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

3594 API 47- 043 - 3/5/19 County LINCO	LN j	District DUVAL	
	GER HEIRS	Field/Pool Name GRIF	FITHSVILLE
Operator (as registered with the OOG) H.G. ENERGY LI	_C		
Address 5260 DuPONT ROAD City PA	ARKERSBURG	State WV	
As Drilled location NAD 83/UTM Attach an as-dril Top hole Northing 4,230,109 M	led plat, profile view, and East	l deviation survey ing 415,964 M	
Landing Point of Curve Northing Bottom Hole Northing 4,230,226 M	East	ing ing	
Elevation (ft) 940' GL Type of Well	■New □ Existing	Type of Report □I	nterim B Final
Permit Type Deviated Horizontal Horizontal	ontal 6A	Depth Type □	Deep Shallow
Type of Operation □ Convert □ Deepen ■ Drill	□ Plug Back □ Redril	lling □ Rework □	Stimulate
Well Type □ Brine Disposal □ CBM □ Gas ■ Oil □ Se	econdary Recovery	olution Mining	ge 🗆 Other
Type of Completion ■ Single □ Multiple Fluids Prod Drilled with □ Cable ■ Rotary	uced □ Brine □Gas	□ NGL ■ Oil □	Other
Drilling Media Surface hole ■ Air □ Mud ■ Fresh W Production hole ■ Air □ Mud □ Fresh Water ■ Brit Mud Type(s) and Additive(s) N/A	AUG 16	ment of	Fresh Water Brine
	Environmental	Protection	
Date completion activities began	nmenced7/11/19 Date completion acti ed	vities ceased8 Granted by	8/1/19
Please note: Operator is required to submit a plugging appli	cation within 5 days of v	erbal permission to plug	
Freshwater depth(s) ft None Salt water depth(s) ft 1110', 1180' Coal depth(s) ft 481'- 487'	Open mine(s) (Y/N) d Void(s) encountered (Cavern(s) encountered	Y/N) depths	None None None
Is coal being mined in area (Y/N)N	Revie Jan	WEG 19	Reviewed by:
	100		

XCV. 0/23/13								
API 47- 043	_ 3/5/19	Farm na	me_ROBER	rs, rand	Y & KELL	YWeil nu	mber_252	
CASING	Hole	Casing		New or	Grade	Bas	sket	Did cement circulate (Y/ N
TRINGS	Size	Size	Depth	Used	wt/ft	Dep	th(s)	* Provide details below*
Conductor	15"	13 3/8"	12'	New	L	s		Sand In
urface	8 7/8"	7"	549.55	New	L:	s	64'	Y
Coal								
ntermediate 1								
ntermediate 2								
ntermediate 3								
roduction	6 1/4"	4 1/2"	2574.661	New	L	s		N
ubing								
acker type and de	epth set							
Comment Details	Circulated Est. 40 s	sks to surface on 7" sur	face cement job. Did	not circulate cen	nent to surface o	on 4 1/2" cement jo	b.	
			"					
CEMENT DATA	Class/Type of Cement	Numbe of Sack			Yield ft ³ /sks)	Volume (<u>ft ³</u>)	Cement Top (MD	
Conductor								
Surface	Reg Neat	140	15.6	6	1.18	165	Surface	e 8
Coal								
ntermediate 1								
ntermediate 2						•		
ntermediate 3								
roduction	50:50 Pozmi	x 120/12	5 13.2/1	4.2 1.	64/1.27	197/186	300'	8
Tubing								
Drillows TD (A	+) 2640'	L	I	Loggorg	ΓD (ft) 2627		DECENT	D
Drillers TD (ft Deepest forma	tion penetrated	Berea			to (ft) N/A	0	RECEIVE of Oil ar	nd Gas
Deepest forma Plug back pro-	-			_ riug vaci	(11) 14/			W
ring back pro	cedule <u>wa</u>			•			AUG 16	7013
Kick off depth	ı (ft) 650'					En	WW Departm vironmental (nent of Protection
			= 1		. 1/1* .*	,		
Check all wire	eline logs run	a caliper	■ density		ited/directio			
		neutron	■ resistivity	/ 📕 gamn	na ray	■ tem	perature	□sonic
W-11 1	-Vor # N	O	anal City	wall	337.	auttim	allested = '	Vac 🗆 No
well cored	⊃Yes No	Conventi	onai Side	wali	we	ere cuttings co	mected =	1.62 140
DESCRIBE T	HE CENTRAL	IZER PLACEM	ENT USED FO	OR EACH C	CASING ST	'RING		
		ratizer placed mid string on 7"						
		20. 0						4
			∃ ⊓Ves ■	No E	ETAILS			
WAS WELL (COMPLETED .	AS SHOT HOLI			•			
WAS WELL (COMPLETED .	AS SHOT HOL			_			
117.81	COMPLETED : COMPLETED		□ Yes ■ 1					

API 47- 043 _ 3/5/19 Farm name ROBERTS, RANDY & KELLY Well number 252

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	7/23/15	2446'	2460'	56	Berea
	1,20,10				
				·	
				ļ <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	8/1/19	4	617	1567	751	1,000	140	
						RECE!	/ED	
<u> </u>						RECE!	and Gas	
-						AUG 1	2019	
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						WV Depa Environment	tment of	<u>,,</u>
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Please insert additional pages as applicable.

