02/06/2015

WR-35 Rev. 8/23/13

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

API 47 - 033 - 0	05776	County HARRI	SON	District TEN MILE	<b>.</b>	
Quad WOLF SUMMIT				Field/Pool Name V	VOLF SUM	ИIT
Farm name HUFFMAN,				Well Number 234		
Operator (as registered wit	h the OOG)	I.G. ENERGY LI	LC	<del></del>		
Address 5260 DuPONT	ROAD	City PA	RKERSBURG	State WV	Zip 26	S101
As Drilled location NAJ Top Landing Point of Bottom	hole No Curve No	Attach an as-drill rthing 4,347,052 M rthing 4,347,235M	I	and deviation survey Easting 543,322 M Easting 543,437 M		
Elevation (ft) 1,168'	GL	Type of Well	■New □ Existing	Type of Report	t □Interim l	Final
Permit Type	ed 🗆 Hori	zontal 🗆 Horizo	ontal 6A 🛭 Vertica	al Depth Type	□ Deep	■ Shallow
Type of Operation □ Con			•	edrilling   Rework		
Well Type □ Brine Dispo	sal 🗆 CBM	□Gas BOil □Se	econdary Recovery	□ Solution Mining □ S	torage   Oth	ıer
Type of Completion ■ Si Drilled with □ Cable	ngle □ Multip ■ Rotary	ole Fluids Prod	luced 🗆 Brine 🗆 🗅 C	Gas □ NGL ■ Oil	□ Other	<del></del>
Drilling Media Surface h	nolo <b>m</b> Air	n Mud - BFresh W	ater Intermedia	ate hole ■ Air □ Mu	d 爲Fresh W	ater 🗆 Brine
Production hole  Air		resh Water Deri				
Mud Type(s) and Additiv						
Date permit issued	7/9/13	Date drilling con	nmenced 11/19/	/14 Date drilling	g ceased	12/7/14
Date completion activities	began	12/12/14	Date completion	activities ceased	12/23/14	
Verbal plugging (Y/N)	N Da	te permission grant	ed	Granted by	·	
Please note: Operator is re	equired to sub	nit a plugging appli	ication within 5 days	of verbal permission to	plug	
Freshwater depth(s) ft _	2	50'	Open mine(s) (Y/	N) depths	N	
Salt water depth(s) ft	N.	1	-	red (Y/N) depths	N	
Coal depth(s) ft	425'- 4	32'		tered (Y/N) depths	N1	
Is coal being mined in area				· · · · ·		
<u> </u>	,			eived Oil & Gas	Review	ed by:
			JAN 2	6 2015		02/06/2

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API 47-033	_ 05776	Farm na	ıme_H	UFFMAN	I, BRIAN	V.	We	ll numbe	<sub>r_</sub> 234		
CASING STRINGS	Hole Size	Casing Size		epth	New or Used	Grade wt/ft		Basket Depth(s)			circulate (Y/N) details below*
Conductor	12 1/4"	11 5/8"		30'	Used	ſ	LS				Sand In
Surface	8 3/4"	7"		507'	New		LS	64'			Y
Coal		•									
Intermediate 1							-	-			
Intermediate 2											
Intermediate 3											1
Production	6 1/4"	4 1/2"	30	69.7'	New		I-55				: Y
Tubing	0 1/4	4 1/2		-	11017						
Packer type and d	epth set								ı		1
Comment Details		ks to surface on 7° sur									
CEMENT DATA	Class/Type of Cement	Numbe of Sack		Slurry wt (ppg)		'ield ³/sks)	Volume (ft.²)	•	Cement Top (MD		WOC (hrs)
Conductor	or coment	01 040	OI Sacks				<u> </u>				- \/
Surface	Reg Neat	110		15.6	1	.18	130		Surface	•	8
Coal											
Intermediate 1											
Intermediate 2											
Intermediate 3											
Production	50:50 Pozmix	140/15	140/150		2 16	4/1.27	230/18	<u> </u>	Surface		8
Tubing	00.00 1 021111	110/10		13.2/14.2	- 1.5	.,	200/10				<del></del>
Drillers TD (ft Deepest forma Plug back pro	tion penetrated	Fifth Sand			Loggers T	• • • —					•
Kick off depth		☐ caliper ☐ neutron		ensity esistivity	△ deviate			induction tempera		□sonic	
	Yes A No HE CENTRALI			Sidewa			ere cutting	gs collect	ted 🗉 🦠	Yes □	No
	COMPLETED A			Yes A No	No DETA	ETAILS		Recei			
WERE TRACI	ERS USED 🙃	Yes 🛭 No	TY	PE OF TRA	ACER(S) U	JSED _		AN 26			

