

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

PM

API 47-103-02784 County Wetzel District Magnolia
Quad New Martinsville Pad Name ZMBG Field/Pool Name Mary
Farm name Zumpetta, Lawrence et al Well Number #4H
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 4,387,940 Easting 515,387
Landing Point of Curve Northing 4,387,581 Easting 515,564
Bottom Hole Northing 4,389,139 Easting 516,213

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 8/14/2012 Date drilling commenced 9/5/2013 Date drilling ceased 5/10/2014
Date completion activities began 8/5/2014 Date completion activities ceased 1/31/2015
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 1,150 Cavern(s) encountered (Y/N) depths _____
Is coal being mined in area (Y/N) N

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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"	90'	New	LS		N - GTS
Surface	17.5"	13.375"	1,299'	New	J55	120' & 202'	Y - CTS
Coal	17.5"	13.375"	1,299'	New	J55	120' & 202'	Y - CTS
Intermediate 1	12.25"	9.625"	2,578'	New	J55		Y - CTS
Intermediate 2							
Intermediate 3							
Production	8.75"	5.5"	12,599'	New	P110		N - TOC @ 2,063'
Tubing	N/A	2.375"	7,210'	New	N80		N/A
Packer type and depth set							

Comment Details Circulated 15 bbls cement to surface on 13.375" casing string. Circulated 15 bbls cement to surface on the 9.625" casing string.
TOC on 5.5" after running CBL @ 2,063'. Note: only two bow spring centralizers were run on the 13.375" casing string due to heaving Red Beds.

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"	942	15.6	1.21	1,139	Surface	8.0
Coal	Class "A"	942	15.6	1.21	1,139	Surface	8.0
Intermediate 1	Lead-10% Salt Tail-Class "A"	Lead-680 Tail-250	Lead-15.6 Tail 15.6	Lead-1.22 Tail-1.20	Lead-830 Tail-300	Surface	12.0
Intermediate 2							
Intermediate 3							
Production	Lead-TunedSpacer Tail-VariCem	Lead-178 Tail-2,430	Lead- 14.5 Tail-15.2	Lead-2.37 Tail-1.20	Lead-422 Tail-2,916	2,063	7.0
Tubing							

Drillers TD (ft) 12,614 MD / 6,937 TVD Loggers TD (ft) N/A
 Deepest formation penetrated Marcellus Shale Plug back to (ft) _____
 Plug back procedure _____

Kick off depth (ft) 5,999 MD / 5,976' 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, 21, 24, 27 and 30. Intermediate casing had bow spring centralizers placed on joints 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48, 51, 54, 57 and 60.
Production casing had rigid spiral centralizers placed on every fourth joint beginning with joint 5 to joint 153. Ran a total of 38 rigid spiral centralizers. Ran bow spring centralizers from joint 157 to joint 244 on every third joint. A total of 30 bow spring centralizers were run.

WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS _____

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

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	8/14/14	12,393	12,497	72	Marcellus Shale
2	8/23/14	12,188	12,326	72	Marcellus Shale
3	8/24/14	11,983	12,116	72	Marcellus Shale
4	8/25/14	11,778	11,916	72	Marcellus Shale
5	8/26/14	11,571	11,693	72	Marcellus Shale
6	8/27/14	11,363	11,507	72	Marcellus Shale
7	8/28/14	11,153	11,306	72	Marcellus Shale
8	9/3/14	10,940	11,096	72	Marcellus Shale
9	9/4/14	10,733	10,874	72	Marcellus Shale
10	9/5/14	10,523	10,676	72	Marcellus Shale
11	9/6/14	10,313	10,458	72	Marcellus Shale
12	9/7/14	10,103	10,256	72	Marcellus Shale
13	9/9/14	9,890	10,043	72	Marcellus Shale
14	9/10/14	9,683	9,836	72	Marcellus Shale
15	9/11/14	9,476	9,623	72	Marcellus Shale
16	9/12/14	9,263	9,407	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	8/23/14	85.2	7,493	5,809	4,892	327,004	6,345	
2	8/24/14	85.4	7,416	6,067	5,283	362,340	6,916	
3	8/25/14	85.4	7,702	5,624	5,033	362,956	6,827	
4	8/26/14	85.3	7,785	5,866	5,334	361,420	6,681	
5	8/27/14	82.8	8,075	6,218	4,848	370,740	8,200	
6	8/28/14	80.7	8,067	6,532	5,086	365,840	6,723	
7	9/3/14	85.5	8,138	6,502	4,383	365,100	7,481	
8	9/4/14	85.7	7,276	5,988	4,265	364,869	7,535	
9	9/5/14	77.9	7,191	6,601	4,825	366,895	6,747	
10	9/6/14	79.7	7,413	5,996	4,590	365,720	6,745	
11	9/7/14	79.5	7,305	6,200	4,972	369,400	6,719	
12	9/8/14	78.4	6,968	5,946	4,883	368,280	6,779	
13	9/10/14	78.8	7,072	5,618	4,619	362,400	6,633	
14	9/11/14	79.8	7,082	7,379	5,089	357,160	6,696	
15	9/12/14	80.3	6,897	5,809	4,736	357,760	6,667	
16	9/13/14	80.3	7,309	6,603	5,295	361,361	6,680	

