

PM

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

API 47-103-02896 County Wetzel District Magnolia  
Quad New Martinsville Pad Name ZMBG Field/Pool Name Mary  
Farm name Zumpetta, Lawrence et al Well Number #7H  
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 4,387,962 Easting 515,408  
Landing Point of Curve Northing 4,388,353 Easting 515,457  
Bottom Hole Northing 4,389,184 Easting 514,970

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 10/16/2013 Date drilling ceased 7/21/2014  
Date completion activities began 8/5/2014 Date completion activities ceased 2/13/2015  
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 1,152 Cavern(s) encountered (Y/N) depths N  
Is coal being mined in area (Y/N) N

RECEIVED  
Office of Oil and Gas  
WV Department of Environmental Protection  
10/09/2015

Reviewed by: [Signature]  
10/09/2015

API 47-103 - 02896

Farm name Zumpetta, Lawrence et al

Well number #7H

| CASING STRINGS            | Hole Size | Casing Size                                     | Depth   | New or Used | Grade wt/ft | Basket Depth(s) | Did cement circulate (Y/ N)<br>* Provide details below* |
|---------------------------|-----------|---|---------|-------------|-------------|-----------------|---|
| Conductor                 | 24"       | 20"   | 90'     | New         | LS          |                 | N - GTS   |
| Surface                   | 17.5"     | 13.375"   | 1,257'  | New         | J55         | 116' & 191'     | N - GTS   |
| Coal                      | 17.5"     | 13.375"   | 1,257'  | New         | J55         | 116' & 191'     | N - GTS   |
| Intermediate 1            | 12.25"    | 9.625"  | 2,571'  | New         | J55         |                 | Y - CTS   |
| Intermediate 2            |           |   |         |             |             |                 |   |
| Intermediate 3            |           |   |         |             |             |                 |   |
| Production                | 8.75"     | 5.5"  | 10,556' | New         | P110        |                 | N - TOC @ 1,305   |
| Tubing                    | N/A       | 2.375"  | 7,266'  | New         | J55         |                 | N/A   |
| Packer type and depth set |           | TAM Inflatable Packer @ 1,156' on 9.625" casing |         |             |             |                 |   |

Comment Details Circulated 0 bbls cement to surface on 13.375" casing string. Circulated 34 bbls cement to surface on the 9.625" casing string.  
TOC on 5.5" after running CBL @ 1,305'.

| CEMENT DATA    | Class/Type of Cement            | Number of Sacks     | Slurry wt (ppg)      | Yield (ft <sup>3</sup> /sks) | Volume (ft <sup>3</sup> ) | Cement Top (MD) | WOC (hrs) |
|----------------|---------------------------------|---------------------|----------------------|------------------------------|---------------------------|-----------------|-----------|
| Conductor      | Type 1                          | 34                  | 15.6                 | 1.18                         | 40                        | Surface         | 24.0      |
| Surface        | Class "A"                       | 980                 | 15.6                 | 1.20                         | 1,176                     | Surface         | 8.0       |
| Coal           | Class "A"                       | 980                 | 15.6                 | 1.20                         | 1,176                     | Surface         | 8.0       |
| Intermediate 1 | Lead-10% Salt Tail-Class "A"    | Lead-680 Tail-250   | Lead-15.6 Tail 15.6  | Lead-1.24 Tail-1.21          | Lead-843 Tail-303         | Surface         | 8.0       |
| Intermediate 2 |                                 |                     |                      |                              |                           |                 |           |
| Intermediate 3 |                                 |                     |                      |                              |                           |                 |           |
| Production     | Lead-Tuned Spacer Tail-Vari Cem | Lead-178 Tail-1,890 | Lead- 14.5 Tail-15.2 | Lead-2.37 Tail-1.20          | Lead-422 Tail-2,268       | 1,305           | 7.0       |
| Tubing         |                                 |                     |                      |                              |                           |                 |           |

Drillers TD (ft) 10,559 MD / 6,715 TVD      Loggers TD (ft) N/A  
 Deepest formation penetrated Marcellus Shale      Plug back to (ft) \_\_\_\_\_  
 Plug back procedure \_\_\_\_\_

Kick off depth (ft) 5,706 MD / 5,691' 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 2, 4, 6, 8, 10, 12, 14, 16, 27 and 29. Intermediate casing had bow spring centralizers placed on joints 3, 7, 11, 15, 19, 23, 27, 31, 35, 39, 43, 47, 51, 55 and 59.  
 Production casing had rigid spiral centralizers placed on every fourth joint beginning with joint 1 to joint 180. Ran a total of 46 rigid spiral centralizers. Ran Bow spring centralizers on every eighth joint from joint 188 to joint 236. A total of 7 bow spring centralizers were run.

