

PM

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

API 47-103-02895 County Wetzel District Magnolia
Quad New Martinsville Pad Name ZMBG Field/Pool Name Mary
Farm name Zumpetta, Lawrence et al Well Number #5H
Operator (as registered with the OOG) Stone Energy Corporation
Address 1300 Fort Pierpont Dr. - Suite 201 City Morgantown State WV Zip 26508

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4,387,953 Easting 515,400
Landing Point of Curve Northing 4,388,256 Easting 515,235
Bottom Hole Northing 4,389,597 Easting 514,464

Elevation (ft) 1,341 GL Type of Well New Existing Type of Report Interim Final
Permit Type Deviated Horizontal Horizontal 6A Vertical Depth Type Deep Shallow
Type of Operation Convert Deepen Drill Plug Back Redrilling Rework Stimulate
Well Type Brine Disposal CBM Gas Oil Secondary Recovery Solution Mining Storage Other _____
Type of Completion Single Multiple Fluids Produced Brine Gas NGL Oil Other _____
Drilled with Cable Rotary

Drilling Media Surface hole Air Mud Fresh Water Intermediate hole Air Mud Fresh Water Brine
Production hole Air Mud Fresh Water Brine

Mud Type(s) and Additive(s)
Saturated salt mud which includes Caustic Soda, Barite, Lime, New-Drill, Perma-Lose HT, Xan-Plex D, X-Cide 102, Soda Ash, and Sodium Chloride

Date permit issued 7/1/2013 Date drilling commenced 9/30/2013 Date drilling ceased 6/5/2014
Date completion activities began 8/6/2014 Date completion activities ceased 2/10/2015
Verbal plugging (Y/N) N Date permission granted _____ Granted by _____

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft 100 Open mine(s) (Y/N) depths N
Salt water depth(s) ft None Reported Void(s) encountered (Y/N) depths N
Coal depth(s) ft 1,012 Cavern(s) encountered (Y/N) depths _____
Is coal being mined in area (Y/N) N

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AUG 27 2015
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Reviewed by:
RK
10/09/2015

API 47-103 - 02895

Farm name Zumpetta, Lawrence et al

Well number #5H

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/ N) * Provide details below*
Conductor	24"	20"	95'	New	LS		N - GTS
Surface	17.5"	13.375"	1,288'	New	J55	122' & 243'	Y - CTS
Coal	17.5"	13.375"	1,288'	New	J55	122' & 243'	Y - CTS
Intermediate 1	12.25"	9.625"	2,575'	New	J55		Y - CTS
Intermediate 2							
Intermediate 3							
Production	8.75"	5.5"	12,303'	New	P110		N - TOC @ 2,488'
Tubing	N/A	2.375"	7,162'	New	N80		N/A
Packer type and depth set							

Comment Details Circulated 35 bbls cement to surface on 13.375" casing string. Circulated 10 bbls cement to surface on the 9.625" casing string.
TOC on 5.5" after running CBL @ 2,488'.

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor	Type 1	34	15.6	1.18	40	Surface	24.0
Surface	Class "A"	970	15.6	1.21	1,174	Surface	8.0
Coal	Class "A"	970	15.6	1.21	1,174	Surface	8.0
Intermediate 1	Lead-10% Salt Tail-Class "A"	Lead-650 Tail-228	Lead-15.6 Tail 15.6	Lead-1.24 Tail-1.21	Lead-806 Tail-276	Surface	12.0
Intermediate 2							
Intermediate 3							
Production	Lead-Tuned Spacer Tail-Vari Cem	Lead-178 Tail-2,280	Lead- 14.5 Tail-15.2	Lead-2.37 Tail-1.20	Lead-422 Tail-2,736	2,488	7.0
Tubing							

Drillers TD (ft) 12,312 MD / 6,662 TVD Loggers TD (ft) N/A
Deepest formation penetrated Marcellus Shale Plug back to (ft) _____
Plug back procedure _____

Kick off depth (ft) 6,110 MD / 6,088' TVD

Check all wireline logs run caliper density deviated/directional induction
 neutron resistivity gamma ray temperature sonic

Well cored Yes No Conventional Sidewall Were cuttings collected Yes No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING Surface casing had bow spring centralizers placed on joints 3, 6, 9, 12, 15, 18 and 21. Intermediate casing had bow spring centralizers placed on joints 3, 6, 9, 12, 15, 18, 23, 26, 29, 32, 35 and 38.
Production casing had rigid spiral centralizers placed on every fourth joint beginning with joint 3 to joint 147. Ran a total of 39 rigid spiral centralizers. Rigid spiral centralizers were run on every third joint from joint 150 to joint 228 for a total of 27. Ran Bow spring centralizers on every third joint from joint 231 to joint 279. A total of 17 bow spring centralizers were run.

