

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

API 47 - 043 - 03458 County LINCOLN District DUVAL
Quad GRIFFITHSVILLE 7.5' Pad Name J.A. FOWLER Field/Pool Name GRIFFITHSVILLE
Farm name MCCLURE, ANDY J. & REBECCA Well Number 110
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 4,231,366 M Easting 416,422 M
Landing Point of Curve Northing _____ Easting _____
Bottom Hole Northing 4,231,513 M Easting 416,409 M

Elevation (ft) 1013' 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

Injection well GCS 1/12/15
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Date permit issued 6/17/2013 Date drilling commenced 10/21/14 Date drilling ceased 10/24/14
Date completion activities began 11/5/14 Date completion activities ceased 11/7/14
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 430' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 1190' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 588' - 593' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by: _____

01/16/2015

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"	675'	New	LS	84'	Y
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	6 1/4"	4 1/2"	2750'	New	J-55		Y
Tubing							
Packer type and depth set							

Comment Details Circulated Est. 50 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 ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor							
Surface	Reg Neat	170	15.6	1.18	200	Surface	8
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	50:50 Pozmix	135/125	13.2/14.2	1.64/1.27	221/159	76'	8
Tubing							

Drillers TD (ft) 2781' Loggers TD (ft) 2783'
 Deepest formation penetrated Berea Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 650'

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 _____
8 Centralizers every 84 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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PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	11/7/14	2585'	2598'	78	Berea

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	11/7/14	5.1	1673	1845	891		40	12 bbls HCL

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<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>Berea</u>	<u>2486'- 2503'</u> TVD	<u>2582'- 2600'</u> 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 ₂ S, ETC)
Sand/Shale	0	588	0	588	
Pittsburgh Coal	588	593	588	593	
Sand/Shale	593	1770	593	1820	
Big Lime	1770	1976	1820	2044	
Big Injun	1976	2074	2044	2148	
Shale	2074	2466	2148	2562	
Coffee Shale	2466	2486	2562	2582	
Berea	2486	2503	2582	2600	
Shale	2503	2680	2600	2781	
TD	2680		2781		Drilled directional N 4° E a distance of 546'
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Please insert additional pages as applicable.

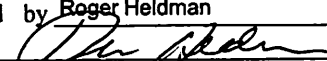
Drilling Contractor Decker Drilling
Address 11565 State Route 676 City Vincent State OH Zip 45784

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

Cementing Company Universal Services
Address 5252 Rt 1428 City Allen State KY Zip 41601

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 12/1/14

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

Prepared for:
 HG Energy LLC
 Dustin Hendershot
 304-481-7342



Prepar
 Produ
 Dave C
 109 S.
 Zanesv
 740-45

INVOICE #:	17396
WELL NAME:	Fowler
COUNTY/STATE:	Lincoln WV
TOWNSHIP/FIELD:	Yawkey
DATE of SERVICE:	11/7/2014
CUSTOMER PO#:	

Description	Notes	Amount	Units	Uni
ACID PUMP CHARGE 1000-2000 PSI		1	EA	\$ 1
MILEAGE CHARGE PER UNIT ONE WAY		67	MI	\$
IC ACID 15%		500	GAL	\$
PRO HIB II		0.333	GAL	\$
PRO CLA FIRM LP		0.66	GAL	\$
PRO NE-1		0.66	GAL	\$
PRO PEN		1	GAL	\$
DATA VAN		1	STAGE	\$
ADDITIONAL HRS AFTER 4 ACID PUMP		5	EA	\$
				TOTA
Customer Approval: _____				

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