RECEIVED

WAS WELL COMPLETED AS SHOT HOLE     Yes     No      DETAILS      Office of Oil and Gas

WAS WELL COMPLETED OPEN HOLE?     Yes     No      DETAILS      AUG 27 2015

WERE TRACERS USED     Yes     No      TYPE OF TRACER(S) USED      WV Department of Environmental Protection

API 47- 103 - 02896

Farm name Zumpetta, Lawrence et al

Well number #7H

PERFORATION RECORD

| Stage No. | Perforation date | Perforated from MD ft. | Perforated to MD ft. | Number of Perforations | Formation(s)    |
|-----------|------------------|------------------------|----------------------|------------------------|-----------------|
| 1         | 8/9/14           | 10,350                 | 10,488               | 72                     | Marcellus Shale |
| 2         | 10/17/14         | 10,145                 | 10,279               | 72                     | Marcellus Shale |
| 3         | 10/18/14         | 9,940                  | 10,078               | 72                     | Marcellus Shale |
| 4         | 10/19/14         | 9,735                  | 9,873                | 72                     | Marcellus Shale |
| 5         | 10/20/14         | 9,530                  | 9,666                | 72                     | Marcellus Shale |
| 6         | 10/21/14         | 9,322                  | 9,473                | 72                     | Marcellus Shale |
| 7         | 10/22/14         | 9,110                  | 9,263                | 72                     | Marcellus Shale |
| 8         | 10/23/14         | 8,900                  | 9,053                | 72                     | Marcellus Shale |
| 9         | 10/24/14         | 8,690                  | 8,843                | 72                     | Marcellus Shale |
| 10        | 10/26/14         | 8,483                  | 8,629                | 72                     | Marcellus Shale |
| 11        | 10/27/14         | 8,270                  | 8,423                | 72                     | Marcellus Shale |
| 12        | 10/28/14         | 8,052                  | 8,210                | 126                    | Marcellus Shale |
| 13        | 10/31/14         | 7,850                  | 7,993                | 72                     | Marcellus Shale |
| 14        | 11/1/14          | 7,644                  | 7,793                | 72                     | Marcellus Shale |
| 15        | 11/2/14          | 7,370                  | 7,583                | 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          | 84.1                | 7,106                        | 6,045                        | 5,100      | 326,500                  | 5,760                  |                                  |
| 2         | 10/18/14          | 85.8                | 7,171                        | 5,632                        | 4,857      | 364,860                  | 6,146                  |                                  |
| 3         | 10/19/14          | 85.0                | 7,105                        | 5,673                        | 4,618      | 366,520                  | 6,079                  |                                  |
| 4         | 10/20/14          | 85.3                | 7,319                        | 8,746                        | 5,244      | 364,100                  | 6,149                  |                                  |
| 5         | 10/21/14          | 84.7                | 7,315                        | 5,708                        | 7,792      | 362,440                  | 6,528                  |                                  |
| 6         | 10/22/14          | 84.7                | 7,216                        | 5,989                        | 4,917      | 361,840                  | 6,070                  |                                  |
| 7         | 10/23/14          | 85.3                | 7,141                        | 5,726                        | 5,005      | 363,360                  | 6,104                  |                                  |
| 8         | 10/24/14          | 80.6                | 6,852                        | 6,294                        | 5,096      | 359,460                  | 6,054                  |                                  |
| 9         | 10/26/14          | 80.8                | 6,666                        | 6,087                        | 5,184      | 363,780                  | 6,183                  |                                  |
| 10        | 10/27/14          | 80.4                | 6,701                        | 6,062                        | 5,035      | 362,960                  | 6,012                  |                                  |
| 11        | 10/28/14          | 78.9                | 7,020                        | 6,436                        | 5,648      | 357,780                  | 5,912                  |                                  |
| 12        | 10/29/14          | 72.1                | 8,243                        | 8,823                        | 5,066      | 345,780                  | 10,156                 |                                  |
| 13        | 11/1/14           | 79.9                | 6,579                        | 5,837                        | 5,066      | 365,180                  | 6,243                  |                                  |
| 14        | 11/2/14           | 80.0                | 6,454                        | 6,491                        | 4,470      | 369,439                  | 6,216                  |                                  |
| 15        | 11/4/14           | 80.0                | 6,412                        | 6,369                        | 5,184      | 359,600                  | 6,246                  |                                  |

Please insert additional pages as applicable.