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API 47- 033 <sub>-</sub> 05776	Farm name_HUFFMAN, BRIAN V.	Well number_234	

## PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	12/12/14	2918'	2928'	40	Fifth Sand
				·	
			-		

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	12/23/14	10	1683	2382	1920	14,900	253	
								!
								: 
						ļ		
				-				
				<u> </u>	•	_		
				Heceive	<u>a</u>	<del>- </del>		
			C	Receive ffice of Oil	& Gas	<u> </u>		
<u></u>				JAN 2 6 20		1		

Please insert additional pages as applicable.

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API 47- 033	_ 05776		Farm	name HUFF	MAN, BRIA	AN V.		Well	number	234		
PRODUCING	FORMATIC	<u> </u>	!	<u>DEPTHS</u>								
Fifth Sand				2740'- 2752'	TVD	2916'- 2	928'	MD				
			<del></del>		1 \D			NID				
			<del></del>	· · · · · · · · · · · · · · · · · · ·								
Please insert ad	lditional page	es as	applicable.					<u></u>				
GAS TEST				□ Open Flow	v	OIL TE	ST 🗆 I	Flow (	⊐ Pump			
SHUT-IN PRE	SSURE S	Surfac	e	psi Bot	tom Hole		_psi	DURA'	TION C	F TEST		hrs
OPEN FLOW												
JEN FLOW		mcfpd	!	NGL bpd	, bpd _	water	bpd	GAS N □ Esti	MEASU mated	□ Orifi	Y ce i	⊐ Pilot
TITLIOT OCVI	TOD		POTTOM.	TOD	DOTTO							:
LITHOLOGY/ FORMATION	TOP DEPTH IN I		BOTTOM DEPTH IN FT	TOP DEPTH IN FI	BOTTOM DEPTH IN		י שמוקר:	ያብርዩ ሞላ	DE VVID	DECODE.	ייינו	TITYAND
OMMATION	NAME TV		TVD	MD MD	MD						-	GAS, H <sub>2</sub> S, ETC)
Sand/Shale	0		425	0	425		<u> </u>	OID (I KE	BIIWAI	DIC, DICHA	c, Oic,	UA3, 1123, E1C)
Pittsburgh Coal	425		432	425	432						_	
Sand/Shale	432		1782	432	1850							
Big Lime	1782		1854	1850	1930							<u> </u>
Big Injun	1854		1922	1930	2008							
Shale	1922		2336	2008	2474							
Fifty Foot	2336		2369	2474	2510							-
Shale	2369		2430	2510	2578							
Sand	2430		2576	2578	2738							
Shale	2576		2740	2738	2916							
Fifth Sand	2740		2752	2916	2928		D	rilled direc	ctional N	33° E a d	istance	of 795'
Shale	2752	_	2905	2928	3089							
TD	2905	_		3089		_						
21 : 1	J:4: 1 · · · · ·		1'. 11									
Please insert ad	ditional page	es as a	ipplicable.									
Orilling Contrac			<u> </u>									
Address11565 S	State Route 67	6		City	Vincent			_ State	OH	Zip <u>4</u>	5784	
	Weather	ford In	ternational									:
Logging Compa Address 777 Nor	th River Aven	ue		0	v Weston			04.4	WV	<b></b> 1	6452	
Audiess Noi	a. Turoi Areit			City	y <u>***ES(UI)</u>			_ State		Zip _2	.0402	
Cementing Com	npany Unive	rsal S	ervices									
Address Hall Rd				City	Buckhanno	วก		_ State	WV	Zip 2	6201	
	1.1-1							_				f
Stimulating Con	npany Univ	versal	Services		Des-12	_			1407		ale:	
Address Hall Rd	Jidi		12 1 1	City	Buckhanno	on		_ State	WV	Zip <u>4</u>	<b>UHIC</b>	Heceived CE ^* ^# % ( IAIN 3 8 2015
Please insert add	litional page	es as a	ppiicable.									IAN OR 201E
Completed by	Roger Heldn	nan,				Tole	nhone	304-420	-1107		•	30 2013
ignature	100	els.		Title	Operations Ma		himie		Date 1/	20/45		
igilatuici 🔏 🗸						ii iugui			I)ate 1/	ZU/ 13		



