

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

API <u>47</u> - 103	02788 02788	County Wetze	el	District N	Magnolia			
Quad New Martinsvill		Pad Name ZM		Field/Pool Name Mary				
Farm name Zumpetta,		1			mber #6H			
Operator (as registered v			orporation	7(0.30) 33				
Address 1300 Fort Pie	erpont Dr Su	ite 201 City M	lorgantown	State	WV	Zip 26508		
	AD 83/UTM	Attach an as-dri	lled plat, profile v	iew, and deviation Easting 515,39				
Landing Point of		rthing 4,387,762		Easting 515,74				
Botto	m Hole No	rthing 4,386,312		Easting 516,37	74			
Elevation (ft) 1,341 Permit Type Devia Type of Operation Co Well Type Brine Disp Type of Completion S Drilled with Cable Drilling Media Surface Production hole Air Mud Type(s) and Additi	onvert □ Dee oosal □ CBM Single □ Multip ■ Rotary hole ■ Air ■ Mud □ F	zontal Horiz pen Drill Gas Oil S ele Fluids Pro	Secondary Recover duced Brine Vater Interm	rtical Dept Redrilling ry Solution Mi	th Type Rework ning Storag	Interim Final Deep Shallow Stimulate ge Other Other Fresh Water Brine		
Saturated salt mud w	hich includes	Caustic Soda, E	Barite, Lime, Nev	v-Drill, Perma-L	ose HT, Xa	n-Plex D, X-Cide 102		
Soda Ash, and Sodiu	ım Chloride							
Date permit issued 9/14 Date completion activitie Verbal plugging (Y/N)	es began	Date drilling con 8/6/2014 e permission gran	Date complet	3/2013 Da ion activities ceas Grante		sed5/28/2014 5/2015		
Please note: Operator is	required to subn	nit a plugging appl	ication within 5 da	ays of verbal perm	nission to plug	INED ORS		
Freshwater depth(s) ft	1	00	Open mine(s)	(Y/N) depths	REC	and Gas		
Salt water depth(s) ft	None Re	ported		ntered (Y/N) dept		Nants		
Coal depth(s) ft	1,152	2		ountered (Y/N) de	430	IG 2 N		
Is coal being mined in are	ea (Y/N)	N			EUNIC	Reviewed by:		

