

WR-35
 Rev. 8/23/13

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

API 47-087-04748 County ROANE District SMITHFIELD
 Quad LOONEYVILLE 7.5' Pad Name CHARLES MCGRAW Field/Pool Name CLOVER
 Farm name SNODGRASS, REVA ET AL Well Number 205
 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 4,285,358 M Easting 475,291 M
 Landing Point of Curve Northing _____ Easting _____
 Bottom Hole Northing 4,285,120 M Easting 475,300 M

Elevation (ft) 1,110' 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 2/1/21 Date drilling commenced N/A Date drilling ceased N/A
 Date completion activities began 3/3/21 Date completion activities ceased 3/3/21
 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 1820' 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:
507
3/3/21 2021

API 47-087 - 04748 Farm name SNODGRASS, REVA ET AL Well number 205

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		Sand In
Surface	8 3/4"	7"	550'	New	LS	64'	Existing
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	6 1/4"	4 1/2"	2540.8'	New	J-55		Existing
Tubing							
Packer type and depth set							

Comment Details Circulated Est. 25 sks to surface on 7" surface cement 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 ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor							
Surface	Reg Neat	140	15.6	1.18	165.2	Surface	Existing
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	50:50 Pozmix	115/125	13.2/14.2	1.64/1.27	189/186	344'	Existing
Tubing							

Drillers TD (ft) 2601' Loggers TD (ft) 2592'
 Deepest formation penetrated Big Injun Plug back to (ft) N/A
 Plug back procedure N/A

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 _____

20 Centralizers every 88 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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<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
Big Injun	2158'- 2178'	TVD 2386'- 2414' 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	994	0	996	
Sand	994	1098	996	1102	
Shale	1098	1183	1102	1190	
Sand	1183	1374	1190	1386	
Shale	1374	1686	1386	1736	
Sand	1686	1993	1736	2152	
Little Lime	1993	2007	2152	2172	
Pencil Cave	2007	2015	2172	2184	
Big Lime	2015	2132	2184	2350	
Keener	2132	2158	2350	2386	
Big Injun	2158	2178	2386	2414	Drilled directional S 6° E a distance of 728'
Shale	2178	2305	2414	2601	
TD	2305		2601		

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 [Signature] Title Operations Manager Date 3/8/21

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

[Signature]
03/19/2021



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

Frac

HG Energy

Company Rep: Dustin Hendershot
Treater: Daniel L Graham
3/3/2021
Well: CH Mcgraw 205
Roane County, WV

Casing

OD: 4.5"
ID: N/A
Weight: 10.5 lb.
TD: 2601 ft.

Tubing

Size: N/A
Depth: N/A

Packers

Upper Make: N/A
Upper Depth: N/A
Lower Make: N/A
Lower Depth: N/A

Pressures

PSI Test: 3626 psi
Breakdown: 401 psi
Max: 513 psi
Average: 402 psi
Displacement: 419 psi

Volumes:

Pad 50 BBL
Treatment: 135 BBL
0.15% Acid: 250 Gal
Total: 231 BBL
Flush: 37 Bbl

Open Hole

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

Perforations

of Shots: N/A
Top Perf: 2396 ft.
Bottom Perf: 2406 ft.

Rates

Average: 6 bbl/min
Max: 6 bbl/min

Notes:

Invoice #: 23847



03/19/2021

Prepared for:		 PRODUCERS SERVICE CORP.	Prepared by:	
HG Energy			Producers Service Corp	
Dustion Hendershot			Daniel I Graham	
			109 S. Graham St.	
			Zanesville, OH 43702	

740-454-6253

FIELD TICKET:	23847
WELL NAME:	CH McGraw 205
COUNTY/STATE:	Roane/WV
TOWNSHIP/FIELD:	Clover
DATE of SERVICE:	3/3/2021
CUSTOMER PO#:	

