335.15	7,261.0	502.8	-369.1	618.4	6.26	6.23	0.71	
7,517.0	70.11	335.56	7,272.7	529.9	-381.5	648.1	9.85	9.78	1.28	
7,549.0	74.35	335.18	7,282.5	557.6	-394.2	678.5	13.30	13.25	-1.19	
7,581.0	76.02	335.95	7,290.7	585.8	-407.0	709.3	5.71	5.22	2.41	
7,613.0	80.74	334.75	7,297.1	614.2	-420.0	740.6	15.20	14.75	-3.75	
7,645.0	83.52	334.43	7,301.5	642.9	-433.6	772.2	8.74	8.69	-1.00	
7,676.0	86.61	334.86	7,304.2	670.8	-446.9	803.0	10.06	9.97	1.39	
7,708.0	89.93	334.92	7,305.1	699.7	-460.4	834.9	10.38	10.38	0.19	
7,772.0	91.04	334.22	7,304.6	757.5	-487.9	898.8	2.05	1.73	-1.09	
7,836.0	91.17	334.05	7,303.3	815.1	-515.8	962.7	0.33	0.20	-0.27	
7,899.0	90.03	333.07	7,302.7	871.5	-543.9	1,025.7	2.39	-1.81	-1.56	
7,962.0	89.60	333.21	7,302.9	927.7	-572.3	1,088.7	0.72	-0.68	0.22	
8,026.0	89.60	332.95	7,303.3	984.8	-601.3	1,152.6	0.41	0.00	-0.41	
8,090.0	89.97	332.83	7,303.6	1,041.7	-630.5	1,216.6	0.61	0.58	-0.19	
8,153.0	90.74	333.06	7,303.2	1,097.8	-659.1	1,279.6	1.28	1.22	0.37	
8,217.0	91.01	333.88	7,302.2	1,155.1	-687.7	1,343.5	1.35	0.42	1.28	
8,280.0	91.01	334.08	7,301.1	1,211.7	-715.4	1,406.4	0.32	0.00	0.32	
8,344.0	90.87	333.13	7,300.0	1,269.0	-743.8	1,470.4	1.50	-0.22	-1.48	
8,407.0	90.44	332.60	7,299.3	1,325.1	-772.5	1,533.3	1.08	-0.68	-0.84	
8,471.0	90.54	332.54	7,298.8	1,381.9	-802.0	1,597.3	0.18	0.16	-0.09	
8,534.0	90.30	332.11	7,298.3	1,437.7	-831.3	1,660.3	0.78	-0.38	-0.68	
8,598.0	90.24	331.35	7,298.0	1,494.0	-861.6	1,724.3	1.19	-0.09	-1.19	
8,661.0	90.54	330.97	7,297.6	1,549.2	-892.0	1,787.3	0.77	0.48	-0.60	
8,725.0	90.97	331.02	7,296.7	1,605.2	-923.0	1,851.3	0.68	0.67	0.08	
8,788.0	90.07	330.74	7,296.2	1,660.2	-953.7	1,914.3	1.50	-1.43	-0.44	
8,852.0	89.70	331.51	7,296.3	1,716.3	-984.6	1,978.3	1.33	-0.58	1.20	
8,916.0	89.97	330.94	7,296.5	1,772.4	-1,015.4	2,042.3	0.99	0.42	-0.89	
8,980.0	90.27	330.90	7,296.3	1,828.3	-1,046.5	2,106.3	0.47	0.47	-0.06	
9,043.0	90.47	331.15	7,295.9	1,883.4	-1,077.0	2,169.3	0.51	0.32	0.40	
9,107.0	91.07	331.48	7,295.1	1,939.6	-1,107.7	2,233.3	1.07	0.94	0.52	
9,170.0	90.23	331.37	7,294.4	1,994.9	-1,137.8	2,296.3	1.34	-1.33	-0.17	
9,234.0	90.07	330.74	7,294.2	2,050.9	-1,168.8	2,360.3	1.02	-0.25	-0.98	
9,298.0	90.24	331.43	7,294.0	2,106.9	-1,199.8	2,424.3	1.11	0.27	1.08	