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WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS _____

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WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

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WERE TRACERS USED Yes No TYPE OF TRACER(S) USED _____

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PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	8/12/14	12,096	12,234	72	Marcellus Shale
2	10/10/14	11,891	12,029	72	Marcellus Shale
3	10/11/14	11,686	11,824	72	Marcellus Shale
4	10/12/14	11,481	11,620	72	Marcellus Shale
5	10/13/14	11,276	11,414	72	Marcellus Shale
6	10/14/14	11,066	11,219	72	Marcellus Shale
7	10/15/14	10,856	11,013	72	Marcellus Shale
8	10/16/14	10,646	10,783	72	Marcellus Shale
9	10/18/14	10,436	10,589	72	Marcellus Shale
10	10/19/14	10,226	10,379	72	Marcellus Shale
11	10/20/14	10,016	10,169	72	Marcellus Shale
12	10/21/14	9,806	9,961	72	Marcellus Shale
13	10/22/14	9,596	9,746	72	Marcellus Shale
14	10/23/14	9,384	9,539	72	Marcellus Shale
15	10/24/14	9,176	9,325	72	Marcellus Shale
16	10/25/14	8,966	9,119	72	Marcellus Shale

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
1	10/10/14	84.8	7,317	6,263	4,589	316,201	5,235	
2	10/11/14	81.8	7,441	5,106	6,353	359,740	5,697	
3	10/12/14	82.5	7,287	5,800	5,036	360,360	5,643	
4	10/13/14	85.0	7,135	6,033	5,124	359,760	5,618	
5	10/14/14	85.4	7,233	6,033	4,797	361,940	5,535	
6	10/15/14	85.4	7,107	6,028	4,797	364,560	5,640	
7	10/16/14	85.6	7,299	6,007	4,767	360,520	5,502	
8	10/18/14	80.5	6,855	5,399	4,975	352,555	5,467	
9	10/19/14	80.5	6,888	6,552	4,679	358,600	5,436	
10	10/20/14	79.4	7,113	5,843	4,917	365,120	5,520	
11	10/21/14	80.2	7,002	5,459	4,945	366,740	5,471	
12	10/22/14	78.8	6,873	5,966	4,857	364,120	5,473	
13	10/23/14	80.4	6,924	5,491	5,184	361,380	5,630	
14	10/24/14	80.4	6,984	5,632	5,541	360,940	5,494	
15	10/25/14	80.4	6,870	5,991	5,541	360,160	6,432	
16	10/26/14	80.8	6,678	5,476	5,274	359,360	5,586	

Please insert additional pages as applicable.

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10/09/2015

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PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
17	10/26/14	8,752	8,911	72	Marcellus Shale
18	10/27/14	8,554	8,699	72	Marcellus Shale
19	10/28/14	8,336	8,489	72	Marcellus Shale
20	10/29/14	8,115	8,279	72	Marcellus Shale
21	10/30/14	7,916	8,055	72	Marcellus Shale
22	10/31/14	7,706	7,859	72	Marcellus Shale
23	11/1/14	7,500	7,649	72	Marcellus Shale
24	11/2/14	7,268	7,439	72	Marcellus Shale

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
17	10/27/14	80.7	6,695	5,351	5,422	359,000	5,527	
18	10/28/14	80.7	6,719	5,556	5,096	359,800	5,378	
19	10/29/14	80.2	6,719	5,797	5,332	362,640	5,524	
20	10/30/14	79.3	6,667	5,897	4,797	361,340	5,354	
21	10/31/14	78.4	6,935	6,004	4,597	368,800	5,564	
22	11/1/14	78.2	6,610	5,777	5,005	358,140	5,631	
23	11/2/14	80.1	6,525	6,003	4,857	369,740	5,526	
24	11/3/14	62.9	6,819	5,214	5,214	172,520	6,141	

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Please insert additional pages as applicable.

