

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

API 47-043-03619 County LINCOLN District DUVAL  
Quad GRIFFITHSVILLE 7.5' Pad Name NATHANIEL MASON Field/Pool Name GRIFFITHSVILLE  
Farm name JOSHUA BRUMFIELD, JUSTIN WHITE Well Number 143  
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 4,232,586 M Easting 415,286 M  
Landing Point of Curve Northing \_\_\_\_\_ Easting \_\_\_\_\_  
Bottom Hole Northing 4,232,695 M Easting 415,099 M

Elevation (ft) 915' 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 7/18/21 Date drilling commenced 12/15/21 Date drilling ceased 12/22/21  
Date completion activities began 1/25/22 Date completion activities ceased 1/31/22 **RECEIVED**  
Verbal plugging (Y/N) N Date permission granted \_\_\_\_\_ Granted by \_\_\_\_\_ **Office of Oil and Gas**  
**MAR 03 2022**

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 N/A Open mine(s) (Y/N) depths None  
Salt water depth(s) ft N/A Void(s) encountered (Y/N) depths None  
Coal depth(s) ft 402' Cavern(s) encountered (Y/N) depths None  
Is coal being mined in area (Y/N) N

Reviewed by:

TU

**03/04/2022**

API 47- 043 - 03619 Farm name JOSHUA BRUMFIELD, JUSTIN WHITE Well number 143

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"	10'	New	LS		Sand In
Surface	10 7/8"	8 5/8"	505.36'	New	LS		Y
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	6 1/4"	4 1/2"	2682.15'	New	LS		N
Tubing							
Packer type and depth set							

Comment Details Circulated Est. 95 sks to surface on 8 5/8" job. Did not circulate 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	215	15.6	1.18	254	Surface	8
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	50:50 Pozmix	120/125	13.2/14.2	1.64/1.27	197/159	380'	8
Tubing							

Drillers TD (ft) 2723' Loggers TD (ft) 2723'  
 Deepest formation penetrated Berea 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 \_\_\_\_\_

10 Centralizers every 88 from bottom on 4 1/2", Centralizer placed mid string and 42' from bottom on 8 5/8"

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

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

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

03/04/2022



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PRODUCING FORMATION(S)	DEPTHS	
Berea	2402'- 2422'	TVD 2558'- 2580' 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	BOTTOM	TOP	BOTTOM	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H <sub>2</sub> S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	
Sand/Shale	0	402	0	402	
Pittsburgh Coal	402	408	402	408	
Sand/Shale	408	1675	408	1746	
Big Lime	1675	1882	1746	1980	
Big Injun	1882	1986	1980	2096	
Shale	1986	2382	2096	2536	
Coffee Shale	2382	2402	2536	2558	
Berea	2402	2422	2558	2580	Drilled directional N 59.7° E a distance of 708'
Shale	2422	2551	2580	2723	
TD	2551		2723		

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 Appalachian Well Surveys  
Address 10291 Ohio Avenue City Cambridge State OH Zip 43725

Cementing Company Lightning Energy Services  
Address PO Box 580 City Bridgeport State WV Zip 26330

Stimulating Company Reliance Well Services  
Address 510 Cranberry Street Suite 230 City Erie State PA Zip 16507

Please insert additional pages as applicable.

Completed by Roger Heldman Telephone 304-420-1107 WV Department of  
Signature  Title Operations Manager Date 2/24/22 Environmental Protection

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

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03/04/2022



# Reliance

WELL SERVICES LLC

510 Cranberry Street  
Suite 230  
Erie, PA 16507  
Phone 814.454.1644  
Fax 814.454.1164  
24 Hour 412.906.0992

N MASON 143

## Invoice

P.O.#	Inv. Date	Invoice #
12050	1/31/2022	12198

Job Date	DUE DATE
1/31/2022	3/2/2022

HG Energy, LLC  
5260 DuPont Rd  
Parkersburg, WV 26101

API#	Lease	Well#	State	County	Stages	Terms & Type
	Nathaniel	143	WV	Lincoln	1	Oil/Gas

Description	Quantity	Unit Price	Amount
Pump Truck Charge (#136)	1		
Blender Truck Charge (#210)	1		
Control Van Charge (#710)	1		
Iron/Connections Truck Charge (#507)	1		
Acid HCL 15%	250		
4 N 1 - Inhibitor & Iron Control (in acid)	1		
Sand: Bulk 20/40 API/100 LB (#628)	50		
AP-1 - Oxidizing Breaker	10		
Pro Gel 4.0L - Liquid Guar	30		
BXL 10C - Crosslinker	10		
BXL-A - Breaker Activator	10		
Pro CLA Firm LP - Clay Control	10		
Pro Flo II - Surfactant	10		
BioClear 1000 - Dry Biocide	1		
DISCOUNT FOR PAYMENT WITHIN TERMS	1		
NON DISCOUNTED ITEMS			
Mileage (5 Trucks @ 200 miles/way - Waived after first well of same trip)	0		
Fuel Surcharge (Per Stage Under 1 Hr)	1		

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Thank you for your business.

Total

Terms are Net 30, based on the job completion date. Balances not paid after 30 days are subject to a monthly 1.5% service charge in addition to the Non Discounted total amount due.

Balance Due

03/04/2022