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Well number #4H

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
17	9/13/14	9,053	9,206	72	Marcellus Shale
18	9/14/14	8,838	8,996	72	Marcellus Shale
19	9/15/14	8,633	8,775	72	Marcellus Shale
20	9/16/14	8,423	8,576	72	Marcellus Shale
21	9/17/14	8,204	8,360	72	Marcellus Shale
22	9/18/14	8,003	8,145	72	Marcellus Shale
23	9/19/14	7,743	7,796	72	Marcellus Shale
24	9/20/14	7,570	7,736	72	Marcellus Shale
25	9/21/14	7,330	7,507	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	9/14/14	80.2	7,167	5,921	5,029	363,920	6,638	
18	9/15/14	80.6	7,324	6,362	5,412	362,240	6,721	
19	9/16/14	79.8	7,032	8,005	5,178	366,860	6,647	
20	9/17/14	80.3	6,970	6,942	5,119	367,920	6,503	
21	9/18/17	78.8	7,118	6,708	4,825	365,360	7,495	
22	9/19/14	80.6	7,517	7,331	5,355	367,840	6,309	
23	9/20/14	80.3	7,264	6,619	5,376	365,500	6,602	
24	9/21/14	80.4	7,324	7,401	5,138	367,500	6,556	
25	9/21/14	80.4	7,249	6,440	5,437	363,600	6,619	

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API 47- 103 - 02784 Farm name Zumpetta, Lawrence et al Well number #4H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>Marcellus Shale</u>	<u>6,858' to 6,928'</u> TVD	<u>7,330' to 12,497'</u> MD
_____	_____	_____
_____	_____	_____
_____	_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 2,188 psi Bottom Hole 3,988 calculated psi DURATION OF TEST 55.5 hrs

OPEN FLOW Gas 1,786 mcfpd Oil _____ bpd NGL 105.6 bpd Water 518.4 bpd GAS MEASURED BY Estimated Orifice Pilot

LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
	0		0		
See Attached Sheet					

Please insert additional pages as applicable.

Drilling Contractor Nomac (top-hole) & Saxon Drilling (horizontal)
Address 2034 Martins Branch Rd /9303 New Trails Drive City Mount Morris / The Woodlands State PA / TX Zip 25312 / 77381

Logging Company Scientific Drilling and Schlumberger
Address 3475 Washington Ave / 1178 US HWY 33 East City Finleyville / Weston State PA / WV Zip 15332 / 26452

Cementing Company Halliburton
Address 1628 Jackson Mill Road City Jane Lew State WV Zip 26378

Stimulating Company Schlumberger
Address 1178 US HWY 33 East City Weston State WV Zip 26452

Please insert additional pages as applicable.

Completed by W. Lee Hornsby Telephone 304-225-1600
Signature [Signature] Title Drilling Engineer Date 8/25/2015

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

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ZMBG #4H
 API 47-103-02784
 Stone Energy Corporation

	Horizontal		Bottom (ft TVD)	Bottom (ft MD)	
	Top (ft TVD)	Top (ft MD)			
Sandstone & Shale	Surface		* 1,150'		FW @ 100'
Coal	1,150'		* 11,520'		
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'		* 5,968'	5,990'	
Rhinestreet	5,968'	5,990'	~ 6,483'	6,540'	
Cashaqua	6,483'	6,540'	~ 6,648'	6,753'	
Middlesex	6,648'	6,753'	~ 6,664'	6,772'	
West River	6,664'	6,772'	~ 6,725'	6,887'	
Geneseo	6,725'	6,887'	~ 6,741'	6,917'	
Tully Limestone	6,741'	6,917'	~ 6,783'	7,008'	
Hamilton Shale	6,783'	7,008'	~ 6,825'	7,136'	
Marcellus	6,825'	7,136'	~ 6,937'	12,614'	
TD			6,937'	12,614'	

