

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 47-087-04804 County ROANE District SMITHFIELD
Quad LOONEYVILLE 7.5' Pad Name MCGRAW, CHARLES Field/Pool Name CLOVER
Farm name ED ASBURY Well Number 133
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 4,285,177 M Easting 475,467 M
Landing Point of Curve Northing _____ Easting _____
Bottom Hole Northing 4,284,997 M Easting 475,625 M

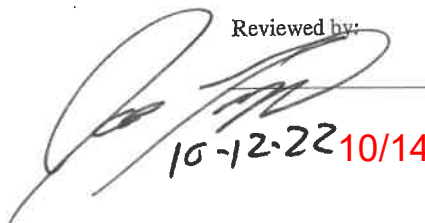
Elevation (ft) 1,117 GL Type of Well New Existing Type of Report Interim Final
Permit Type Deviated Horizontal Horizontal 6A Vertical Depth Type Deep Shallow
Type of Operation Convert Deepen Drill Plug Back Redrilling Rework Stimulate
Well Type Brine Disposal CBM Gas Oil Secondary Recovery Solution Mining 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 5/19/22 Date drilling commenced 7/25/22 Date drilling ceased 7/30/22
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 1900' 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

WR-35
Rev. 8/23/13

API 47-087 - 04804

Farm name ED ASBURY

Well number 133

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 Y
Surface	8 7/8"	7"	513.4'	New	LS 17#		
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	6 1/4"	4 1/2"	2548.95'	New	J-55 11.6#		Y
Tubing							
Packer type and depth set							

Comment Details Circulated Est. 40 sks to surface on 7" job. Circulated Est. 25 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	110'	8
Tubing							

Drillers TD (ft) 2597' Loggers TD (ft) 2540'
 Deepest formation penetrated Big Injun Plug back to (ft) N/A
 Plug back procedure N/A

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Kick off depth (ft) 600'

Check all wireline logs run caliper density deviated/directional induction neutron resistivity gamma ray temperature sonic

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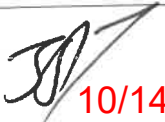
Well cored Yes No Conventional Sidewall Were cuttings collected Yes No

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 _____


10/14/2022

WR-35
Rev. 8/23/13

API 47- 087 - 04804 Farm name ED ASBURY Well number 133

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	8/17/22	2392'	2402'	40	Big Injun

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Please insert additional pages as applicable.

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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	8/23/22	15.3	1102	1316	422	3000	121	250 gals HCL

Please insert additional pages as applicable.



10/14/2022

WR-35
Rev. 8/23/13

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PRODUCING FORMATION(S)	DEPTHS	
Big Injun	2121'- 2157'	TVD 2343'- 2406' MD
_____	_____	_____
_____	_____	_____
_____	_____	_____

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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	1968	0	2132	
Little Lime	1968	1978	2132	2153	
Pencil Cave	1978	1985	2153	2166	
Big Lime	1985	2121	2166	2343	
Big Injun	2121	2157	2343	2406	Drilled directional S 40.9° E a distance of 793'
Shale	2157	2307	2406	2597	
TD	2307		2597		

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 *Roger Heldman* Title Operations Manager Date 10/6/22

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

[Signature]
10/14/2022



Reliance

Well Services, LLC

15 BPM X-Link

HG Energy, LLC
Treater: Tony Lewellen
Date: 8/23/2022
Lease: C. McGraw
Well: #133
API #: 47-087-04804
Roane County, WV

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OCT 12 2022
WV Department of
Environmental Protection



Reliance

Well Services

Table of Contents

Cover Sheet	1
Table of Contents	2
Job Summary	3
Job Summary Moment-by-Moment Comments Stage 1	4
Physical Chemical Inventory	6
<u>SDSs</u>	
4 N 1 SDS	7
Pro Gel 4.0L SDS	27
GB-LEB SDS	35
BXL-10C SDS	41
BXL-A SDS	50
AP 1 Breaker SDS	57
Pro CLA Firm LP SDS	68
Pro NE-1 SDS	76

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OCT 12 2022
WV Department of
Environmental Protection



Reliance
WELL SERVICES LLC

510 Crumhorny Street
Suite 250
Erie, PA 16507
Phone: 814-541-1644
Fax: 814-454-1164
24 Hour: 812-906-0992

Operator: HG Energy, LLC
Lease: C. McGraw
Well #: 133
Location: Roane County, WV
API #: 47-087-04804