API 47- 103	027848	Form no	Z	umpetta, La	wrence et al	Wall -	number_#6H	
			iiiie		<u>-</u>	W C11 1	iuiiioci	
CASING STRINGS	Hole Size	Casing Size	n		w or Grade		asket	Did cement circulate (Y/ N
Conductor	24"	20"			sed wt/ft lew	LS	epth(s)	* Provide details below* N - GTS
Surface	17.5"	13.375"					23' & 246'	Y-CTS
Coal	17.5"	13.375"					23' & 246'	Y-CTS
ntermediate I	12.25"	9.625"				J55	25 & 240	Y-CTS
ntermediate 2	12.20	0.020		004				1-010
ntermediate 3								
Production	8.75"	5.5"	12	.630' N	lew F	2110		N - TOC @ 2,154'
Tubing	N/A	2.375"				J55		N/A
acker type and d		2.070	* 1	304		000		1974
Comment Details TOC on 5.5" after n	Circulated 37 bbls ounning CBL @ 2,154*.	cement to surface on 1	3.375" ca	sing string. Circulat	ed 10 bbls cement to s	urface on the 9.629	5" casing string.	
CEMENT DATA	Class/Type of Cement	Numbe of Sack		Slurry wt (ppg)	Yield (ft ³/sks)	Volume (ft ²)	Cemen Top (MI	
Conductor	Type 1	34		15.6	1.18	40	Surfac	
Surface	Class "A"	980		15.6	1.21	1,186	Surfac	e 8.0
Coal	Class "A"	980		15.6	1.21	1,186	Surfac	e 8.0
ntermediate 1	Lead-10% Salt Tail-Cla	ss A Lead-680 Ta	ail-250	Lead-15.6 Tail 15.6	Lead-1.24 Tail-1.21	Lead-843 Tail-30	3 Surfac	e 8.0
ntermediate 2								
ntermediate 3								
roduction	Lead-TunedSpacer Tall-V	eriCem Lead-178 Tai	I-2,340	Lead- 14.5 Tail-15.2	Lead-2.37 Tail-1.20	Lead-422 Tail-2,80	8 2,154	7.0
ubing								
•) 12,635 MD / 6,929 tion penetrated cedure				gers TD (ft) N/A g back to (ft)			
Cick off depth	(ft) 5,928 MD / 5,990 line logs run	7' TVD □ caliper □ neutron			deviated/directi gamma ray		uction nperature	□sonic
Vell cored	Yes No	Convention	onal	Sidewall	w	ere cuttings c	ollected •	Yes □ No
points 3, 6, 9, 12, 15, 18, 2 Production casing ha	21, 24, 27 and 30. Intermedia d rigid spiral centralizer	ate casing had bow spring cer	tralizers pla joint begi	ced on joints 3, 6, 9, 12, 1	5, 18, 23, 26, 29, 32, 35 and	38. 59 rigid spiral centra	lizers. Ran Bow sp	spring centralizers placed on wring centralizers on every eighth jo
WAS WELL (COMPLETED A	AS SHOT HOLE		Yes 🖪 No	DETAILS		RECE	IVED Gas
WAS WELL (COMPLETED C	OPEN HOLE?	□ Ye	s 🖪 No	DETAILS _	(- 10 ου 19C	327 2015
WERE TRAC	ERS USED 🗆	Yes • No	TYI	PE OF TRACE	ER(S) USED _		All	208 17 10000
							EUNING!	(1) 10/00/21

API 47- 103 _ 0278 Farm name Zumpetta, Lawrence et al ____Well number #6H

PERFORATION RECORD

Stage		Perforated from	Perforated to	Number of	
No.	Perforation date	MD ft.	MD ft.	Perforations	Formation(s)
1	8/12/14	12,410	12,509	72	Marcellus Shale
2	8/23/14	12,219	12,357	72	Marcellus Shale
3	8/24/14	12,014	12,147	72	Marcellus Shale
4	8/25/14	11,802	11,947	72	Marcellus Shale
5	8/26/14	11,604	11,742	72	Marcellus Shale
6	8/27/14	11,394	11,545	72	Marcellus Shale
7	8/28/14	11,184	11,331	72	Marcellus Shale
8	8/29/14	10,974	11,127	72	Marcellus Shale
9	9/2/14	10,760	10,911	72	Marcellus Shale
10	9/3/14	10,554	10,699	72	Marcellus Shale
11	9/4/14	10,345	10,497	72	Marcellus Shale
12	9/5/14	10,143	10,287	72	Marcellus Shale
13	9/6/14	9,924	10,083	72	Marcellus Shale
14	9/7/14	9,714	9,863	72	Marcellus Shale
15	9/10/14	9,504	9,657	72	Marcellus Shale
16	9/11/14	9,294	9,447	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	84.3	7,371	5,674	4,516	319,260	6,228	- varogen outer (units)
2	8/24/14	85.5	7,657	5,967	5,163	365,400	7,017	
3	8/25/14	85.3	7,905	6,548	5,228	362,300	6,832	
4	8/26/14	82.6	7,612	5,729	5,380	361,000	6,652	
5	8/27/14	85.5	7,746	5,663	5,207	351,404	6,801	
6	8/28/14	80.3	7,875	6,295	4,955	165,060	5,234	
7	8/29/14	84.8	7,465	6,084	5,119	343,550	6,715	
8	9/2/14	75.2	8,351	5,904	5,265	251,410	8,519	
9	9/3/14	77.5	7,704	6,618	4,354	362,520	6,869	
10	9/4/14	78.0	7,273	6,305	4,883	359,574	6,867	
11	9/5/14	80.0	7,073	6,136	4,972	360,600	6,680	
12	9/6/14	77.0	7,509	6,395	4,796	262,040	5,974	
13	9/7/14	74.4	8,493	6,315	4,500	130,900	_5,189	Gas
14	9/8/14	77.8	7,682	7,178	5,265	362,460 ^{\(\)}	7,546	
15	9/11/14	80.4	7,252	6,066	5,442	364, <u>960</u> ු		216
16	9/12/14	80.8	7,443	6,460	5,471	368,560	6,629	<u> </u>

Please insert additional pages as applicable.

