

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

API 47 - 087 - 04781 County ROANE District SMITHFIELD
Quad LOONEYVILLE 7.5' Pad Name STARR, J.H. Field/Pool Name CLOVER
Farm name FISHER, FREDDIE Well Number 112
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 4,285,049 M Easting 474,998 M
Landing Point of Curve Northing _____ Easting _____
Bottom Hole Northing 4,284,921 M Easting 474,794 M

Elevation (ft) 1,097' 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

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Date permit issued 9/16/20 Date drilling commenced N/A Date drilling ceased N/A
Date completion activities began 10/1/20 Date completion activities ceased 10/1/20
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 1830' Void(s) encountered (Y/N) depths None
Coal depth(s) ft None Cavern(s) encountered (Y/N) depths None
Is coal being mined in area (Y/N) N

Reviewed by:

11-15-20

API 47- 087 - 04781 Farm name FISHER, FREDDIE Well number 112

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		Existing
Surface	8 3/4"	7"	507'	New	LS	64'	Existing
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	6 1/4"	4 1/2"	2488.9'	New	J-55		Existing
Tubing		2 3/8"	2265'	New	J-55		
Packer type and depth set							

Comment Details Circulated Est. 50 sks to surface on 7" surface cement job. Circulated Est. 8 sks to surface on 4 1/2" cement job. *Existing Cement/casing program*

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	Existing
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	50:50 Pozmix	95/125	13.2/14.2	1.64/1.27	156/186	110'	Existing
Tubing							

Drillers TD (ft) 2542' Loggers TD (ft) 2522'

Deepest formation penetrated Big Injun 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 _____

20 Centralizers every 88 from bottom on 4 1/2", Centralizer placed mid string on 7" *Existing*

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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<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>Big Injun</u>	<u>2156'- 2174'</u> TVD	<u>2358'- 2380'</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

<u>LITHOLOGY/ FORMATION</u>	<u>TOP DEPTH IN FT NAME TVD</u>	<u>BOTTOM DEPTH IN FT TVD</u>	<u>TOP DEPTH IN FT MD</u>	<u>BOTTOM DEPTH IN FT MD</u>	<u>DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H₂S, ETC)</u>
Sand/Shale	0	1668	0	1726	
Sand	1668	1688	1726	1752	
Shale	1688	1697	1752	1762	
Sand	1697	1806	1762	1902	
Shale	1806	1820	1902	1922	
Sand	1820	1956	1922	2100	
Little Lime	1956	1992	2100	2146	
Pencil Cave	1992	2002	2146	2158	
Big Lime	2002	2124	2158	2318	
Keener	2124	2156	2318	2358	
Big Injun	2156	2174	2358	2380	Drilled directional S 60.3° W a distance of 729'
Shale	2174	2302	2380	2542	
TD	2302		2542		

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 Hall Rd City Buckhannon State WV Zip 26201

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 11/2/20

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



Producers Service Corporation
109 South Graham Street
Zanesville, OH 43701
(740) 454-6253
www.producerservicecorp.com

Acid

HG Energy

Company Rep: Dustin
Treater: Daniel L Graham
10/1/2020
Well: J.H. Starr #112
Roane County, WV

Casing

OD: 4.5"
ID: N/A
Weight: 10.5 lb.
TD: 2600 ft.

Tubing

Size: N/A
Depth: N/A

Packers

Upper Make: N/A
Upper Depth: 2308 ft.
Lower Make: N/A
Lower Depth: N/A

Pressures

PSI Test: N/A
Breakdown: N/A
Max: 1214 psi
Average: 971 psi
Displacement: 1134 psi

Volumes:

Pad N/A
Treatment: 60 BBL
#VALUE! 2500 Gal
Total: 70 BBL
Flush: 10 BBL

Open Hole

Size: N/A
From: N/A
To: N/A

Perforations

of Shots: N/A
Top Perf: 2403 ft.
Bottom Perf: 2410 ft.

Rates

Average: 1.5 bbl/min
Max: 2 bbl/min

Notes:

Invoice #: 23834

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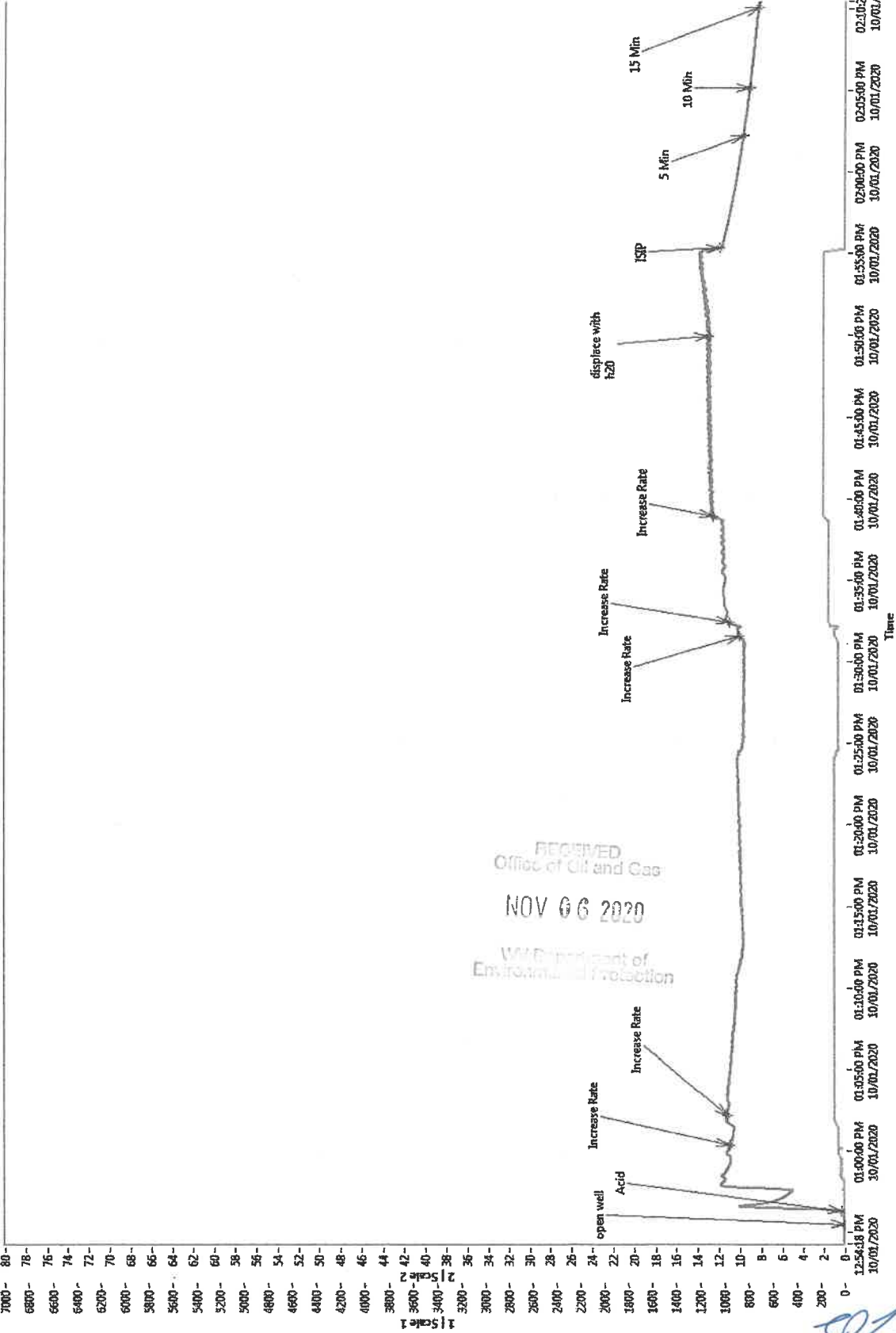


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Oct 01, 2020

HG Energy J. H. Starr #11

1 | Pressure 1
2 | Discharge Rate



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Wildcat Unit of
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Timestamp	Annotation	Pressure 1	Discharge Rate	Stage Total (gal)	Grand Total (gal)	Stage Total (bbt)	Grand Total (bbt)
10/1/2020 12:55:28 PM	open well	0.87	0.00	0.00	0.00	0.00	0.00
10/1/2020 12:56:19 PM	Acid	20.80	0.00	0.04	0.04	0.00	0.00
10/1/2020 1:00:20 PM	Increase Rate	950.66	0.55	33.06	33.06	0.79	0.79
10/1/2020 1:02:09 PM	Increase Rate	980.24	0.91	83.21	83.21	1.98	1.98
10/1/2020 1:31:34 PM	Increase Rate	872.34	0.86	1121.48	1121.48	26.70	26.70
10/1/2020 1:32:25 PM	Increase Rate	957.58	1.47	1157.41	1157.41	27.56	27.56
10/1/2020 1:38:53 PM	Increase Rate	1096.81	1.92	1566.36	1566.36	37.29	37.29
10/1/2020 1:48:58 PM	displace with h2o	1142.06	2.03	2512.94	2512.94	59.83	59.83
10/1/2020 1:55:20 PM	ISIP	1043.14	0.00	2959.35	2959.35	70.46	70.46
10/1/2020 2:02:12 PM	5 Min	845.99	0.00	2959.35	2959.35	70.46	70.46
10/1/2020 2:05:09 PM	10 Min	794.01	0.00	2959.35	2959.35	70.46	70.46
10/1/2020 2:10:07 PM	15 Min	726.23	0.00	2959.35	2959.35	70.46	70.46

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