02/12/2016

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

API 47 - 043 - 034	481 County LIN	ICOLN	Dist	rict DUVAL		
Quad GRIFFITHSVILLE 7			Fiel	d/Pool Name	RIFFITH	ISVILLE
Farm name JOHNSON, J.,			We			
Operator (as registered with the		YLLC				
Address 5260 DuPONT Ro	OAD City	PARKERSBU	IRG	State WV	Zip	26101
As Drilled location NAD 8. Top ho	ole Northing 4,232,295	-drilled plat, profi 5 M	Easting	416,145 M		
Landing Point of Cur	The state of the s	2.54	_ Easting _			
Bottom Ho	Northing 4,232,303	1101	Easting_	416,031 M		
Elevation (ft) 970'		Vell ≣New □ E		Type of Report		
Permit Type   Deviated	□ Horizontal □ Ho	rizontal 6A 🛛	Vertical	Depth Type	□ Deep	Shallow
Type of Operation □ Conver	t □ Deepen 📱 Drill	□ Plug Back	□ Redrilling	□ Rework	□ Stimu	late
Well Type 🗆 Brine Disposal	□ CBM □ Gas □ Oil	Secondary Rec	overy   Solution	on Mining   St	orage 🗆	Other
Type of Completion ■ Single Drilled with □ Cable ■ R	e □ Multiple Fluids F otary	Produced □ Brin	e □Gas □	NGL <b>≜</b> Oil	□ Other	
Drilling Media Surface hole	■ Air □ Mud ■Fres	h Water In	termediate hole	Air □ Muc	I ■ Fresh	Water □ Brin
Production hole ■ Air □ N				0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	20 2 0 7 10 10 10	0.00
Mud Type(s) and Additive(s) N/A						
Date permit issued 6/30	)/15 Date drilling	commenced	11/5/15	Date drilling	ceased	11/12/15
Date completion activities beg		Date com				
	Date permission gr			Granted by		
verbai piugging (1714)	Date permission gi	anteu		manied by		
Please note: Operator is requi	red to submit a plugging a	a Managaran	100		100	
Freshwater depth(s) ft	None	Onen mine	c(s) (Y/N) depths	RECE	IVED .	
Salt water depth(s) ft	1160'	Void(s) en	countered (V/N)	Office of O	il and C	ne
Coal depth(s) ft	587'- 592'	Cavern(s)	encountered (Y/	N) dentles C 1	0 2015	one
Is coal being mined in area (Y	. V. King		onsountered (17.			
and the second s			E	WV Depa	artment tal Prot	end by: ection

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API 47- 043	_ 03481	Farm na	me_JOHNSO	N, J., LO\	/EJOY	Wel	l number 153	
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	12 1/4"	11 5/8"	30'	Used		LS	• ``	Sand In
Surface	8 3/4"	7"	636'	New		LS	64'	Y
Coal								
Intermediate 1								
Intermediate 2								
Intermediate 3								· -
Production	6 1/4"	4 1/2"	2767.1'	New	J	-55		Υ
Tubing								
Packer type and de	epth set	- · · · · · · · · · · · · · · · · · · ·	<del></del>					
Comment Details	Circulated Est. 50	sks to surface on 7" surfa	ce cement job. Circu	lated Est. 25 sks	to surface or	n 4 1/2" cement	job.	
CEMENT	Class/Type	Number	Slurry	, <u> </u>	ield /	Volume	Cemer	nt WOC
DATA	of Cement	of Sacks	wt (ppg		³/sks)	( <u>fl.<sup>3</sup></u> )	Top (M	
Conductor	<del></del>							
Surface	Reg Neat	160	15.6		1.18	189	Surfac	e 8
Coal								
Intermediate 1	-							
Intermediate 2								
Intermediate 3								
Production Tubing	50:50 Pozmi	x 120/125	13.2/14	.2 1.6	4/1.27	197/186	198'	8
Drillers TD (ft Deepest forma Plug back pro-	tion penetrated	Berea		Loggers T Plug back				
Kick off depth	, ,	■ caliper	density resistivity	■ deviate	ed/direction		nduction emperature	□sonic
Well cored	Yes B No	Convention	nal Sidew	all	W	ere cuttings	collected =	Yes □ No
		IZER PLACEME! efizer placed mild string on 7°	NT USED FOF	R EACH CA	ASING ST	TRING		
WAS WELL C	COMPLETED A	AS SHOT HOLE	□ Yes 🖪	No DE	TAILS			RECEIVED Office of Oil and Gas
WAS WELL C	COMPLETED (	OPEN HOLE?	□ Yes 📱 No	DETA	AILS			
WERE TRACI	ERS USED 🗆	Yes A No	TYPE OF TR	ACER(S) U	JSED		Er	WV Department of nvironmental Protecti

API 47- 043 - 03481 Farm name JOHNSON, J., LOVEJOY Well number 153

## PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	12/2/15	2605'	2615'	40	Berea
	-	·			
<del></del>					
		······································			
				1	
				1	
				<u> </u>	
-				<del> </del>	
<u> </u>					
				<u> </u>	

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	12/4/15	4	1033	2406	948	1,000	154	
			-					
		-						
								-
<del></del>				† <u>-</u>				
				<del></del>				
			.,		<del></del>			
				<del> </del>				
							-, ,,	<del></del>
				<del> </del>			REC	EIVED Oil and Gas
<u> </u>						<del>                                     </del>	Office of	Oil and Gas
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						<u> </u>	DEC	1 0 2015
	L					1		

Please insert additional pages as applicable.