AUG 27 2015



ZMBG #7H  
 API 47-103-02896  
 Stone Energy Corporation

|                       | Horizontal      |                |                    |                   |
|-----------------------|-----------------|----------------|--------------------|-------------------|
|                       | Top<br>(ft TVD) | Top<br>(ft MD) | Bottom (ft<br>TVD) | Bottom<br>(ft MD) |
| Sandstone & Shale     | Surface         |                | *                  | 1,152'            |
| Coal                  | 1,152'          |                | *                  | 1,154'            |
| Sandstone & Shale     | 1,154'          |                | *                  | 2,116'            |
| 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'          |                | *                  | 5,684'            |
| Rhinestreet           | 5,684'          | 5,702'         | ~                  | 6,498'            |
| Cashaqua              | 6,498'          | 6,636'         | ~                  | 6,615'            |
| Middlesex             | 6,615'          | 6,819'         | ~                  | 6,637'            |
| West River            | 6,637'          | 6,852'         | ~                  | 6,689'            |
| Geneseo               | 6,689'          | 6,955'         | ~                  | 6,706'            |
| Tully Limestone       | 6,706'          | 6,993'         | ~                  | 6,740'            |
| Hamilton Shale        | 6,740'          | 7,085'         | ~                  | 6,774'            |
| Marcellus             | 6,774'          | 7,218'         | ~                  | 6,715'            |
| TD                    |                 |                |                    | 6,715'            |

FW @ 100'

No SW Reported

\* From Pilot Hole Log and Driller's Log

~ From MWD Gamma Log

RECEIVED  
Office of Oil and Gas

AUG 27 2015

WV Department of  
Environmental Protection  
10/09/2015



103-02896

**Hydraulic Fracturing Fluid Product Component Information Disclosure**

|                            |               |
|----------------------------|---------------|
| Fracture Date:             | 11/4/2014     |
| State:                     | West Virginia |
| County/Parish:             | Wetzel County |
| API Number:                | 47-103-02896  |
| Operator Name:             | Stone Energy  |
| Well Name and Number:      | ZMBG #7H      |
| Longitude:                 | 515,408       |
| Latitude:                  | 4,387,962     |
| Long/Lat Projection:       |               |
| Production Type:           | Natural Gas   |
| True Vertical Depth (TVD): | 6715          |
| Total Water Volume (gal)*: | 4026123       |