10/09/2015

Farm name_Zumpetta, Lawerence et al API 47- 103 _ 02788 _Well number_#6H

PERFORATION RECORD

Stage		Perforated from	Perforated to	Number of	
No.	Perforation date	MD ft.	MD ft.	Perforations	Formation(s)
17	9/12/14	9,084	9,238	72	Marcellus Shale
18	9/13/14	8,869	9,027	72	Marcellus Shale
19	9/14/14	8,666	8,817	72	Marcellus Shale
20	9/15/14	8,454	8,607	72	Marcellus Shale
21	9/16/14	8,239	8,392	234	Marcellus Shale
22	9/18/14	8,040	8,178	72	Marcellus Shale
23	9/21/14	7,821	7,977	108	Marcellus Shale
24	9/22/14	7,617	7,767	72	Marcellus Shale
25	9/22/14	7,391	7,553	72	Marcellus Shale

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage	Stimulations	Ave Pump	Ave Treatment	Max Breakdown		Amount of	Amount of	Amount of
No.	Date	Rate (BPM)	Pressure (PSI)	Pressure (PSI)	ISIP (PSI)	Proppant (lbs)	Water (bbls)	Nitrogen/other (units)
17	9/13/14	80.7	7,179	6,088	5,471	360,260	6,660	
18	9/14/14	80.5	6,904	6,171	5,561	359,500	6,631	
19	9/15/14	80.4	6,993	5,847	5,677	367,400	6,729	
20	9/16/14	80.3	7,250	6,824	5,412	360,720	6,438	
21	9/17/14	78.1	8,279	7,915	5,778	144,100	8,508	
22	9/19/14	80.0	7,288	6,925	5,471	362,040	6,603	
23	9/22/14	67.6	8,817	6,921	5,894	15,000	4,245	
24	9/22/14	79.8	6,936	6,821	5,259	354,460	6,610	
25	9/23/14	80.2	6,981	6,693	5,289	364,440	6,451	
							-11	ED 625
							REUT	MUQ CO
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							DULA	nd Of
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							MN De	10/09/201
Please	insert addition	onal pages as a	pplicable.				"UOVI	1911
							Family	40/00/004
								10/09/201

10/09/2015

API 47- 103	_ 0278 4	Farm i	_{name} Zumpet	ta, Lawren	ice et al	Well number_#6H
PRODUCING Marcellius Shale	FORMATION(S		DEPTHS 6,875' to 6,929'	_ TVD 	7,395' to 12,509	9' MD
Please insert ad	lditional pages a	 s applicable.		 -		
GAS TEST	Build up □	Drawdown	■ Open Flow	(OIL TEST _ F	low 🗆 Pump
SHUT-IN PRE	SSURE Surfa	ace 2,558	_psi Botto	m Hole <u>4,357</u>	calculated psi	DURATION OF TEST 67 hrs
OPEN FLOW	Gas 1,703 mcf	Oil pd t	NGL opd 32.4		Water 60.6 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 F MD		OCK TYPE AND RECORD QUANTITYAND UID (FRESHWATER, BRINE, OIL, GAS, H2S, ETC)
See Attached Sheet	0		0			
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Drilling Contra	ditional pages a ctor Nomac (top lartins Branch Rd /	-hole) & Saxon			is / The Woodland	s State PA / TX Zip 25312 / 77381
Logging Compa	any Scientific Dr	illing and Schlu 178 US HWY 33 E	mberger East City	Finleyville /	Weston	State PA / WV Zip 15332 / 26452
Cementing Cor Address 1628 Ja	npany Halliburto	'n	City	Jane Lew		State WV Zip 26378
Stimulating Co Address 1178 U	mpany Schlum	berger	City	Weston		State WW Zip 26452 Office 2 7 2015 304-225-1600 NUG 2 7 2015 Date 8/25/2015 AND PROCESSOR
	ditional pages a	s applicable.	City			- 3005 - 3015
	W. Lee Hornsby				Telephone	304-225-1600 ANG 27 100 101 101
Signature	WCP-L	by I	Title D	rilling Enginee	er	Date 8/25/2015 25 15 10 10 10 10 10 10 10 10 10 10 10 10 10
Submittal of H	ydraulic Fracturi	(ing Ch emical I	Disclosure Info	rmation	Attach copy of	304-225-1600 AND 27 CONTROL OF TRACFOCUS Registry 10/09/20