ZMBG #5H
 API 47-103-02895
 Stone Energy Corporation

	Top (ft TVD)	Horizontal Top (ft MD)	Bottom (ft TVD)	Bottom (ft MD)	
Sandstone & Shale	Surface	*	1,012'		FW @ 100'
Coal	1,012'	*	1,015'		
Sandstone & Shale	1,152'	*	2,116'		No SW Reported
Big Lime	2,116'	*	2,216'		
Big Injun	2,216'	*	2,316'		
Sandstone & Shale	2,316'	*	2,689'		
Berea Sandstone	2,689'	*	2,719'		
Shale	2,719'	*	2,894'		
Gordon	2,894'	*	2,944'		
Undiff Devonian Shale	2,944'	*	5,999'	6,018'	
Rhinestreet	5,999'	6,018' ~	6,452'	6,520'	
Cashaqua	6,452'	6,520' ~	6,604'	6,713'	
Middlesex	6,604'	6,713' ~	6,626'	6,743'	
West River	6,626'	6,743' ~	6,677'	6,843'	
Geneseo	6,677'	6,843' ~	6,694'	6,873'	
Tully Limestone	6,694'	6,873' ~	6,728'	6,957'	
Hamilton Shale	6,728'	6,957' ~	6,761'	7,069'	
Marcellus	6,761'	7,069' ~	6,662'	12,312'	
TD			6,662'	12,312'	

* From Pilot Hole Log and Driller's Log

~ From MWD Gamma Log

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10/09/2015

103.02895

Hydraulic Fracturing Fluid Product Component Information Disclosure

Fracture Date:	10/30/2014
State:	West Virginia
County/Parish:	Wetzel County
API Number:	47-103-02895
Operator Name:	Stone Energy
Well Name and Number:	ZMBG #5H
Longitude:	515,400
Latitude:	4,387,953
Long/Lat Projection:	
Production Type:	Natural Gas
True Vertical Depth (TVD):	6662
Total Water Volume (gal)*:	5629071

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
H015, Slickwater, WF115	Schlumberger	Corrosion Inhibitor, Bactericide (Myacide GA25), Scale Inhibitor, Surfactant, Acid, Breaker, Gelling Agent, Friction Reducer, Iron Control Agent, Clay Control Agent, Fluid Loss Additive, Propping	Water (Including Mix Water Supplied by Client)*	NA		84.48034%	
			Crystalline silica	14808-60-7	98.38599%	15.26917%	
			Hydrochloric acid	7647-01-0	0.91896%	0.14262%	
			Ammonium sulfate	7783-20-2	0.12715%	0.01973%	
			Polyethylene glycol monohexyl ether	31726-34-8	0.06769%	0.01051%	
			Glutaraldehyde	111-30-8	0.05164%	0.00801%	
			Diammonium peroxodisulfate	7727-54-0	0.03123%	0.00485%	
			Urea	57-13-6	0.02119%	0.00329%	
			Methanol	67-56-1	0.00529%	0.00082%	
			Dicoco dimethyl quaternary ammonium chloride	61789-77-3	0.00521%	0.00081%	
			Sodium erythorbate	6381-77-7	0.00290%	0.00045%	
			Thiourea formaldehyde polymer	Proprietary	0.00264%	0.00041%	
			Ethylene Glycol	107-21-1	0.00220%	0.00034%	
			Trisodium ortho phosphate	7601-54-9	0.00220%	0.00034%	
			Aliphatic acids	Proprietary	0.00203%	0.00031%	
			Calcium chloride	10043-52-4	0.00125%	0.00019%	
			Aliphatic alcohols, ethoxylated #2	Proprietary	0.00088%	0.00014%	
			Propargyl alcohol	107-19-7	0.00088%	0.00014%	
			Olefin hydrocarbon	Proprietary	0.00044%	0.00007%	
			Hexadec-1-ene	629-73-2	0.00018%	0.00003%	
			Formaldehyde	50-00-0	0.00001%	< 0.00001%	

* 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-34845 (Generated on 2/16/2015 4:44 PM)

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 B.