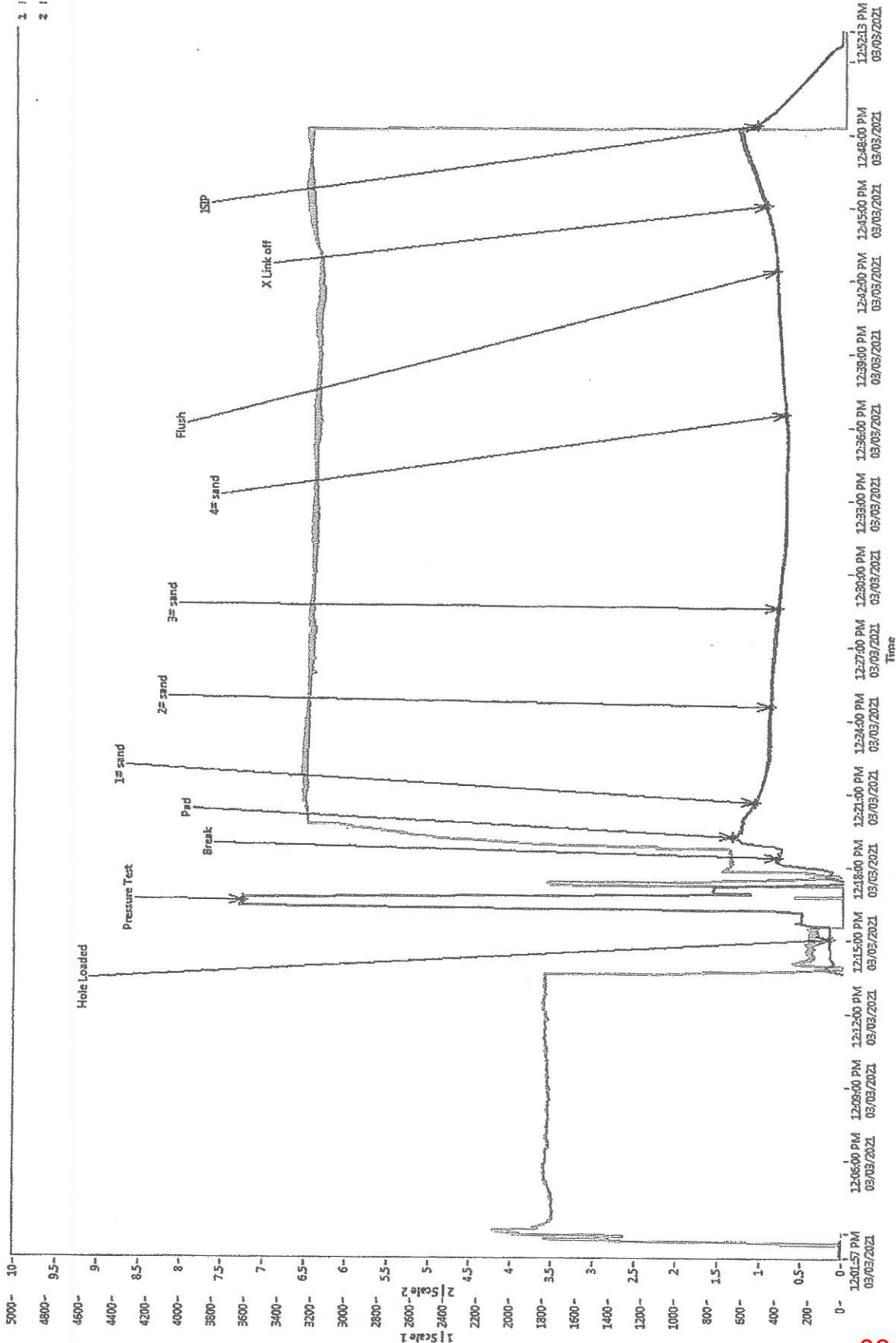
Description	Notes	Amount	Units	Unit Cost	Total Cost
BLENDER CHARGE 0-10 BPM		1	EA		
FLUID PUMP CHARGE 0-3000 PSI MIN CHARGE 4 HRS		1	EA		
MILEAGE CHARGE PER UNIT ONE WAY			MI		
PRO GEL 4.0		40	GAL		
AP BREAKER		10	LB		
BIO CLEAR 750		1.5	LB		
PRO CLA FIRM LP		10.5	GAL		
PRO NE-21		6	GAL		
BXL-A		10.5	GAL		
BXL-10C		10.5	GAL		
IC ACID 15%		250	GAL		
4M1 INHIBATOR		0.5	GAL		
ACID DELIVERY		2	HR		
SAND 20/40 OTTAWA		140	CWT		
SAND DELIVERY / TON MILES		1050	TMILE		
DATA VAN		1	STAGE		
Customer Approval:					

SPZ

Mar 03, 2021

HG Energy CH McGraw 205 INV#23847

1 | Pressure 1
2 | Discharge Rate



JIP



03/19/2021



Timestamp	Annotation	Pressure 1	Discharge Rate	Stage Total (gal)	Grand Total (gal)	Stage Total (bb)	Grand Total (bb)
3/3/2021 12:15:01 PM	Hole Loaded	79.76	0.40	1743.98	1743.98	41.52	41.52
3/3/2021 12:16:35 PM	Pressure Test	3625.69	0.00	1752.58	1752.58	41.73	41.73
3/3/2021 12:18:22 PM	Break	400.13	1.36	1819.66	1819.66	43.33	43.33
3/3/2021 12:19:15 PM	Pad	669.45	4.99	1917.98	1917.98	45.67	45.67
3/3/2021 12:20:37 PM	1# sand	539.86	6.51	2271.05	2271.05	54.07	54.07
3/3/2021 12:24:35 PM	2# sand	448.58	6.49	1076.97	3352.58	25.64	79.82
3/3/2021 12:28:36 PM	3# sand	406.10	6.46	1081.86	4443.48	25.87	105.80
3/3/2021 12:36:32 PM	4# sand	367.93	6.34	2126.18	6574.16	50.73	156.53
3/3/2021 12:42:24 PM	Flush	422.00	6.31	1554.89	8133.54	37.13	193.66
3/3/2021 12:45:04 PM	X Link off	480.83	6.43	711.50	8853.91	17.05	210.81
3/3/2021 12:48:22 PM	ISIP	595.82	0.00	1567.55	9709.96	37.43	231.19

JP