* From Pilot Hole Log and Driller's Log

~ From MWD Gamma Log

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10/09/2015

103-02784

Hydraulic Fracturing Fluid Product Component Information Disclosure

Fracture Date:	9/21/2014
State:	West Virginia
County/Parish:	Wetzel County
API Number:	47-103-02784
Operator Name:	Stone Energy
Well Name and Number:	ZMBG #4H
Longitude:	515,387
Latitude:	4,387,940
Long/Lat Projection:	
Production Type:	Natural Gas
True Vertical Depth (TVD):	6937
Total Water Volume (gal)*:	7155212

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, Accelerator, Fluid Loss Additive , Propping	Water (Including Mix Water Supplied by Client)*	NA		86.60706%	
			Crystalline silica	14808-60-7	98.34115%	13.17077%	
			Hydrochloric acid	7647-01-0	0.89220%	0.11949%	
			Ammonium sulfate	7783-20-2	0.12990%	0.01740%	
			Polyethylene glycol monohexyl ether	31726-34-8	0.06690%	0.00896%	
			Glutaraldehyde	111-30-8	0.04858%	0.00651%	
			Diammonium peroxidisulphate	7727-54-0	0.03071%	0.00411%	
			Urea	57-13-6	0.02165%	0.00290%	
			Calcium chloride	10043-52-4	0.01082%	0.00145%	
			Methanol	67-56-1	0.00519%	0.00070%	
			Dicoco dimethyl quaternary ammonium chloride	61789-77-3	0.00515%	0.00069%	
			Trisodium ortho phosphate	7601-54-9	0.00392%	0.00052%	
			Ethylene Glycol	107-21-1	0.00392%	0.00052%	
			Sodium erythorbate	6381-77-7	0.00338%	0.00045%	
			Thiourea formaldehyde polymer	Proprietary	0.00260%	0.00035%	
			Aliphatic acids	Proprietary	0.00199%	0.00027%	
			Aliphatic alcohols, ethoxylated #2	Proprietary	0.00087%	0.00012%	
			Propargyl alcohol	107-19-7	0.00087%	0.00012%	
			Olefin hydrocarbon	Proprietary	0.00043%	0.00006%	
			Hexadec-1-ene	629-73-2	0.00017%	0.00002%	
			Polypropylene glycol	25322-69-4	0.00011%	0.00001%	
			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-34843 (Generated on 2/16/2015 4:43 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.

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ZMBG #4H (47-103-02784) AS-DRILLED