WR-35 Rev. 8/23/13

API 47- 043	_ 3/5/19	Farm	name_ROBER	TS, RAND	Y & KELLY Well number 252
PRODUCING 1	FORMATION()	<u>S)</u>	<u>DEPTHS</u>		
Berea			2396'- 2418'	TVD	2442'- 2464' MD
<u> </u>				_ 1 V D	WID .
		 -			
Please insert ad	ditional pages a	s applicable.		-	
GAS TEST	□ Build up □	Drawdown	□ Open Flow	(OIL TEST Flow Pump
SHUT-IN PRE	SSURE Surf	ace	_psi Botto	m Hole	psi DURATION OF TEST hrs
OPEN FLOW	Gas	Oil	NGL		Water GAS MEASURED BY
OI EN I EOW			bpd		bpd □ Estimated □ Orifice □ Pilot
		r ··			•
LITHOLOGY/	TOP	воттом	TOP	воттом	
FORMATION	DEPTH IN FT	DEPTH IN FT	DEPTH IN FT	DEPTH IN F	T DESCRIBE ROCK TYPE AND RECORD QUANTITYAND
	NAME TVD	TVD	MD	MD	TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
Sand/Shale	0	481	0	481	
Pittsburgh Coal	481	487	481	487	
Sand/Shale	487	1673	487	1704	
Big Lime	1673	1887	1704	1923	
Big Injun	1887	1983	1923	2022	
Shale	1983	2376	2022	2422	
Coffee Shale	2376	2396	2422	2442	
Berea	2396	2418	2442	2464	Drilled directional N 2° W a distance of 385'
Shale	2418	2593	2464	2640	RECEIVED
TD	2593		2640		RECEIVED Office of Cil and Gas
					AUG 16 2019
		-			
					WV Department of Environmental Protection
Please insert ad	lditional pages a	s applicable.		<u> </u>	Environment
Address 1070 S	ctor Noah Horn	well brilling	City	Vansant	State VA Zip 24656
Address 1070 S	andy valley Lane		City	Varisant	State VA Zip 24656
Logging Comp	any Weatherford	d International			
Address 13211	Old Hwy 50		City	Flora	State IL Zip 62839
Cementing Cor	npany Petroset	Services		10/200400	OH 72: 44691
Address P.O. B	0X 1076		City	Wooster	State OH Zip 44691
Stimulating Co	mpany Produc	ers Service Co	rp.		
	outh Graham Stree	t	City	Zanesville	State OH Zip 43701
	lditional pages a				
					224 122 4427
Completed by	Roger Heldman	1/1/1			Telephone 304-420-1107
Signature	for	puare-	Title O	perations Ma	Date 8/14/19
Submittal of H	ydraulic Fractur	ing Chemical	Disclosure Info	rmation	Attach copy of FRACFOCUS Registry

repared for:				Prepared by: Producers Service Corp	
IG Energy				Landon Brooks	
rd Euergy				109 S. Graham St.	
Oustin Hendershot	PRODUCERS SERVICE CORP.			Zanesville, OH 43702	
Justin Denacismot	JENTIVE VVNF.			740-454-6253	
INVOICE #; 22230					
WELL NAME: Hager HRS #252					
COUNTRY/STATE: Lincoln/WV		· · · · · · · · · · · · · · · · · · ·			
TOWNSHIP/FIELD: Griffithsville					
DATE of SERVICE: 8/1/2019					
CUSTOMER PO#:	<u> </u>	·····			
Description	Notes	Amount	Units	Unit Cost	Total Cost
LUID PUMP CHARGE 0-3000 PSI MIN CHARGE 4 HRS		1	EA		
RLENDER CHARGE 0-10 BPM		1	EA		
IILEAGE CHARGE PER UNIT ONE WAY	2 Units @ 200 miles		MI		
C ACID 15% PRO HIB II		250	GAL GAL		
CID DELIVERY		2			
PRO CLA FIRM LP		6	GAL.		
RO NE-21		6			
PRO GEL 4.0	<u> </u>	8	GAL		1984
AND 20/40 OTTAWA		10	CWT		
BIO CLEAR 750		1	LB		
RONTROL		50			
DATA VAN AND DELIVERY / TON MILES	<u> </u>	100			
AND DELIVER! I TON MILES		100	CMILE		
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Customer Approval:	- 1861, 1861				
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