

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

API 47-087-04753 County ROANE District SMITHFIELD  
Quad LOONEYVILLE 7.5' Pad Name KINKEAD, S.B. Field/Pool Name CLOVER  
Farm name MAY, TIMOTHY D. Well Number 109  
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 4,285,442 M Easting 475,633 M  
Landing Point of Curve Northing \_\_\_\_\_ Easting \_\_\_\_\_  
Bottom Hole Northing 4,285,245 M Easting 475,464 M

Elevation (ft) 1,110' 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 7/10/18 Date drilling commenced NA Date drilling ceased NA  
Date completion activities began 7/23/18 Date completion activities ceased 7/27/18  
Verbal plugging (Y/N) N Date permission granted \_\_\_\_\_ Granted by \_\_\_\_\_

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

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Freshwater depth(s) ft None Open mine(s) (Y/N) depths None  
Salt water depth(s) ft 1730' 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: \_\_\_\_\_

Reviewed by

*Pe [Signature]* 4-30-19

WR-35  
Rev. 8/23/13

API 47- 087 - 04753 Farm name MAY, TIMOTHY D. Well number 109

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"	508'	New	LS	64'	Y
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	6 1/4"	4 1/2"	2583.3'	New	J-55		Y
Tubing							
Packer type and depth set							

Comment Details Circulated Est. 25 sks to surface on 7" surface cement job. Circulated Est. 25 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	130	15.6	1.18	153.4	Surface	8
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	50:50 Pozmix	115/125	13.2/14.2	1.64/1.27	189/186	Surface	8
Tubing							

Drillers TD (ft) 2630' Loggers TD (ft) 2623'  
 Deepest formation penetrated Big Injun Plug back to (ft) N/A  
 Plug back procedure N/A

Kick off depth (ft) 600'

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 \_\_\_\_\_

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PRODUCING FORMATION(S)	DEPTHS	
Big Injun	2148'- 2165'	TVD 2383'- 2425' MD

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	1665	0	1724	
Sand	1665	1671	1724	1730	
Shale	1671	1677	1730	1738	
Sand	1677	1790	1738	1878	
Shale	1790	1809	1878	1904	
Sand	1809	1972	1904	2139	
Little Lime	1972	1987	2139	2162	
Pencil Cave	1987	1998	2162	2176	
Big Lime	1998	2119	2176	2356	
Keener	2119	2148	2356	2383	
Big Injun	2148	2165	2383	2425	Drilled directional S 41° W a distance of 771'
Shale	2165	2312	2425	2630	
TD	2312		2630		

Please insert additional pages as applicable.

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

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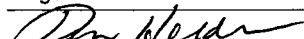
Logging Company Weatherford International  
Address 777 North River Avenue City Weston State WV Zip 26452

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Environmental Protection

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 8/1/18