

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

MAR 19 2015

WV GEOLOGICAL SURVEY MORGANTOWN, WV

API <u>47</u> _ 087 _ 04750 County ROAM	NE District SMITHFIELD						
Quad LOONEYVILLE 7.5' Pad Name KINKEAD, S.B. Field/Pool Name CLOVER							
Farm name SNODGRASS, REVA ET AL Well Number 201							
Operator (as registered with the OOG) H.G. ENERGY L	LC Wen remove						
	ARKERSBURG State WV	Zip 26101					
As Drilled location NAD 83/UTM Attach an as-dri Top hole Northing 4,285,360 M  Landing Point of Curve Northing  Bottom Hole Northing	Easting						
Elevation (ft) 1,110' GL Type of Well	■New □ Existing Type of Report □In	terim <b>B</b> Final					
Permit Type   Deviated   Horizontal   Horizontal	ontal 6A   Vertical Depth Type	Deep   Shallow					
Type of Operation □ Convert □ Deepen ■ Drill	□ Plug Back □ Redrilling □ Rework □ S	timulate					
Well Type □ Brine Disposal □ CBM □ Gas ■ Oil □ Se	econdary Recovery   Solution Mining   Storage	🗆 Other					
Type of Completion ■ Single □ Multiple Fluids Prod  Drilled with □ Cable ■ Rotary	duced □ Brine □Gas □ NGL ■ Oil □ Oi	ther					
Drilling Media Surface hole ■ Air □ Mud ■ Fresh W	/ater Intermediate hole ■ Air □ Mud ■ I	Fresh Water   Brine					
Production hole Air							
Mud Type(s) and Additive(s) N/A							
Date permit issued11/18/14 Date drilling com  Date completion activities began2/4/15	nmenced 1/13/15 Date drilling ceased	1/15/15					
Verbal plugging (Y/N)N Date permission grante							
Date permission grante	Granted by						
Please note: Operator is required to submit a plugging applie	cation within 5 days of verbal permission to plug						
Freshwater depth(s) ftNone	Open mine(s) (Y/N) depths No	one					
Salt water depth(s) ft1700'	Void(s) encountered (Y/N) depths	None					
Coal depth(s) ftNone	Cavern(s) encountered (Y/N) depths	None					
Is coal being mined in area (Y/N)N							
		Reviewed by:					

Clover Rush Run (197) 6-6

Rev. 8/23/13									
API 47- 087	04750	Farm n	ame_SNODG	RASS, RE	VA ET	ALWell	number_20	1	
CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft		Basket Depth(s)		circulate (Y/ N)
Conductor	12 1/4"	11 5/8"	30'	Used	WUIL	LS	Depui(s)	1	Sand In
Surface	8 3/4"	7"	550'	New		LS	64'		Y
Coal	0 0,71			1.011					
Intermediate 1									
Intermediate 2								1	
Intermediate 3									
Production	6 1/4"	4 1/2"	2323.15'	New		J-55			Υ
Tubing			20200	7.0					
Packer type and d	lepth set								
Comment Details	Circulated Est. 50 s	ks to surface on 7" sur	face cement job. Circ	ulated Est. 15 sks	to surface o	on 4 1/2" cement jo	b.		
CEMENT DATA	Class/Type of Cement	Numbe of Sack			(ield : ³/sks)	Volume (ft <sup>3</sup> )	Ceme Top (N		WOC (hrs)
Conductor									
Surface	Reg Neat	140	15.6	3 1	1.18	165	Surfa	ice	8
Coal					200				
ntermediate 1									
ntermediate 2									
ntermediate 3									
Production	50:50 Pozmix	90/125	13.2/14	4.2 1.6	4/1.27	147.6/186	54'	,	8
Tubing									- Inne   1 /
Drillers TD (ft	1) 2363'			Loggers T	D (ft) 236	62'		<b>HEC</b>	EIV
	tion penetrated	Big Injun		Plug back					
Plug back pro				11.05 0	(1)			MAR	1 9 2015
Kick off depth	ı (ft) N/A				-30 Ne. 712				OGICAL SI ANTOWN,
Check all wire	line logs run	■ caliper ■ neutron	■ density ■ resistivity	■ deviate			luction mperature	□sonic	
Well cored	Yes A No	Convention	onal Sidev	wall	W	ere cuttings	collected <b>=</b>	Yes □ N	lo
	HE CENTRALI		ENT USED FO	R EACH CA	SING S	TRING	100-200 (100 (100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 -		
o Centralizers every 88 f	from bottom on 4 1/2", Centra	izer placed mid string on 7							
VAS WELL O	COMPLETED A	S SHOT HOLE	□ Yes ■	No DE	TAILS				
WAS WELL C	COMPLETED C	PEN HOLE?	□ Yes ■ No	o DETA	AILS _				
			Marine and the process of the						
VERE TRACI	ERS USED	Yes 📱 No	TYPE OF TH	RACER(S) U	JSED _				

API 47-087 \_ 04750

Farm name\_SNODGRASS, REVA ET AL

\_Well number\_201

## PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	2/4/15	2174'	2182'	32	Big Injun
		- Car of the Carlotte			
					*

Please insert additional pages as applicable.

