

12/28/2018

WR-35
Rev. 8/23/13

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

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DEC 10 2018

WV Department of
Environmental Protection

API 47-043-03588 County LINCOLN District DUVAL
Quad GRIFFITHSVILLE 7.5' Pad Name BELL, E.P. Field/Pool Name GRIFFITHSVILLE
Farm name BENDER, JASON & ASHLEY Well Number 507
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 4,230,894 M Easting 416,841 M
Landing Point of Curve Northing _____ Easting _____
Bottom Hole Northing 4,230,999 M Easting 417,059 M

Elevation (ft) 888' 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 9/5/18 Date drilling commenced 10/11/18 Date drilling ceased 10/18/18
Date completion activities began 10/26/18 Date completion activities ceased 11/6/18
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 1070' Void(s) encountered (Y/N) depths None
Coal depth(s) ft 440'-445' Cavern(s) encountered (Y/N) depths None
Is coal being mined in area (Y/N) N

Reviewed by:

Reviewed by
J. Gray Smith

SS

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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	15"	13 3/8"	13"	New	LS		Sand In
Surface	8 3/4"	7"	549.6'	New	LS	64'	Y
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	6 1/4"	4 1/2"	2730.55'	New	LS		Y
Tubing							
Packer type and depth set							

Comment Details Circulated Est. 25 sks to surface on 7" surface cement job. Circulated Est. 20 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	140	15.6	1.18	165	Surface	8
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	50:50 Pozmix	120/125	13.2/14.2	1.64/1.27	197/186	172'	8
Tubing							

Drillers TD (ft) 2787 Loggers TD (ft) 2712

Deepest formation penetrated Berea Plug back to (ft) N/A

Plug back procedure N/A

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Kick off depth (ft) 650'

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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 _____

12 Centralizers every 68 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

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Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	10/29/18	2572'	2582'	40	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	11/6/18	4	729	1633	783	1,000	141	

Please insert additional pages as applicable.

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PRODUCING FORMATION(S)	DEPTHS		
Berea	2358'- 2379'	TVD	2568'- 2592' 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	440	0	440	
Pittsburgh Coal	440	445	440	445	
Sand/Shale	445	1644	445	1710	
Big Lime	1644	1854	1710	1950	
Big Injun	1854	1946	1950	2069	
Shale	1946	2338	2069	2545	
Coffee Shale	2338	2358	2610	2568	
Berea	2358	2379	2568	2592	Drilled directional N 64.2° E a distance of 794'
Shale	2379	2548	2592	2787	
TD	2548		2787		

Please insert additional pages as applicable.

Drilling Contractor Noah Horn Well Drilling
Address 1070 Sandy Valley Lane City Vansant State VA Zip 24656

Logging Company Weatherford International
Address 13211 Old Hwy 50 City Flora State IL Zip 62839

Cementing Company C & J Energy Services
Address 580 Hawthorn Drive City Norton State VA Zip 24273

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 *Roger Heldman* Title Operations Manager Date 12/5/18

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

Prepared for:

HG Energy

Dustin Hendershot



Prepared by:

Producers Service Corp

Daniel L Graham

109 S. Graham St.

Zanesville, OH 43702

740-454-6253

WV Department of
Environmental Protection

Field Ticket #: 20845

WELL NAME: EP Bell #507

COUNTY/STATE: Lincoln/WV

TOWNSHIP/FIELD: Griffithsville

DATE of SERVICE: 11/6/2018

CUSTOMER PO#:

Description	Notes	Amount	Units	Unit Cost	Total Cost
BLENDER CHARGE 0-10 BPM		1	EA		1,500.00
FLUID PUMP CHARGE 0-3000 PSI MIN CHARGE 4 HRS		1	EA		
MILEAGE CHARGE PER UNIT ONE WAY	2 Units @ 200miles	400	MI		
IC ACID 15%		250	GAL		
ACID DELIVERY		4	HR		
PRO HIB II		0.5	GAL		
IRONROL		50	LB		
PRO CLA FIRM LP		6	GAL		
PRO NE-21		6	GAL		
BIO CLEAR 750		1	LB		
BUFFER I		50	LB		
PRO GEL 4		150	LB		
DATA VAN		1	STAGE		

Customer Approval: _____