33.05776

Field Ticket - (This is not an invoice)  HG Energy LLC  5260 DUPONT RD	Start Date - Customer No.  AFE / PO No.	5069		Project No. Task No. Formation	Upper Devonian	
5260 DUPONT RD	AFE / PO No.	5069			Unper Devonian	
5260 DUPONT RD				Formation	Unner Devonian	
4447-01-44-1	11.7					
uni pada	I. I. T. man			n I I I I I I I I I I I I I I I I I I I	Opper Determine	
PARKERSBURG, WV 26101		Job Type Descripti		Operator Name	Donald Tiziani	
PARKERSBURG, WV 26101	Frac	1 Stage C	rosslink Frac	-	To	Weight
	Casing	New/Used	Size	From 1	2990	
Buckhannon		used	4.5			
	Tubing		i i de l'ambiga	9:45	Left Location	
2			3 4 4 4 4 4			Date
	Open Hole		Time	Date	No. of Shots	1000
	Perforations				No. of Shots	
	1				No. of Shots	
API#			Drilling Contractor		Max PSI Allowed	40
047-033-05776		1 -		Gross	Item	Net Amount
Description		Quantity			Discount	
		040,000		1 100000		
Unit Mileage Charge Trucks and Vans (Except Bulk Units), Per Unit Mile						
Crew & Light Duty Vehicle Mileage Charge, Per Unit Mile						
Transport Delivery Charge (4 Hr Minimum), Per Hr					1	
Proppant and Bulk Delivery Charges, Per Ton Mile						
Minimum Pump Charge, <1500 HP, 1st 4 Hrs						
0 - 10 BPM Computerized Blender, 1st 4 Hrs						
Treatment Van, (WINFRAC Data Monitoring or Similar)						
Unihib G		_				
LEB 10X - Lquid Enzyme Breaker					1 0	
Cla-Chek G						
Unilink 8.5 Crosslinker (Borate)						
Unigel 19 XL						
Iron Control - A (EC6673A)						
NE-90G						
Supersurf, Surfactant (Non-Ionic)			79 17			
15% HCI Acid, Area 1						
20-40 mesh White Sand, Area 1						
Proppant Pumping Charge, 20/40 mesh or smaller	CVVI	145.00				
					1 0,00	<u></u> 1
	- 112			1		
	A TOTAL					
	1 1 1		0			
	Till to the		-			
	11					
Milesea Calaulation Section	Unit of	Quantity				
			+			
Unit Mileage Charge Trucks and Vans (Except Bulk Units), Per Unit Mile			+			
	UNITS	75				
	711		Total			
Proppant and Bulk Delivery Charges, Per Ton Mile		tal	T			
	Miles					
Cement Delivery Charge	TM Landad Tot	tal .	-			
		(G)			7 7	
	-					
			-			
	Customer P	enresentative:				
x	Customer R	tepresentative:				
X  CUSTOMER AUTHORIZED AGENT SIGNATURE		tepresentative:				