ZMBG #6H API 47-103-02788 Stone Energy Corporation

Horizontal

	Тор	Тор		Bottom (ft	Bottom
	(ft TVD)	(ft MD)		TVD)	(ft MD)
Sandstone & Shale	Surface		*	1,152'	FW @ 100'
Coal	1,152'		*	1,154'	
Sandstone & Shale	1,154'		*	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'		*	5,905'	5,925'
Rhinestreet	5,905'	5,925'	~	6,481'	6,574'
Cashaqua	6,481'	6,574'	~	6,646'	6,809'
Middlesex	6,646'	6,809'	~	6,671'	6,839'
West River	6,671'	6,839'	~	6,728'	6,968'
Geneseo	6,728'	6,968'	~	6,747'	6,998'
Tully Limestone	6,747'	6,998'	~		6,788'
Hamilton Shale	6,788'	7,088'	~	6,831'	7,196'
Marcellus	6,831'	7,196'	~	6,929'	12,635'
TD				6,929'	12,635'

^{*} From Pilot Hole Log and Driller's Log

[~] From MWD Gamma Log

Hydraulic Fracturing Fluid Product Component Information Disclosure

9/23/2014	Fracture Date:
: West Virginia	State:
: Wetzel County	County/Parish:
47-103-02788	API Number:
Stone Energy	Operator Name:
ZMBG #6H	Well Name and Number:
515,395	Longitude:
4,387,949	Latitude:
	Long/Lat Projection:
Natural Gas	Production Type:
6929	True Vertical Depth (TVD):
6944113	Total Water Volume (gal)*:

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		87.94984%	
		Additive , 1 Topping	Crystalline silica	14808-60-7	98.12723%	11.82449%	
			Hydrochloric acid	7647-01-0	1.10354%	0.13298%	
			Ammonium sulfate	7783-20-2	0.16211%	0.01953%	
			Polyethylene glycol	31726-34-8	0.07752%	0.00934%	
			Glutaraldehyde	111-30-8	0.05975%	0.00720%	
			Diammonium peroxidisulphate	7727-54-0	0.03176%	0.00383%	
			Urea	57-13-6	0.02702%	0.00326%	
			Dicoco dimethyl quaternary ammonium	61789-77-3	0.00596%	0.00072%	
			Trisodium ortho	7601-54-9	0.00447%	0.00054%	
			Ethylene Glycol	107-21-1	0.00447%	0.00054%	
			Sodium erythorbate	6381-77-7	0.00438%	0.00053%	
			Calcium chloride	10043-52-4	0.00145%	0.00017%	
			Methanol	67-56-1	0.00064%	0.00008%	
			Thiourea formaldehyde	Proprietary	0.00032%	0.00004%	
			Aliphatic acids	Proprietary	0.00025%	0.00003%	
			Propargyl alcohol	107-19-7	0.00011%	0.00001%	
			Aliphatic alcohols, ethoxylated #2	Proprietary	0.00011%	0.00001%	
			Olefin hydrocarbon	Proprietary	0.00005%	0.00001%	
			Hexadec-1-ene	629-73-2	0.00002%	< 0.00001%	
			Formaldehyde	50-00-0	< 0.00001%	< 0.00001%	

