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

API 47 - 043 -	03482 _{Cc}	unty LINCOLN		District DUVAL	
Quad GRIFFITHSVILL		d Name MAY, ED	NA	Field/Pool Name	RIFFITHSVILLE
Farm name JOHNSON,				_ Well Number _154	
Operator (as registered wi		ENERGY LLC			
Address 5260 DuPONT		City PARKE	RSBURG	State WV	Zip 26101
	p hole Northin	tach an as-drilled pla g 4,232,296 M g 4,232,522 M	Eas	nd deviation survey sting 416,149 M sting 416,232 M	
Elevation (ft) 970'	GL	Type of Well ■Ne	w □ Existing	Type of Report	□Interim ■Final
Permit Type 📱 Deviat	ed 🗆 Horizonta	l Horizontal 6	A □ Vertical	Depth Type	□ Deep ■ Shallow
Type of Operation □ Con	vert Deepen	■ Drill □ Plug	g Back □ Redr	illing Rework	□ Stimulate
Well Type □ Brine Dispo	osal □ CBM □ Ga	s □ Oil ■ Seconda	ry Recovery □ S	Solution Mining 🗆 St	orage 🗆 Other
Type of Completion ■ Si Drilled with □ Cable	ngle □ Multiple ■ Rotary	Fluids Produced	□ Brine □Gas	□ NGL ■ Oil	□ Other
Drilling Media Surface be Production hole Air Mud Type(s) and Additive N/A	□ Mud □ Fresh	nd BFresh Water Water B Brine	Intermediate	hole ■ Air □ Mud	i ■ Fresh Water □ Brine
Date permit issued		te drilling commence		Date drining	
Date completion activities	A 1			ivities ceased	12/4/15
Verbal plugging (Y/N)	N Date per	mission granted		Granted by	
Please note: Operator is re	equired to submit a p	olugging application	within 5 days of v	verbal permission to p RECEIVED Jepthy OII and G (Y/N) depths 2015	olug AS
Freshwater depth(s) ft _	None	Ope	en mine(s) (Y/N)	HEUDII and G	None
Salt water depth(s) ft		 Voi	d(s) encount	(Y/N) depths 2015	None
Coal depth(s) ft	587'- 592'	Cav	ern(s) encountere	d (YAA) tlepths	_ None
Is coal being mined in area		N	— Er	d (YME) depths WV Departmental Pro Wironmental Pro	otection Reviewed by

02/05/2016

Rev. 8/23/13								
API 47- 043	- 03482	Farm n	ame_JOHNS	ON, J. , LO	VEJOY	Well nu	ımber <u>154</u>	
CASING	Hole	Casing	Donah	New or	Grade wt/ft			d cement circulate (Y/N) Provide details below*
STRINGS Conductor	Size 12 1/4"	Size 11 5/8"	Depth 30'	Used Used	LS		oth(s) * 1	Sand In
Surface	8 3/4"	7"	636'	New	LS		64'	Y
Coal	0 3/4	,	030	IVEW		-	0-7	
Intermediate 1				 	-			
Intermediate 2				 -	 			
Intermediate 3					 			
Production			07040	ļ.,.	 .	-		<u>. </u>
Tubing	6 1/4"	4 1/2"	2764.9'	New	J-5	5		Y
Packer type and de	anth set							
Packer type and u	epui set							
Comment Details	Circulated Est. 75	sks to surface on 7" su	face cement job. Cir	culated Est. 15 sk	s to surface on 4	1 1/2" cement job.		
CEMENT DATA	Class/Type of Cement				Yield it ³/sks)	Volume (ft.¹)	Cement Top (MD)	WOC (hrs)
Conductor								
Surface	Reg Neat	160	15.	.6	1.18	189	Surface	8
Coal								
Intermediate 1								
Intermediate 2								
Intermediate 3								
Production	50:50 Pozm	ix 120/12	5 13.2/	14.2 1.6	64/1.27	197/186	116'	8
Tubing								
Drillers TD (ft Deepest forma Plug back prod	tion penetrated	Berea			TD (ft) 2814' to (ft) N/A			
Kick off depth	(ft)_650'							
Check all wire	line logs run	■ caliper ■ neutron	■ density ■ resistivity		ed/direction a ray			sonic
Well cored	Yes ≜ No	Conventi	onal Side	wall	Wer	e cuttings co	llected ■ Yes	s 🗆 No
						_		
		IZER PLACEM relizor placed mid string on 7"	ENT USED FO	OR EACH C	ASING STI	NING		
Le Calabia Con de la Constantina del Constantina del Constantina de la Constantina d	O	nation placed that saving on t						
WAS WELL C	COMPLETED .	AS SHOT HOLE	∵ □Yes 🖺	No Di	ETAILS _		SECE	IVED GES
WAS WELL C	COMPLETED	OPEN HOLE?	□ Yes 🛔 N	lo DET	AILS		Office of C	IVED Gas
WERE TRACI	ERS USED 🗆	Yes 🖪 No	TYPE OF T	RACER(S)	USED		UF1	
							MAD	ental Plots
							Environ	pepartment of protection mental Protection 02/05/20

	API	47- 043 -	03482	Farm name JOHNSON, J., LOVEJOY	Well number 154
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PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	12/2/15	2640'	2650'	40	Berea
					
-					
				 	
-				<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	1057	3023	975	1,000	149	
					_			
		· · · · · · ·				 		
-				1				
-								
			<u> </u>	 		<u> </u>		
						-	·	
		·						
								ED
							250	Elvend Gas
							77.04	Oll Sin
							Office	Cil and Gas

Please insert additional pages as applicable.