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API 47- 043	03481	Farm	<sub>name</sub> JOHNS	ON, J., LO	VEJOY_ <sub>V</sub>	ell numbe	<sub>r</sub> 153	
PRODUCING	FORMATION(	S)	<u>DEPTHS</u>					
Berea				mr.m. 2	יאפטי יאפטאי			
Delea		<del></del> -	2400 - 2401	_ TVD	2602'- 2624'	MD		
		<del></del> -						
Please insert ac	Iditional pages a	as applicable.		_				
GAS TEST	□ Build up □	Drawdown	□ Open Flow	0	IL TEST - Flow	□ Pump		
SHUT-IN PRE	SSURE Surf	àce	_psi Botto	om Hole	psi DU	RATION C	OF TEST hrs	
OPEN FLOW	Gas	Oil	NGL	Ţ	Water GA	AS MEAST	IRED BY	
			bpd	bpd	bpd 🗆 I	Estimated	☐ Orifice ☐ Pilot	
		·	-		<del></del> •			
LITHOLOGY/	TOP	воттом	TOP	воттом				
FORMATION	DEPTH IN FT	DEPTH IN FT	DEPTH IN FT		DESCRIBE ROCK	TYPE AND	RECORD QUANTITYAND	
	NAME TVD	TVD	MD	MD			ER, BRINE, OIL, GAS, H₂S, ET	C)
Sand/Shale	0	587	0	587				<u>-/</u>
Pittsburgh Coal	587	592	587	592				
Sand/Shale	592	1750	592	1836				
Big Lime	1750	1948	1836	2056				
Big Injun	1948	2050	2056	2168				
Shale	2050	2440	2168	2580				
Coffee Shale	2440	2460	2580	2602				
Berea	2460	2481	2602	2624	Drilled d	irectional N	31° W a distance of 667'	
Shale	2481	2635	2624	2780				
TD	2635		2780					
Please insert ad	ditional pages a	s applicable.				-		
Drilling Contra	ctor Decker Drill	ing						
Address 11565	State Route 676		City	Vincent	St	ate OH	Zip 45784	
								_
Logging Compa	any Weatherford	I International						
Address 11000 I	Performance PL		City	Youngstown	St	ate OH	Zip <u>44502</u>	_
o	Universal	Santicas						
Cementing Con Address 14 Sew	npany Universal	Oel vices	O't-	Buckhannon	64	W/V	zt. 26201	
Address 14 3ew	el Flant Nu		City	DUCKHAIIIIIII	Sta	ate WV	Zip 26201	_
Stimulating Co.	mpany Produc	ers Service Cor	p.					
Address 109 So	uth Graham Street		City	Zanesville	Sta	ate OH	BECEIVED GO	<b>.</b>
	ditional pages a		·			O	用EGEIVED ffice of Oil and Gas	7
	Defa- Halina							
	Röger Heldman	Hotela -			Telephone 304-	420-1107	DEC 1 0 2015	
Signature	ya N	المالي المالي	Title _O	perations Mana	ger	Date	and Denestment Of	F
Submittal of Liv	ydraulic Fracturi	ng Chemical F	Sischooura Info	mation A	Attach conv of ED	/ CEOCTIC	WV Department of	ti∩ı
Saviilitai UI A)	Talauno Piaciuli	ing Chemicai L	visciosmie IIIIOI	manon P	macii copy oi FK/	TOTO HIS	Registratental Protec	01

Prepared for:

H G Energy

**Dustin Hendershot** 

304-481-7342



Prepared by:

**Producers Service Corp** 

Daniel L Graham

109 S. Graham St.

Zanesville, OH 43702

**Total Cost** 

740-454-6253

INVOICE #:	1942

WELL NAME:

E J May #153

COUNTY/STATE:

Lincoln WV

TOWNSHIP/FIELD: Griffithsville

DATE of SERVICE: 12/4/2015

Customer Approval:

CUSTOMER PO#:  Description	Notes	Amount	Units	Unit Cos
		1	EA	
FLUID PUMP CHARGE 0-3000 PSI MIN CHARGE 4 HRS		1	EA	
BLENDER CHARGE 0-10 BPM	2 Units @200 Miles		MI	
MILEAGE CHARGE PER UNIT ONE WAY	Z Units @Z00 miles	250	GAL	
C ACID 15%		0.5	GAL	
PRO HIB II		4	HR	
ACID DELIVERY		6	GAL	
PRO CLA FIRM LP		6	GAL	
PRO NE-21		150	· LB	
PRO GEL 4			LB	
BUFFER I		50		
DATA VAN		1	STAGE	
BIO CLEAR 750		1	LB	
IRONTROL		50	LB	
SAND 20/40 OTTAWA	H .	10		
SAND DELIVERY / TON MILES		100	TMILE	
	1			

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