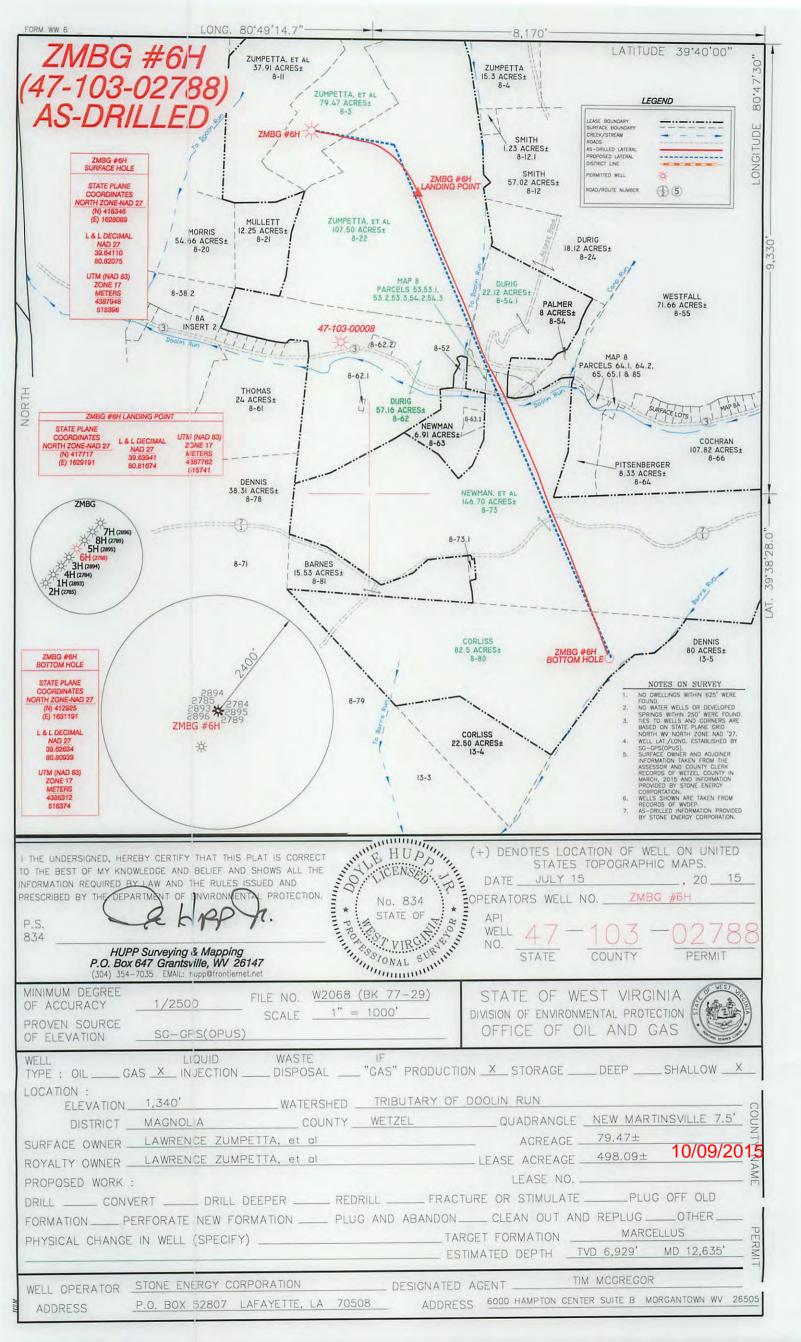
^{*} Total Water Volume sources may include fresh water, produced water, and/or recycled water

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

MN Debuist

^{**} Information is based on the maximum potential for concentration and thus the total may be over 100%

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