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ZMBG #5H (47-103-02895) AS-DRILLED

LONGITUDE 80°47'30"

9,320'

LAT. 39°38'28.1"

**ZMBG #5H
BOTTOM HOLE**

STATE PLANE
COORDINATES
NORTH ZONE-NAD 27
(N) 423811
(E) 1825104

L & L DECIMAL
NAD 27
39.85508
80.83157

UTM (NAD 83)
ZONE 17
METERS
4389597
514464

SCHEIBELHOOD
74.76 ACRES±
4-17

HEINZMAN
158.239 ACRES±
5-8

RICHTER
80.5 ACRES±
5-10

LLOYD
40.25 ACRES±
4-24

HEAVEN PARTNERSHIP
74.8 ACRES±
5-24

NICE
93.91 ACRES±
4-32

GODDARD
54.65 ACRES±
5-29

BURTON
66.94 ACRES±
5-31

NICE
23.85 ACRES±
4-34

HOWELL
38.26 ACRES±
8-1

DALLISON LUMBER INC.,
ET AL
35 ACRES±
8-2

SCHUPBACH
99.75 ACRES±
5-30

ZUMPETTA, ET AL
79.47 ACRES±
8-3

ZUMPETTA, ET AL
27 ACRES±
8-2.1

HELMICK
35.40 ACRES±
8-10

ZUMPETTA, ET AL
57.91 ACRES±
8-1.1

ZMBG #5H

NOTES ON SURVEY

1. NO DWELLINGS WITHIN 625' WERE FOUND.
2. NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250' WERE FOUND.
3. TIES TO WELLS AND CORNERS ARE BASED ON STATE PLANE GRID NORTH WY NORTH ZONE NAD '27.
4. WELL LAT./LONG. ESTABLISHED BY SG-GPS(OPUS).
5. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF WETZEL COUNTY IN MARCH, 2015 AND INFORMATION PROVIDED BY STONE ENERGY CORPORATION.
6. WELLS SHOWN ARE TAKEN FROM RECORDS OF WDEP.
7. AS-DRILLED INFORMATION PROVIDED BY STONE ENERGY CORPORATION.

ZMBG #5H LANDING POINT

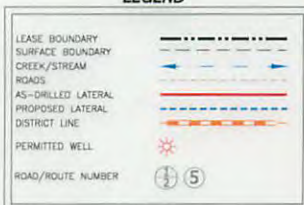
STATE PLANE
COORDINATES
NORTH ZONE-NAD 27
(N) 419447
(E) 1827582

L & L DECIMAL
NAD 27
39.64410
80.82261

UTM (NAD 83)
ZONE 17
METERS
4388280
515235



LEGEND



ZMBG #5H SURFACE HOLE

STATE PLANE
COORDINATES
NORTH ZONE-NAD 27
(N) 418361
(E) 1628083

L & L DECIMAL
NAD 27
39.64114
80.82071

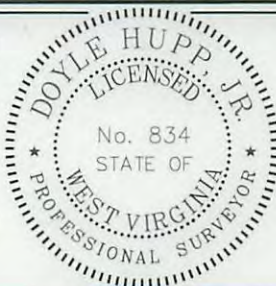
UTM (NAD 83)
ZONE 17
METERS
4387052
515400

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE RULES ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

Doyle Hupp Jr.

P.S. 834

HUPP Surveying & Mapping
P.O. Box 647 Grantsville, WV 26147
(304) 354-7035 EMAIL: hupp@frontiernet.net



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

DATE JULY 15, 20 15

OPERATORS WELL NO. ZMBG #5H

API WELL NO. 47-103-02895

STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1/2500 FILE NO. W2068 (BK 77-29)

PROVEN SOURCE OF ELEVATION SG-GPS(OPUS) SCALE 1" = 1000'

STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS



WELL TYPE : OIL GAS LIQUID INJECTION WASTE DISPOSAL IF "GAS" PRODUCTION STORAGE DEEP SHALLOW

LOCATION : ELEVATION 1,340' WATERSHED TRIBUTARY OF DOOLIN RUN

DISTRICT MAGNOLIA COUNTY WETZEL QUADRANGLE NEW MARTINSVILLE 7.5'

SURFACE OWNER LAWRENCE ZUMPETTA, et al ACREAGE 79.47±

ROYALTY OWNER LAWRENCE ZUMPETTA, et al LEASE ACREAGE 465.17± **10/09/2015**

PROPOSED WORK : LEASE NO. _____

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER

PHYSICAL CHANGE IN WELL (SPECIFY) _____ TARGET FORMATION MARCELLUS

ESTIMATED DEPTH TVD 6,662' MD 12,312'

WELL OPERATOR STONE ENERGY CORPORATION DESIGNATED AGENT TIM MCGREGOR

ADDRESS P.O. BOX 52807 LAFAYETTE, LA 70508 ADDRESS 1300 FORT PIERPONT DR., SUITE 201 MORGANTOWN, WV 26508

COUNTY NAME

PERMIT