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

API <u>47</u> -	04767	County ROANE		District_SMIT	HFIELD	
Quad LOONE	YVILLE 7.5'	Pad Name LONG		Field/Pool Na	me CLOVER	₹
Farm name KIN	IG, WILLIE			Well Number		
Operator (as reg	gistered with the OOG	H.G. ENERGY LLC	С			
Address 5260	DuPONT ROAD	City PAF	RKERSBURG	State W	/Z	<sub>ip</sub> 26101
As Drilled local	Top hole ng Point of Curve	Attach an as-drille Northing 4,285,299 M Northing Northing 4,285,512 M	d plat, profile viev	v, and deviation sur Easting 476,138 M Easting 476,167 M		
Elevation (ft)	1,038' GL	Type of Well	□New <b>å</b> Existing	g Type of F	Report □Interi	m <b>≜</b> Final
Permit Type	■ Deviated □ H	Iorizontal   Horizon	tal 6A 🗆 Vertic	cal Depth Ty	ype □ Dee	ep 📕 Shallow
Type of Operati	ion 🗆 Convert 🗆 🗈	Deepen □ Drill □	Plug Back 🗆 I	Redrilling	work 🗂 Stim	ıulate
Well Type □ E	Brine Disposal □ CBI	M □ Gas □ Oil 📕 Sec	ondary Recovery	□ Solution Mining	□ Storage □	⊐ Other
Drilled with	Surface hole □ Ai □ Air □ Mud	r □ Mud □Fresh Wat □ Fresh Water □ Brine	ter Intermed	Gas □ NGL ■		
	0/44/00					
Date permit issu	ned9/14/20	Date drilling comm		Date di	illing ceased _	N/A
_	activities began			activities ceased _	9/17/2	20 RECEIVED
Verbal plugging	g (Y/N) N	Date permission granted	<u> </u>	Granted by		NOV 0 6 2820
Please note: Op	perator is required to s	ubmit a plugging applica	ation within 5 days	of verbal permission	on to plug En	WV Deputiment of vironmental Profit
Freshwater dept	h(s) ft	None	Open mine(s) (Y	/N) depths	None	e
Salt water depth	n(s) ft	1750'	Void(s) encounte	red (Y/N) depths_	N	lone
Coal depth(s) for	No.	one	Cavern(s) encour	tered (Y/N) depths	1	Vone
Is coal being mi	ned in area (Y/N)	N			¥	

WR-35 Rev. 8/23/13

API 47- 087	04767	Farm na	nme_KING, W	/ILLIE		Well	number_10	06	
CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft		Basket Depth(s)		ment circulate (Y/ N
Conductor	12 1/4"	11 5/8"	30'	Used	1	LS	ochui(s)	· FIO	Existing
Surface	8 3/4"	7"	507'	New		LS	64'		
Coal	0 3/4		307	New		LO	04	-	Existing
Intermediate 1									
Intermediate 2									
Intermediate 3								-	
Production		4.460	0.5051	<u> </u>				-	
	6 1/4"	4 1/2"	2537'	New		-55			Existing
Tubing  Packer type and d		2 3/8"	2240'	New	J.	-55			
Comment Details	Circulated Est. 50 s	sks to surface on 7" surf	ace cement job. Circi	ulated Est. 20 sks	s to surface or	n 4 1/2" cement jo	ob. *Existing Cas	sing/Cement	program*
CEMENT DATA	Class/Type of Cement	Number of Sacks			Yield t <sup>3</sup> /sks)	Volume ( <u>ft <sup>3</sup></u> )	Cen Top (	nent (MD)	WOC (hrs)
Conductor									
Surface	Reg Neat	130	15.6	3	1.18	153	Sur	face	Existing
Coal									
Intermediate 1									
Intermediate 2									
Intermediate 3									
Production	50:50 Pozmix	95/125	13.2/14	4.2 1.6	4/1.27	156/186	54'		Existing
Tubing									
Drillers TD (ft Deepest forma Plug back pro  Kick off depth	cedure N/A	Big Injun		Loggers T Plug back					
Check all wire	eline logs run	□ caliper □ neutron  Conventio		□ gamma wall	We	□ te		□ Yes 1	ECEIVED of Oil and Gos
		ZER PLACEME		K EACH CA	TC DMICA	RING		WV D. Invironm	n- Parti
WAS WELL C	COMPLETED A	S SHOT HOLE	□ Yes ■	No DI	ETAILS				
WAS WELL C	COMPLETED C	PEN HOLE?	□ Yes · No	o DETA	AILS				
WERE TRAC	ERS USED 🗆	Yes No	TYPE OF TE	RACER(S) U	USED				

