

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

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Office of Oil and Gas
OCT 12 2022

WV Department of
Environmental Protection

API 47-087-04807 County ROANE District SMITHFIELD
Quad LOONEYVILLE 7.5' Pad Name MCGRAW, CHARLES Field/Pool Name CLOVER
Farm name WILLIE KING Well Number 131
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 4,265,150 M Easting 476,093 M
Landing Point of Curve Northing _____ Easting _____
Bottom Hole Northing 4,285,133 M Easting 475,783 M

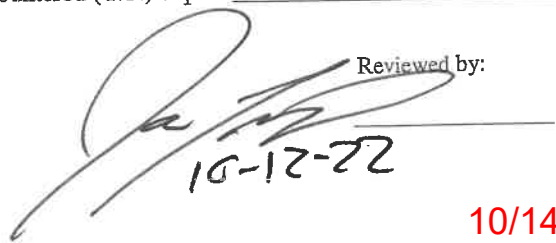
Elevation (ft) 1,055 GL Type of Well New Existing Type of Report Interim Final
Permit Type Deviated Horizontal Horizontal 6A Vertical Depth Type Deep Shallow
Type of Operation Convert Deepen Drill Plug Back Redrilling Rework Stimulate
Well Type Brine Disposal CBM Gas Oil Secondary Recovery Solution Mining 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 6/16/22 Date drilling commenced 8/1/22 Date drilling ceased 8/5/22
Date completion activities began 8/17/22 Date completion activities ceased 8/23/22
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 N/A Open mine(s) (Y/N) depths None
Salt water depth(s) ft 1890' Void(s) encountered (Y/N) depths None
Coal depth(s) ft N/A Cavern(s) encountered (Y/N) depths None
Is coal being mined in area (Y/N) N

Reviewed by:

10-12-22

10/14/2022

API 47-087 - 04807

Farm name WILLIE KING

Well number 131

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 54#		Sand In
Surface	8 7/8"	7"	450.7'	New	LS 17#		Y
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	6 1/4"	4 1/2"	2558.3'	New	J-55 11.6#		Y
Tubing							
Packer type and depth set							

Comment Details Circulated Est. 45 sks to surface on 7" job. Circulated Est. 35 sks to surface on 4 1/2" 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	130	15.6	1.18	153	Surface	8
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	50:50 Pozmix	125/125	13.2/14.2	1.64/1.27	205/159	100'	8
Tubing							

Drillers TD (ft) 2627
Deepest formation penetrated Big Injun
Plug back procedure N/A

Loggers TD (ft) 2584'
Plug back to (ft) N/A

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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

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

JDP

10/14/2022

API 47- 087 - 04807 Farm name WILLIE KING Well number 131

PRODUCING FORMATION(S)	DEPTHS		
Big Injun	2051'- 2105'	TVD	2420'- 2502' 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	BOTTOM	TOP	BOTTOM	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	
Sand/Shale	0	1901	0	2202	
Little Lime	1901	1914	2202	2217	
Pencil Cave	1914	1921	2217	2231	
Big Lime	1921	2051	2231	2420	
Big Injun	2051	2105	2420	2502	Drilled directional S 86.9° W a distance of 1019'
Shale	2105	2192	2502	2627	
TD	2192		2627		

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.