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WR-35 Rev. 8/23/13

API 47- 043	_ 03482	Farm	name_JOHNS	ON, J. , LC	OVEJOY	Well	numbe	r_154			
PRODUCING	FORMATION(<u>S)</u>	<u>DEPTHS</u>								
Berea			2460'- 2482'	TO IT	2635'- 2658') M					
Derea			2400-2402	_ 17D _	2000 - 2000	мл					
			_								
											
Please insert ad	lditional pages a	s applicable.									
GAS TEST	□ Build up □	Drawdown	□ Open Flow	(OIL TEST 🗆 B	low c	⊐ Pump)			
SHUT-IN PRE	SSURE Surf	ace	_psi Botto	m Hole	psi	DURA	TION (OF TES	т	hrs	
OPEN FLOW	Gas	Oil	NGL		Water	GASA	AE A CI	ו משמו	ev.		
				bpd	bpd	□ Estir	nated	ו שנואונ Ori □	fice [⊒ Pilot	
		• • • • • • • • • • • • • • • • • • • •		F =							
LITHOLOGY/	ТОР	воттом	ТОР	воттом							
FORMATION	DEPTH IN FT		DEPTH IN FT		T DESCRIBE F	OCK TY	PE AND	RECOR	D OUAN	TITYAND	
	NAME TVD	TVD	MD	MD	TYPE OF FL				-		TC)
Sand/Shale	0	587	0	587		<u> </u>		D.1., D.1.	, 0.12,	5115, 11 ₂ 5, 2	<u>10, </u>
Pittsburgh Coal	587	592	587	592							
Sand/Shale	592	1746	592	1852				_	-		
Big Lime	1746	1950	1852	2098							
Big Injun	1950	2050	2098	2212							
Shale	2050	2440	2212	2614							
Coffee Shale	2440	2460	2614	2635							
Berea	2460	2482	2635	2658	Drille	ed directi	onal N	25.5° E	a distand	ce of 700'	
Shale	2482	2634	2658	2811							
TD	2634		2811								
			 .								
	_										
Please insert ad	ditional pages a	s applicable.									
Drilling Contract	ctor Decker Drill	ing									
Address 11565 S	State Route 676		City	Vincent		State	ОН	Zip	45784		
_	10/					_					
Logging Compa	Weatherford	International		 ,			011				
Address 11000 F	Performance PL		City	Youngstown		_ State	OH _	Zip	44502		
Cementing Con	npany Universal	Services									
Address 14 Sew	er Plant Rd		City	Buckhannon		_ State	wv	7in	26201		
						_ State		Z ip .			
	npany Produce		p) _	
	uth Graham Street		City	Zanesville		_ State	OH	_Ze\	33X0+	4 Gas	
Please insert add	ditional pages as	s applicable.						FIEL	Oil si.	! ••	
G 11.1.	Poger Holdman					204 420	Ather.	CO C.		2015	
. , .	Roger Heldman		This Or	perations Man	Telephone _ ager	JU4-42U	- I Wr	27/18	C10	<u> </u>	.4
Signature	ya ,	runco	Title O	JOI GUULIS IVIBILE	ay o i		Date 1	ziii ipit	, -	_{∓m} ent ^C	wior
Submittal of Hy	draulic Fracturi	ng Chemical D	isclosure Infor	mation	Attach copy of	FRACF	ocus	Repitt	Debal	trnent of the last	Cuo.
							E	nviro	ULIO	02/05	/201
							_				

Prepared	for:
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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 #:	19412

E J May #154 WELL NAME:

Lincoln WV COUNTY/STATE:

TOWNSHIP/FIELD: Griffithsville

DATE of SERVICE: 12/4/2015

CUSTOMER PO#:

Customer Approval: _

Description	Notes	Amount	Units	Unit Cost	
FLUID PUMP CHARGE 0-3000 PSI MIN CHARGE 4 HRS		1	EA		+
BLENDER CHARGE 0-3000 F 31 Milk GHARGE 4 THRO		1	EA	4.7	
MILEAGE CHARGE PER UNIT ONE WAY	2 Units @200 Miles	400	MI		
IC ACID 15%		250	GAL		
PRO HIB II		0.5	GAL		
		4	HR		
ACID DELIVERY	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	6	GAL		
PRO CLA FIRM LP		6	GAL		
PRO NE-21		150	LB		
PRO GEL 4		50	LB		
BUFFER I		1	STAGE		
DATA VAN BIO CLEAR 750		1	LB		
IRONTROL		50	LB		
SAND 20/40 OTTAWA		10	CWT		
SAND 20/40 OTTAWA		100	TMILE		
SAND DELIVERY / TON MILES					

RECEIVED	Gas
Office of Oil and	

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