WR-35 Rev. 8/23/13

API 47- 087 - 04767 Farm name KING, WILLIE

\_\_\_\_Well number\_106

## PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	7/7/15	2350'	2360'	40	Big Injun

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	7/9/15	5	2278	2717	1502	2,500	148	
1	9/17/20	1	1665	1736	1278		10	2500 gals HCL
								7
								PEGEIVED
								NOV 0 6 2020
							<b>a</b> ,	WV Department of

Please insert additional pages as applicable.



API 47- <u>087</u>	_ 04767		Farm	<sub>name</sub> KING, V	VILLIE	Well number_106						
PRODUCING:	FORMATI	ON(S)		DEPTHS								
Big Injun				2068'- 2093'	TVD	2332'- 2	2368'	MD				
					_1 \D	10011	.000	IVID				
					_							
<del></del>			<del></del>	<del></del>								
Please insert ad	lditional pag	ges as a	pplicable.									
GAS TEST	□ Build up	□ Di	rawdown	□ Open Flow		OIL TE	ST 🗆	Flow	∃ Pump	)		
SHUT-IN PRE	SSURE	Surface		_psi Botto	om Hole		_psi	DURA'	TION (	OF TEST	hrs	
OPEN FLOW	Gas		Oil	NGL		Water		GAS	ÆASI	JRED BY		
				bpd				01101		□ Orifice	□ Pilot	
		•			- 1 5		•					
LITHOLOGY/	TOP		воттом	TOP	воттом	1						
FORMATION	DEPTH IN	FT D	EPTH IN FT	DEPTH IN FT	DEPTH IN	FT DES	SCRIBE :	ROCK TY	PE AND	RECORD QU	JANTITYAND	
	NAME TV	/D	TVD	MD	MD	TYI	PE OF FL	LUID (FRE	SHWAT	ER, BRINE, O	OIL, GAS, H <sub>2</sub> S, E	TC)
Sand/Shale	0		1400	0	1426							
Sand	1400		1420	1426	1450							
Shale	1420		1592	1450	1652							
Sand	1592		1742	1652	1848							
Shale	1742		1748	1848	1858							
Sand	1748		1762	1858	1878							
Shale	1762		1798	1878	1930							
Sand	1798		1948	1930	2152							
Big Lime	1948		2040	2152	2292							
Keener	2040		2068	2292	2332							
Big Injun	2068		2093	2332	2368		Dr	illed direct	ional N	10.7° E a dis	tance of 776'	
Shale	2093		2233	2368	2555							
TD	2233			2555				_				
Please insert ad	ditional pag	ges as ar	oplicable.									
			. ~									
Drilling Contract Address 11565 S				G:	Vincent			<b>G</b>	ОН	r: 457	'ΩΛ	
Address 11303 C	state Noute o	10		City	Vincent			_ State	ОН	Zip 457	04	
Logging Compa	any Weathe	rford Int	ernational									
Address 777 Nor	rth River Aver	nue		City	Weston			State	WV	Zip 264	52 REC	EIVED
											— €##88 <sub>6</sub> / (	ਗੀ and
Cementing Con		ersal Se	rvices								NOV 0	6 201
Address Hall Rd				City	Buckhanno	n		State	WV	Zip _262	01	
Stimulating Cor	nnony. Pro	oducers	Service Co	rp.							Env Depa	rtment
Address 109 Sou				City	Zanesville	=		State	ОН	Zip 437	01	
Please insert add			onlicable	City				_ state		Zip57		
	pag	, en an al	Pilouoio.									
Completed by	Roger Held	man /				Tele	ephone	304-420	-1107			
Signature	ga,	Ou	dia	Title O	perations Ma		_		Date 1	1/3/20		
			C1	Disclosure Info		A		CENT : ~=	10.07	Registry		