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## STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

WV GEOLOGICAL SURVEY MCRGANTOWN, WV

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	2/12/15	5	438	1132	335	2,500	140	THE OGOLD CATE (ALMO)
					-1///			
		74						

Please insert additional pages as applicable.

API 47- 087	04750	Farm	name_SNOD	GRASS, F	₹EV	'A ET AL	Wel	l numbe	er_201	
PRODUCING	FORMATION	(S)	DEPTHS							
Big Injun				TVD	21	66'- 2184'	MI	)	REC	EN
					_		_	IA.		19 · · / ·
Please insert ac	dditional pages a	as applicable.							MORGAN	GICAL SLIPVEY
GAS TEST	□ Build up □	□ Drawdown	□ Open Flow		OII	L TEST 🗆	Flow	□ Pumj	)	1116° 400
SHUT-IN PRE	SSURE Surf	face	_psi Botto	om Hole		psi	DURA	TION	OF TEST _	hrs
OPEN FLOW	Gas met	Oil fpd	NGL bpd	_ bpd _					JRED BY □ Orifice	□ Pilot
LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN MD	FT				RECORD QUA	ANTITYAND IL, GAS, H₂S, ETC)
Sand/Shale	0		0	994						<u>, 0.10,1120,210)</u>
Sand			994	1288						
Shale			1288	1343						
Sand			1343	1366						
Shale			1366	1700						
Sand			1700	1974				-		
Little Lime			1974	2000			es de la companya de			
Pencil Cave			2000	2012			10			
Big Lime			2012	2140						*
Keener			2140	2166						
Big Injun			2166	2184	_					
Shale			2184	2363	_					
TD			2363		$\dashv$					
Please insert ad	ditional pages as	s applicable.								
Drilling Contract	ctor Decker Drill	ing								
Address 11565			City	Vincent			State	ОН	Zip _4578	4
	Weatherford	International	1							_
Address 777 No	th River Avenue		City	Weston			State	WV	Zip <u></u>	2
Cementing Con Address Hall Rd	npany Universal	Services	City	Buckhannor	1		_ State	WV	Zip _2620	1
	npany Produce	ers Service Corp	city	Zanesville	ti.		Stata	ОН	Zip 4370	1
	ditional pages as	applicable.	City		_		_ State		_ Zip	
	Roger Heldman	/ 1				Telephone	304-420	-1107		
Signature	Ser 1	Ildr-	Title Or	perations Mar	ager	r		Date 2/	25/15	
Submittal of Hy	draulic Fracturii	ng Chemical D	isclosure Infor	mation	Att:	ach conv of	FRACE	OCUS	Registry	

Prepared for
H G Energy



Prepared by:
Producers Service Corp
Jason Stanbery
109 S. Graham St.
Zanesville, OH 43702
740-454-6253

				THE RESERVE TO THE RE	
INVOICE #: 18124					
WELL NAME: S B Kinkead #	201				
STATE & COUNTY: WV/Roane					
TOWNSHIP/FIELD: Clover					
DATE of SERVICE: 2/12/2014					
CUSTOMER PO#					
	Notes	Amount	Units	Unit Cost	Total Cost

Description	Notes	Amount	Units	Unit Cost	Tot
FLUID PUMP CHARGE 0-3000 PSI MIN CHARGE 4 HRS		1	EA		
BLENDER CHARGE 0-10 BPM		1	EA		
MILEAGE CHARGE PER UNIT ONE WAY	2 Units @ 150 Miles	0	MI		
IC ACID 15%		250	GAL		
PRO HIB II		0.5	GAL		
ACID DELIVERY		2	HR		
PRO CLA LOK (KCL SUBSTITUTE)		15		-	
PRO NE-21		5	GAL		
PRO GEL 4		150	LB		
BUFFER I		50	LB		
BUFFER II		50			
PRO CLA LOK (KCL SUBSTITUTE)		15			
AP BREAKER	•	15			
BXL-A		10			
BXL-10C		10		1	
SAND 20/40 OTTAWA		25		3	
SAND DELIVERY / TON MILES		100		7	
BIO CLEAR 750		2	LB	3	
DATA VAN		1	STAGE	3	
					4
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Customer Approval:	
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WV GROUDINGE ROPUTY MORGANIOWN, WY