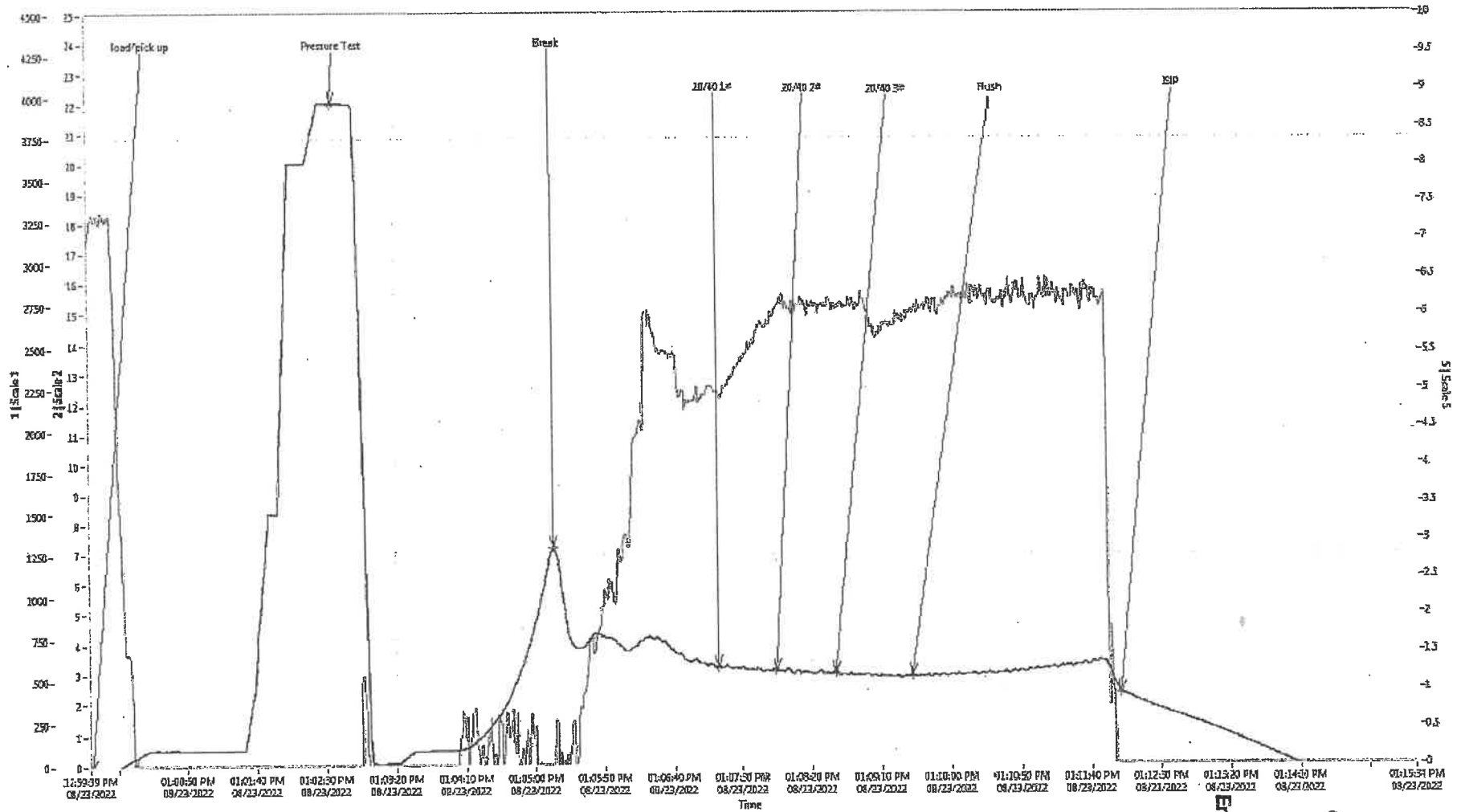
Completed by Roger Heldman Telephone 304-420-1107
Signature  Title Operations Manager Date 10/6/22

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



10/14/2022

HG ENERGY, LLC - C. MCGRAW #131- STAGE 1 COMMENTS



1 Pressure 1 KK
 2 Discharge KK

FracCommand Suite
 Frac Automation and Data Management System

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JOB COMMENTS AND DETAILS

Job Name	C. McGraw #131
Location	Roane County, WV
Company	HG Energy, LLC
Comments	Stage 1 of 1. Treated Per Design.

GRAPH NOTES AND RANGES

Timestamp	Annotation	Pressure 1	Discharge Rate	Stage Total (bbl)	Grand Total (bbl)	Grand Total (gal)
8/23/2022 12:59:40 PM	load/pick up	-26.69	17.31	26.86	26.86	1115.88
8/23/2022 1:02:37 PM	Pressure Test	3963.62	0.00	33.60	33.60	1411.11
8/23/2022 1:06:00 PM	Break	712.76	5.58	36.58	36.58	1532.37
8/23/2022 1:07:13 PM	20/40 1#	569.92	12.35	51.13	51.13	2139.00
8/23/2022 1:07:54 PM	20/40 2#	548.70	14.89	9.34	60.68	2538.01
8/23/2022 1:08:37 PM	20/40 3#	535.76	15.06	10.16	71.34	2985.80
8/23/2022 1:09:32 PM	Flush	517.82	14.94	13.42	85.02	3560.33
8/23/2022 1:12:01 PM	ISIP	410.01	0.00	36.44	121.71	5111.79



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Quality Control Job Sheet

Customer	HG Energy, LLC	
Date	8/23/2022	
Well	C. McGraw #131	

PHYSICAL INVENTORY

Chemical	Starting Inventory	Final Inventory	Total Pumped
Pro Gel 4.0L	100.00	75.00	25.00
Geo Break	9.00	8.50	0.50
BXL-C	20.00	15.00	5.00
BXL-A	20.00	15.00	5.00
AP-1 Breaker	5.00	0.00	5.00
Pro CLA Firm LP	5.00	0.00	5.00
Pro NE-1	5.00	0.00	5.00

Acid	Acid Volume Out	4 N 1 Added	Acid Voume In	Total
Acid 15%	500	1.25	250	251.25



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