Daniel L Graham	Production bendershot  Parkersburg WV 26101  PRODUCERS SERVICE CORP.  Production bendershot  Production bendershot  Production bendershot  Production bendershot  Dan  209  209  209  209  209  209  209  20	iel L Graham S. Graham St.
Daniel L Graham PRODUCERS PRODUCES P	Dan Dan Dan Dan Dan Dustin hendershot Dan	iel L Graham S. Graham St.
PRODUCERS   199 S. Graham St.	Parkersburg WV 26101 PRODUCERS Dustin hendershot SERVICE CORP. Zan	
Description    Description   D	Dustin hendershot SERVICE CORP. Zan	
TIELD TICKET:   23830   740-454-6253		and the same of th
FIELD TICKET:   23830		454_6253
COUNTY/STATE: Rosse/WV   Clover		TOTURE
TOWNSHIP/FIELD: Clover  DATE of SERVICE: 9/17/2020  CUSTOMER POW:     Description	WELL NAME: Jackson Long #106	
DATE of SERVICE: 9/17/2020	COUNTY/STATE: Roane/WV	
CUSTOMER POW:  Description Notes Amount Units Unit Cost Total Cost  ACID PUMP CHARGE 1000-2000 PSI 1 EA  MILEAGE CHARGE PER UNIT ONE WAY 2 Mile  CACID 15% 2500 GAL  PRO NEI 3 GAL  PRO NE-1 2.5 GAL  PRO NE-1 2.5 GAL  PRO PEN 2.5 GAL  ACID DELIVERY 2 INR  DATA VAN 1 STAGE  Unit Cost Total Cost  Total Cost	TOWNSHIP/FIELD: Clover	
Description Notes Amount Units Unit Cost Total Cost  ACID PUMP CHARGE 1000-2000 PSI  MILEAGE CHARGE PER UNIT ONE WAY  C ACID 15%  2500 GALL PRO HIB II  3 GALL PRO HIB II  3 GALL PRO PEN  2.5 GALL PRO PEN  2.5 GALL PRO PEN  2.5 GALL PRO PEN  3 SALL PRO PEN  3 SALL PRO PEN  4 SALL PRO PEN  5 SALL PRO PE	DATE of SERVICE: 9/17/2020	
ACID PUMP CHARGE 1000-2000 PSI	CUSTOMER PO#:	
MILEAGE CHARGE PER UNIT ONE WAY C ACID 15% 2500 GAL PRO HIS II 3 GAL PRO HIS II 2.5 GAL PRO NE-1 2.5 GAL PRO PEN 2.5 GAL PRO SOL ACID DELIVERY 2 HR DATA VAN 1 STAGE  RECEIVED ORIGINAL OF SOL  SOL ACID DELIVERY ATA VAN 1 STAGE  NOV 0 G 2020	Description . Notes Amount Units	Unit Cost Total Cost
CACID 1989  PRO HIB II  PRO CLA FIRM LP  2.5 GAL  PRO PEN  2.5 GAL  PRO PEN  2.5 GAL  PRO SOL  25 GAL  ACID DELIVERY  2 HR  STAGE  Ustomer Approval:  STAGE  NOV 0 G 2020		
PRO ILB I		
PRO CLA FIRM LP PRO NE-1 PRO PEN PRO NE-1 PRO PEN PRO SOL PRO		
PRO NE-1 PRO SOL PRO S		
PRO SOL ACID DELIVERY 2 HR DATA VAN 1 STAGE  Ustomer Approval:  With the stage of Cit and Gas NOV 6 6 2020	PRO NE-1 2.5 GAL	
ACID DELIVERY  2 HR DATA VAN  1 STAGE  ustomer Approval:  NOV 0 6 2020		
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ustomer Approval:  Diffice of Oil and Gas NOV 0 6 2020		
ustomer Approval:  Office of Oil and Gas  NOV 0 6 2020	1 STAGE	
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Producers Service Corporation 109 South Graham Street Zanesville, OH 43701 (740) 454-6253 www.producersservicecorp.com