**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, AntiFoam Agent, Surfactant, Acid, Breaker, Gelling Agent, Friction Reducer, Iron Control Agent, Clay Control Agent, Propping Agent, Fluid Loss | Water (Including Mix Water Supplied by Client)* | NA                                       |  | 85.96392%  |          |
|                         |              |  | Crystalline silica                              | 14808-60-7                               | 90.77231%  | 12.74087%  |          |
|                         |              |  | Hydrochloric acid                               | 7647-01-0                                | 1.03933%   | 0.14588%   |          |
|                         |              |  | Ammonium sulfate                                | 7783-20-2                                | 0.12996%   | 0.01824%   |          |
|                         |              |  | Polyethylene glycol monohexyl ether             | 31726-34-8                               | 0.06970%   | 0.00978%   |          |
|                         |              |  | Glutaraldehyde                                  | 111-30-8                                 | 0.05291%   | 0.00743%   |          |
|                         |              |  | Diammonium peroxodisulfate                      | 7727-54-0                                | 0.03021%   | 0.00424%   |          |
|                         |              |  | Urea  | 57-13-6                                  | 0.02166%   | 0.00304%   |          |
|                         |              |  | Methanol  | 67-56-1                                  | 0.00602%   | 0.00085%   |          |
|                         |              |  | Dicoco dimethyl quaternary ammonium chloride    | 61789-77-3                               | 0.00536%   | 0.00075%   |          |
|                         |              |  | Trisodium ortho phosphate                       | 7601-54-9                                | 0.00438%   | 0.00061%   |          |
|                         |              |  | Ethylene Glycol                                 | 107-21-1                                 | 0.00438%   | 0.00061%   |          |
|                         |              |  | Sodium erythorbate                              | 6381-77-7                                | 0.00328%   | 0.00046%   |          |
|                         |              |  | Thiourea formaldehyde polymer                   | Proprietary                              | 0.00301%   | 0.00042%   |          |
|                         |              |  | Aliphatic acids                                 | Proprietary                              | 0.00231%   | 0.00032%   |          |
|                         |              |  | Calcium chloride                                | 10043-52-4                               | 0.00129%   | 0.00018%   |          |
|                         |              |  | Aliphatic alcohols, ethoxylated #2              | Proprietary                              | 0.00100%   | 0.00014%   |          |
|                         |              |  | Propargyl alcohol                               | 107-19-7                                 | 0.00100%   | 0.00014%   |          |
|                         |              |  | Olefin hydrocarbon                              | Proprietary                              | 0.00050%   | 0.00007%   |          |
|                         |              |  | Polypropylene glycol                            | 25322-69-4                               | 0.00027%   | 0.00004%   |          |
|                         |              |  | Hexadec-1-ene                                   | 629-73-2                                 | 0.00020%   | 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-34849 (Generated on 2/16/2015 4:46 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 D.

RECEIVED  
Office of Oil and Gas

Environmental Protection

10/09/2015



# ZMBG #7H (47-103-02896) AS-DRILLED

**ZMBG #7H  
BOTTOM HOLE**

STATE PLANE  
COORDINATES  
NORTH ZONE-NAD 27  
(N) 422427  
(E) 1626740

L & L DECIMAL  
NAD 27  
39.65224  
80.82569

UTM (NAD 83)  
ZONE 17  
METERS  
4389184  
514970

SCHEIBELHOOD  
74.76 ACRES±  
4-17

HEINZMAN  
138.239 ACRES±  
5-8

RICHTER  
80.5 ACRES±  
5-10

LLOYD  
40.25 ACRES±  
4-24

HEAVEN PARTNERSHIP  
74.8 ACRES±  
5-24

ZMBG #7H  
BOTTOM HOLE

NICE  
93.91 ACRES±  
4-32

GODDARD  
54.65 ACRES±  
5-29

SCHUPBACH  
99.75 ACRES±  
5-30

BURTON  
66.94 ACRES±  
5-31



### 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.

NICE  
23.85 ACRES±  
4-34

HOWELL  
38.26 ACRES±  
8-1

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

ZUMPETTA, ET AL  
79.47 ACRES±  
8-3

ZMBG #7H  
LANDING POINT

ZUMPETTA, ET AL  
37.91 ACRES±  
8-11

ZUMPETTA, ET AL  
27 ACRES±  
8-2.1

HELMICK  
35.40 ACRES±  
8-10

ZMBG #7H

**ZMBG #7H  
LANDING POINT**

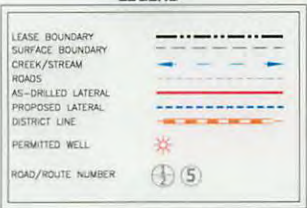
STATE PLANE  
COORDINATES  
NORTH ZONE-NAD 27  
(N) 419673  
(E) 1628293

L & L DECIMAL  
NAD 27  
39.64475  
80.82003

UTM (NAD 83)  
ZONE 17  
METERS  
4388353  
515457



### LEGEND



**ZMBG #7H SURFACE HOLE**

STATE PLANE  
COORDINATES  
NORTH ZONE-NAD 27  
(N) 418390  
(E) 1628110

L & L DECIMAL  
NAD 27  
39.64122  
80.82061

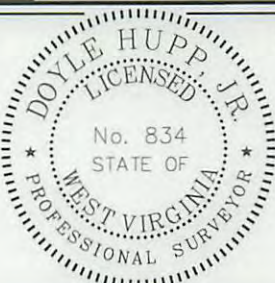
UTM (NAD 83)  
ZONE 17  
METERS  
4387961  
515406

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 #7H

API WELL NO. 47-103-02896

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 254.02± **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 6,715' MD 10,559'

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