

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

FEB 25 2015

WV Department of  
Environmental Protection

API 47 - 087 - 04747 County ROANE District SMITHFIELD  
Quad LOONEYVILLE 7.5' Pad Name CARR-NICHOLS Field/Pool Name CLOVER  
Farm name MCCLAIN, JOHN R. & KEATON Well Number 102  
Operator (as registered with the OOG) H.G. ENERGY LLC  
Address 5260 DuPONT ROAD City PARKERSBURG State WV Zip 26101

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey  
Top hole Northing 4,285,478 M Easting 475,123 M  
Landing Point of Curve Northing \_\_\_\_\_ Easting \_\_\_\_\_  
Bottom Hole Northing 4,285,555 M Easting 474,860 M

Elevation (ft) 1,114' GL Type of Well  New  Existing Type of Report  Interim  Final  
Permit Type  Deviated  Horizontal  Horizontal 6A  Vertical Depth Type  Deep  Shallow  
Type of Operation  Convert  Deepen  Drill  Plug Back  Redrilling  Rework  Stimulate  
Well Type  Brine Disposal  CBM  Gas  Oil  Secondary Recovery  Solution Mining  Storage  Other \_\_\_\_\_  
Type of Completion  Single  Multiple Fluids Produced  Brine  Gas  NGL  Oil  Other \_\_\_\_\_  
Drilled with  Cable  Rotary

Drilling Media Surface hole  Air  Mud  Fresh Water Intermediate hole  Air  Mud  Fresh Water  Brine  
Production hole  Air  Mud  Fresh Water  Brine  
Mud Type(s) and Additive(s)  
N/A

Date permit issued 11/17/14 Date drilling commenced 12/23/14 Date drilling ceased 12/31/14  
Date completion activities began 2/4/15 Date completion activities ceased 2/10/15  
Verbal plugging (Y/N) N Date permission granted \_\_\_\_\_ Granted by \_\_\_\_\_

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft None Open mine(s) (Y/N) depths None  
Salt water depth(s) ft 1775' Void(s) encountered (Y/N) depths None  
Coal depth(s) ft None Cavern(s) encountered (Y/N) depths None  
Is coal being mined in area (Y/N) N

Reviewed by:  
JK

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WR-35  
Rev. 8/23/13

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CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/N) * Provide details below*
Conductor	12 1/4"	11 5/8"	30'	Used	LS		Sand In
Surface	8 3/4"	7"	562'	New	LS	64'	N
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	6 1/4"	4 1/2"	2576.4'	New	J-55		Y
Tubing							
Packer type and depth set							

Comment Details Grouted w/ Est. 25 sks to surface on 7" surface cement job. Circulated Est. 35 sks to surface on 4 1/2" cement job.

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor							
Surface	Reg Neat	140	15.6	1.18	165	Surface	8
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	50:50 Pozmix	110/125	13.2/14.2	1.64/1.27	180/186	40'	8
Tubing							

Drillers TD (ft) 2631'      Loggers TD (ft) 2631'  
 Deepest formation penetrated Big Injun      Plug back to (ft) N/A  
 Plug back procedure N/A

Kick off depth (ft) 550'

Check all wireline logs run     caliper     density     deviated/directional     induction  
 neutron     resistivity     gamma ray     temperature     sonic

Well cored     Yes     No      Conventional      Sidewall      Were cuttings collected     Yes     No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING \_\_\_\_\_

20 Centralizers every 88 from bottom on 4 1/2". Centralizer placed mid string on 7"

WAS WELL COMPLETED AS SHOT HOLE     Yes     No      DETAILS \_\_\_\_\_

WAS WELL COMPLETED OPEN HOLE?     Yes     No      DETAILS \_\_\_\_\_

WERE TRACERS USED     Yes     No      TYPE OF TRACER(S) USED \_\_\_\_\_

05/01/2015



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<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
Big Injun	2182'- 2198'	TVD 2507'- 2538' MD
_____	_____	_____
_____	_____	_____

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Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow

OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface \_\_\_\_\_ psi Bottom Hole \_\_\_\_\_ psi DURATION OF TEST \_\_\_\_\_ hrs

OPEN FLOW Gas \_\_\_\_\_ mcfpd Oil \_\_\_\_\_ bpd NGL \_\_\_\_\_ bpd Water \_\_\_\_\_ bpd  
GAS MEASURED BY  Estimated  Orifice  Pilot

LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H <sub>2</sub> S, ETC)
Sand/Shale	0	998	0	1004	
Sand	998	1112	1004	1119	
Shale	1112	1200	1119	1211	
Sand	1200	1288	1211	1309	
Shale	1288	1716	1309	1768	
Sand	1716	1992	1768	2182	
Little Lime	1992	2018	2182	2232	
Pencil Cave	2018	2026	2232	2246	
Big Lime	2026	2155	2246	2463	
Keener	2155	2182	2463	2507	
Big Injun	2182	2198	2507	2538	Drilled directional S 69° E a distance of 877'
Shale	2198	2268	2538	2631	
TD	2268		2631		

Please insert additional pages as applicable.

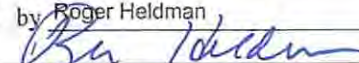
Drilling Contractor Decker Drilling  
Address 11565 State Route 676 City Vincent State OH Zip 45784

Logging Company Weatherford International  
Address 777 North River Avenue City Weston State WV Zip 26452

Cementing Company Universal Services  
Address Hall Rd City Buckhannon State WV Zip 26201

Stimulating Company Producers Service Corp.  
Address 109 South Graham Street City Zanesville State OH Zip 43701

Please insert additional pages as applicable.

Completed by Roger Heldman Telephone 304-420-1107  
Signature  Title Operations Manager Date 2/18/15

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry



Prepared for:  
H G Energy



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

INVOICE #: 18120
WELL NAME: Carrrr-Nichols#102
STATE & COUNTY: WV/Roane
TOWNSHIP/FIELD: Clover
DATE of SERVICE: 2/10/2015
CUSTOMER PO#

Description	Notes	Amount	Units	Unit Cost	Total Cost
FLUID PUMP CHARGE 0-3000 PSI MIN CHARGE 4 HRS		1			
BLENDER CHARGE 0-10 BPM		1			
MILEAGE CHARGE PER UNIT ONE WAY	2 Units @ 150 Miles	300			
IC ACID 15%		250			
PRO HIB II		0.5			
ACID DELIVERY		2			
PRO CLA LOK (KCL SUBSTITUTE)		15			
PRO NE-21		5			
PRO GEL 4		150			
BUFFER I		50			
BUFFER II		50			
PRO CLA LOK (KCL SUBSTITUTE)		15			
AP BREAKER		15			
BXL-A		10			
BXL-10C		10			
SAND 20/40 OTTAWA		25			
SAND DELIVERY / TON MILES		100			
BIO CLEAR 750		2			
DATA VAN		1			

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Customer Approval: \_\_\_\_\_