## Acid HG Energy

Company Rep: Dustin Treater: Daniel L Graham

9/17/2020

Well: Jackson Long #106 Roane County, WV

Casing		Tubing	Packers		
OD: 4.5"	OD: N/A	Size: N/A	Upper Make: N/A		
iD: N/A	Weight: N/A	Depth: N/A	Upper Depth: N/A		
Weight: 10.5 lb.	From: N/A		Lower Make: N/A		
TD: 2555 ft.	To: N/A		Lower Depth: N/A		
Pressures	Volumes:	Open Hole	Perforations		
PSI Test: N/A	Pad N/A	Size: N/A	# of Shots: N/A		
Breakdown: N/A	Treatment: 60 BBL	From: N/A	Top Perf: 2350 ft.		
Max: 1736 psi	15% Acid: 2500 Gal	To: N/A	Bottom Perf: 2360 ft.		
Average: 1665 psi	Total: 70 BBL				
Displacement: 1652 psi	Flush: 10 BBL				
Rates		Notes:			
Average: 1 bbl/min	Invoice #: 23830		•		

Invoice #: 23

Max: 1.6 bbl/min

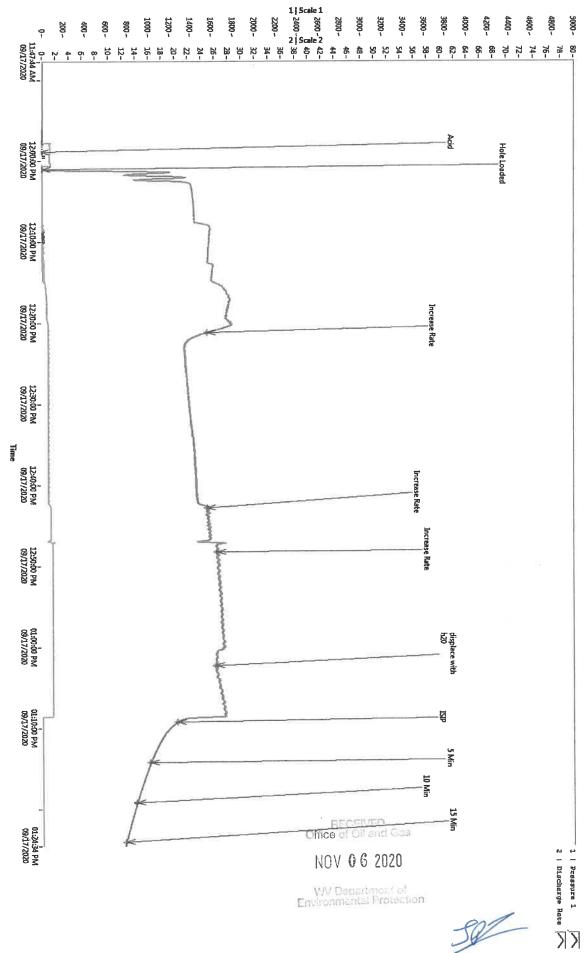
LIME

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+0.:00	10 1/2	10 1150	5 Min 1020.78	5 Min 1020 78		ISIP 1211.49	1017	ISIP 1275.97	displace with h20 1638.95	increase Rate 1654.94	1565.36	1565.06		Mole Loaded 2.80	// Acid -9.87		Pressure 1																
	_		. —	_	_	_	_	_	_	_	_	_	_	_	_	_	_		_			_		_	Ī				•			1.11 9.29	Discharge Rate Stage Total (gal)
																																	Grand Total (gal)
9.89	9.89	9.89	9.89	9.89	9.89	9.89	9.89	9.89	9.89	9.89	9.89	9.89	9.89	9.89	9.89	9.89	9.89	9.89	9.89	9.89	5	9.89		9.89	59.79	37.37	30.07	0,00	0	3.36	1.26	0.22	Stage Total (bbl)
69.71	69.71	69.71	17.69	69.71	69.71	69.71	69.71	69.71	69.71	69.71	69.71	69.71	69.71	69.71	69.71	69.71	69.71	69.71	69.71	69.71	200	69,71		69,71	59.79	37,37	30.07	20.00	20 0	3.36	1,26	0.22	Grand Total (bbl)

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