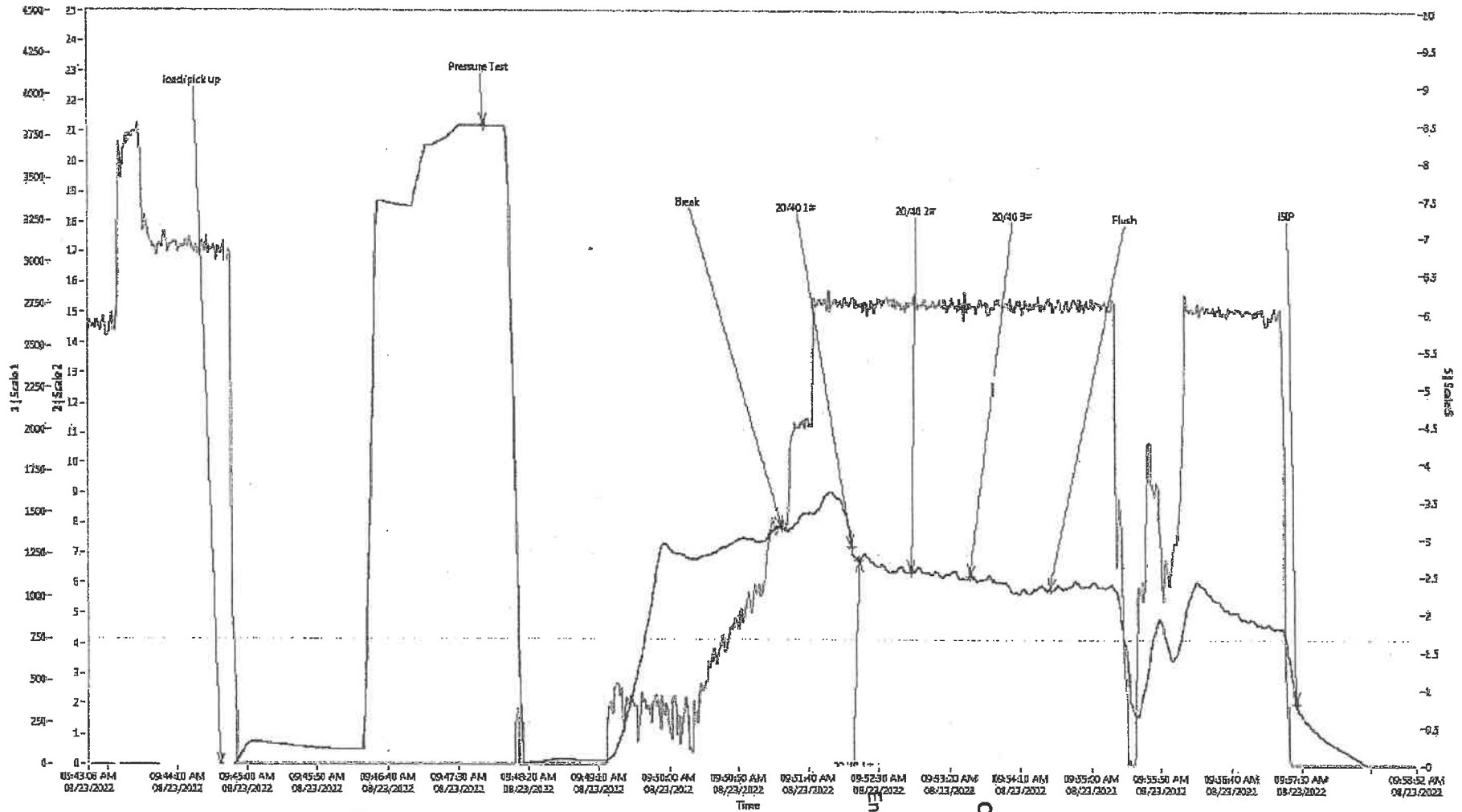
Supervisor: Tony Lewellen
Pump Time: 9:44 AM
Flush Time: 9:57 AM
Date: 8/23/2022



Stage	Depth	Breakdown (psi)	Clean Vol H2O (bbls)	Slurry Discharge (bbls)	Acid 15% HCL (gals)	(In Acid) 4 N 1 Acid Inhibitor (gals)	API 20/40 Sand (sacks)	Ave. Rate (BPM)	Ave. Treating (psi)	ISIP (psi)	5 min. SIP (psi)	10 min SIP (psi)	15 min SIP (psi)	Pro Gel 4.0L Guar Gel (lbs)	GB-LEB Gel Breaker (gals)	BXL-10C X-Linker (gals)	BXL-A Breaker Activator (gals)	AP-1 Breaker (lbs)	Pro CLA Firm LP Clay Control (gals)	Pro NE-1 Biocide/Surfactant (gals)
1	2540	1,316	118	121	250.00	1.25	30.00	15	1,124	422	0	0	0	25.00	0.50	5.00	5.00	5.00	5.00	5.00
Total					250.00	1.25	30.00							25.00	0.50	5.00	5.00	5.00	5.00	5.00

Comments:
Stage 1 8/23/2022: Treated per design.

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HG ENERGY, LLC - C MCGRAW #133 - STAGE 1 COMMENTS



1 Pressure 1 
 2 Discharge 



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JOB COMMENTS AND DETAILS

Job Name	C. McGraw #133
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 9:44:40 AM	load/pick up	-12.49	16.71	29.20	29.20	1214.89
8/23/2022 9:47:48 AM	Pressure Test	3815.63	0.00	32.08	32.08	1347.22
8/23/2022 9:51:21 AM	Break	1415.83	8.11	38.96	38.96	1630.61
8/23/2022 9:52:10 AM	20/40 1#	1303.72	15.32	49.54	49.54	2069.85
8/23/2022 9:52:16 AM	20/40 1#	1222.29	15.40	1.28	51.07	2134.36
8/23/2022 9:52:53 AM	20/40 2#	1149.04	15.22	10.71	60.50	2530.36
8/23/2022 9:53:34 AM	20/40 3#	1123.00	15.10	10.18	71.19	2979.59
8/23/2022 9:54:30 AM	Flush	1041.91	15.26	13.71	85.16	3566.24
8/23/2022 9:57:26 AM	ISIP	366.77	0.00	35.23	120.66	5067.53



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