9,361.0	90.34	331.62	7,293.7	2,162.3	-1,229.8	2,487.3	0.34	0.16	0.30	
9,425.0	90.81	332.44	7,293.1	2,218.8	-1,259.8	2,551.2	1.48	0.73	1.28	
9,488.0	91.14	332.88	7,292.0	2,274.8	-1,288.7	2,614.2	0.87	0.52	0.70	
9,551.0	91.14	332.56	7,290.7	2,330.7	-1,317.6	2,677.2	0.51	0.00	-0.51	
9,615.0	90.00	332.70	7,290.1	2,387.6	-1,347.0	2,741.2	1.79	-1.78	0.22	
9,679.0	89.43	332.37	7,290.4	2,444.4	-1,376.6	2,805.1	1.03	-0.89	-0.52	
9,742.0	89.80	333.10	7,290.8	2,500.4	-1,405.4	2,868.1	1.30	0.59	1.16	
9,805.0	90.44	333.34	7,290.7	2,556.6	-1,433.8	2,931.1	1.08	1.02	0.38	
9,869.0	91.14	334.01	7,289.8	2,614.0	-1,462.2	2,995.0	1.51	1.09	1.05	
9,932.0	90.67	333.51	7,288.8	2,670.5	-1,490.0	3,058.0	1.09	-0.75	-0.79	
9,996.0	90.34	333.63	7,288.3	2,727.8	-1,518.5	3,121.9	0.55	-0.52	0.19	

Company:	Stone Energy	Local Co-ordinate Reference:	Well Mills Wetzel #11H - Slot MW#11H
Project:	Heather Prospect (NAD 27)	TVD Reference:	18' RKB - 1303' GL @ 1321.0usft (Saxon 141)
Site:	Mills Wetzel Pad 2	MD Reference:	18' RKB - 1303' GL @ 1321.0usft (Saxon 141)
Well:	Mills Wetzel #11H	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)
10,059.0	90.87	332.49	7,287.6	2,783.9	-1,547.1	3,184.9	2.00	0.84	-1.81
10,123.0	89.80	332.33	7,287.2	2,840.6	-1,576.7	3,248.8	1.69	-1.67	-0.25
10,187.0	89.50	332.72	7,287.6	2,897.4	-1,606.2	3,312.8	0.77	-0.47	0.61
10,250.0	89.70	332.95	7,288.1	2,953.5	-1,635.0	3,375.8	0.48	0.32	0.37
10,313.0	90.00	332.21	7,288.2	3,009.4	-1,664.0	3,438.8	1.27	0.48	-1.17
10,376.0	90.47	331.83	7,288.0	3,065.0	-1,693.5	3,501.8	0.96	0.75	-0.60
10,440.0	91.28	332.11	7,287.0	3,121.5	-1,723.6	3,565.8	1.34	1.27	0.44
10,504.0	90.70	331.09	7,285.9	3,177.8	-1,754.1	3,629.8	1.83	-0.91	-1.59
10,567.0	90.67	330.67	7,285.1	3,232.8	-1,784.7	3,692.7	0.67	-0.05	-0.67
10,631.0	91.38	330.04	7,284.0	3,288.5	-1,816.4	3,756.7	1.48	1.11	-0.98
10,695.0	91.98	330.87	7,282.1	3,344.1	-1,847.9	3,820.7	1.60	0.94	1.30
10,758.0	89.76	330.06	7,281.2	3,398.9	-1,879.0	3,883.7	3.75	-3.52	-1.29
10,799.0	89.09	330.85	7,281.6	3,434.6	-1,899.2	3,924.7	2.53	-1.63	1.93
10,858.0	89.09	330.85	7,282.5	3,486.1	-1,927.9	3,983.7	0.00	0.00	0.00

Checked By: _____ Approved By: _____ Date: _____