1	County: Harrison Township: API #  047-033-05776  Description  Unit Mileage Charge Trucks and Vans (Except Bulk Units), Per Unit Mile Crew & Light Duty Vehicle Mileage Charge, Per Unit Mile Transport Delivery Charge (4 Hr Minimum), Per Hr Proppant and Bulk Delivery Charges, Per Ton Mile Minimum Pump Charge, <1500 HP, 1st 4 Hrs 0 - 10 BPM Computerized Blender, 1st 4 Hrs Treatment Van, (WINFRAC Data Monitoring or Similar) Unihib G LEB 10X - Lquid Enzyme Breaker Cla-Chek G Unilink 8.5 Crosslinker (Borate) Unigel 19 XL Iron Control - A (EC6673A) NE-90G Supersurf, Surfactant (Non-Ionic) 15% HCl Acid, Area 1 20-40 mesh White Sand, Area 1 Proppant Pumping Charge, 20/40 mesh or smaller  Mileage Calculation Section  Unit Mileage Charge Trucks and Vans (Except Bulk Units), Per Unit Mile Proppant and Bulk Delivery Charges, Per Ton Mile	County: Harrison Township: API# O47-033-05776 Perforations Perforations Depth  Description  Unit Mileage Charge Trucks and Vans (Except Bulk Units), Per Unit Mile Mi Transport Delivery Charges (4 Hr Minimum), Per Hr Proppant and Bulk Delivery Charges, Per Ton Mile Minimum Pump Charge, <1500 HP, 1st 4 Hrs 0 - 10 BPM Computerized Blender, 1st 4 Hrs 1 Treatment Van, (WINFRAC Data Monitoring or Similar) Unlith G LEB 10X - Lquid Enzyme Breaker Cla-Chek G Unigel 19 XL Unon Control - A (EC6673A) NE-90G Supersurf, Surfactant (Non-Ionic) 15% HCI Add, Area 1 20-40 mesh White Sand, Area 1 Proppant and Bulk Delivery Charges, Per Ton Mile  Mileage Calculation Section  Mileage Charge Trucks and Vans (Except Bulk Units), Per Unit Mile  Unit Mileage Charge Trucks and Vans (Except Bulk Units), Per Unit Mile  Unit Mileage Charge Trucks and Vans (Except Bulk Units), Per Unit Mile  Unit Mileage Charge Trucks and Vans (Except Bulk Units), Per Unit Mile  Unit Afficiation  Mileage Charges, Per Ton Mile  TM  Proppant and Bulk Delivery Charges, Per Ton Mile  TM  Proppant and Bulk Delivery Charges, Per Ton Mile  TM  Loaded Tol-Miles  TM	Tubing	Tubing Arrived on Location Open Hole Time  County: Harrison Perforations Description Unit of Measure Unit Mileage Charge Trucks and Vans (Except Bulk Units), Per Unit Mile Unit Mileage Charge Trucks and Vans (Except Bulk Units), Per Unit Mile Unit Mileage Charge Trucks and Vans (Except Bulk Units), Per Unit Mile Unit Mileage Charge Trucks and Vans (Except Bulk Units), Per Unit Mile Unit Mileage Charge Trucks and Vans (Except Bulk Units), Per Unit Mile Unit Mileage Charge Trucks and Vans (Except Bulk Units), Per Unit Mile Unit Mileage Charge Trucks and Vans (Except Bulk Units), Per Unit Mile Unit Mileage Charge Trucks and Vans (Except Bulk Units), Per Unit Mile Unit Mileage Charge Trucks and Vans (Except Bulk Units), Per Unit Mile Unit Gal Unit G	Tubing	Tubing

Version: 12-01-2014

Received Office of Oil & Gas

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