ZMBG #4H SURFACE HOLE

STATE PLANE COORDINATES
NORTH ZONE-NAD 27
(N) 418317
(E) 1628042

L & L DECIMAL
NAD 27
39.84101
80.82085

UTM (NAD 83)
ZONE 17
METERS
4387939
515387

ZMBG #4H LANDING POINT

STATE PLANE COORDINATES
NORTH ZONE-NAD 27
(N) 417134
(E) 1628602

L & L DECIMAL
NAD 27
39.83779
80.81880

UTM (NAD 83)
ZONE 17
METERS
4387581
515564



ZMBG #4H BOTTOM HOLE

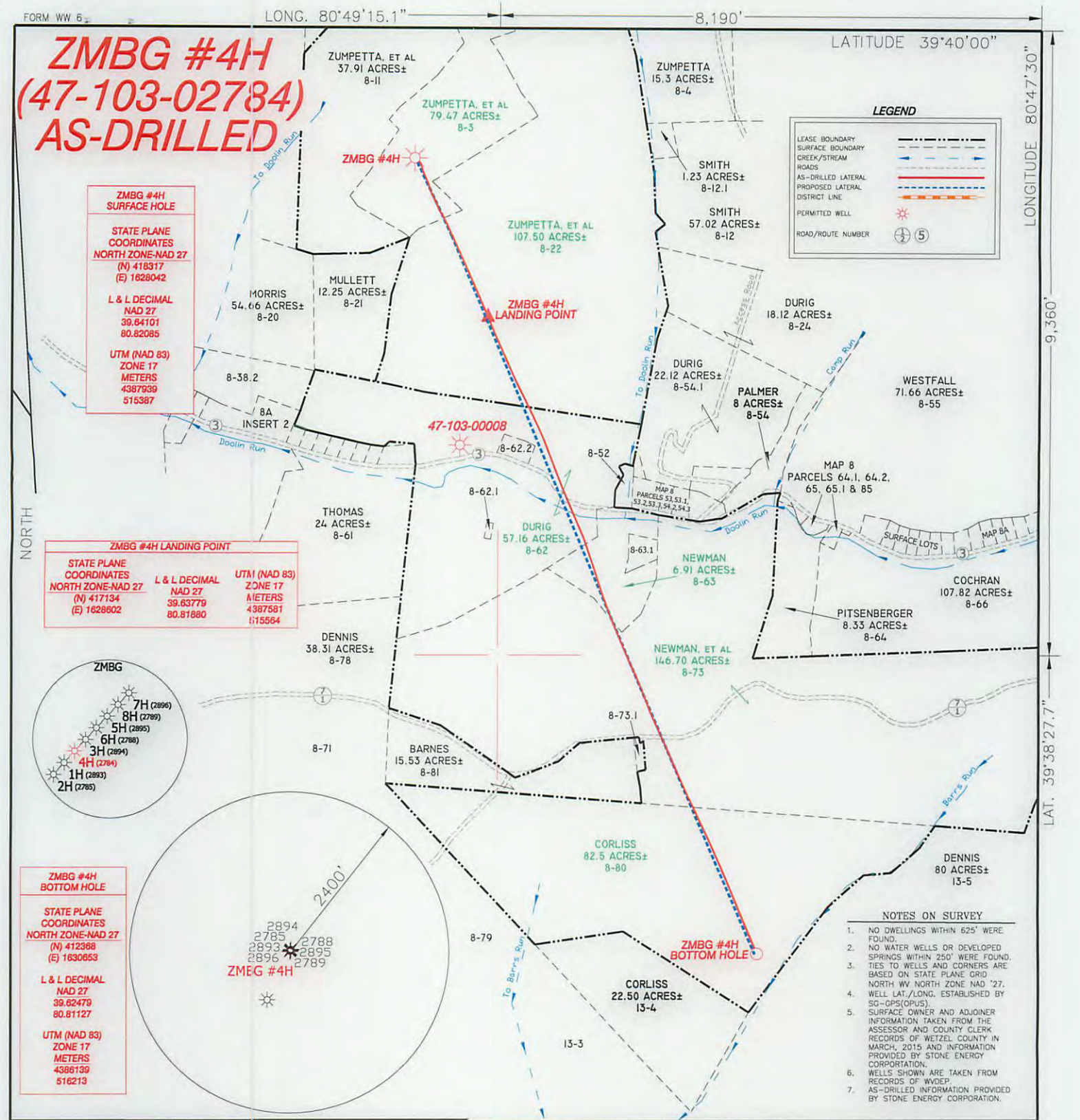
STATE PLANE COORDINATES
NORTH ZONE-NAD 27
(N) 412388
(E) 1630653

L & L DECIMAL
NAD 27
39.62479
80.81127

UTM (NAD 83)
ZONE 17
METERS
4386139
516213

LEGEND

- LEASE BOUNDARY
- SURFACE BOUNDARY
- CREEK/STREAM
- ROADS
- AS-DRILLED LATERAL
- PROPOSED LATERAL
- DISTRICT LINE
- PERMITTED WELL
- ROAD/ROUTE NUMBER



- NOTES ON SURVEY**
- NO DWELLINGS WITHIN 625' WERE FOUND.
 - NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250' WERE FOUND.
 - TIES TO WELLS AND CORNERS ARE BASED ON STATE PLANE GRID NORTH WV NORTH ZONE NAD '27.
 - WELL LAT./LONG. ESTABLISHED BY SG-GPS(OPUS).
 - 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.
 - WELLS SHOWN ARE TAKEN FROM RECORDS OF WVDEP.
 - AS-DRILLED INFORMATION PROVIDED BY STONE ENERGY CORPORATION.

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.

[Signature]

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 #4H
API WELL NO. 47-103-02784
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 480.24± **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 6,937' MD 12,614'

WELL OPERATOR STONE ENERGY CORPORATION DESIGNATED AGENT TIM MCGREGOR
ADDRESS P.O. BOX 52807 LAFAYETTE, LA 70508 ADDRESS 6000 HAMPTON CENTER SUITE B MORGANTOWN WV 26505

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