

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

API 47-043-03616 County Lincoln District Duval
Quad Griffithsville 7.5' Pad Name R Fowler Field/Pool Name Griffithsville
Farm name Andy & Rebecca McClure Well Number 516
Operator (as registered with the OOG) HG Energy LLC
Address 5260 Dupont Rd 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 4,231,586 Easting 417,057
Landing Point of Curve Northing _____ Easting _____
Bottom Hole Northing 4,231,733 Easting 417,101

Elevation (ft) 875 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)

Date permit issued 3/17/20 Date drilling commenced 10/8/21 Date drilling ceased 10/13/21
Date completion activities began 10/20/21 Date completion activities ceased 10/27/21
Verbal plugging (Y/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 N
Salt water depth(s) ft 1150 Void(s) encountered (Y/N) depths N
Coal depth(s) ft 294-297 Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by:
TU

11/12/2021

WR-35
Rev. 8/23/13

API 47-043 - 03616 Farm name Andy & Rebecca McClure Well number 516

| 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 | 12 | U | NA | | |
| Surface | 8 7/8 | 7 | 422 | N | LS/17 | 84 | Y |
| Coal | | | | | | | |
| Intermediate 1 | | | | | | | |
| Intermediate 2 | | | | | | | |
| Intermediate 3 | | | | | | | |
| Production | 6 1/4 | 4 1/2 | 2521 | U | J-55/10.5 | | Y |
| Tubing | | 2 3/8 | 2323 | U | J-55/4.7 | | |
| Packer type and depth set | | | | | | | |

Comment Details Tubing set on tension packer @ 2323'

| 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 | Class A | 120 | 15.6 | 1.18 | 142 | 0 | 8 |
| Coal | | | | | | | |
| Intermediate 1 | | | | | | | |
| Intermediate 2 | | | | | | | |
| Intermediate 3 | | | | | | | |
| Production | 50/50 Pozmix | 100/130 | 13.2/14.2 | 1.64/1.21 | 164/157 | 0 | |
| Tubing | | | | | | | |

Drillers TD (ft) 2564 Loggers TD (ft) 2554
 Deepest formation penetrated Berea Plug back to (ft) _____
 Plug back procedure _____

Kick off depth (ft) _____

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 7" casing centralizers @ 42' & 338'
4 1/2" casing centralizers @ 2521, 2479, 2395, 2311, 2227, 2143, 2059, 1975, 1891, 1807, 1723, 1639, 1555, 1471, 1387, 1303, 1219, 1135, 1051, 967

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 _____

11/12/2021

API 47- 043 - 03616 Farm name Andy & Rebecca McClure Well number 516

| PRODUCING FORMATION(S) | DEPTHS | |
|------------------------|-----------|--------|
| Berea | 2341-2363 | TVD 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 ₂ S, ETC) |
|-------------------------|-------------------------|--------------------|-------------------|-------------------|--|
| | DEPTH IN FT NAME TVD | DEPTH IN FT TVD | DEPTH IN FT MD | DEPTH IN FT MD | |
| sand/shale | 0 | 294 | 0 | 294 | |
| coal | 294 | 297 | 294 | 297 | |
| sand/shale | 297 | 1028 | 297 | 1034 | |
| Salt Sand | 1028 | 1625 | 1034 | 1662 | |
| Little Lime | 1625 | 1667 | 1662 | 1706 | |
| Pencil Cave | 1667 | 1672 | 1706 | 1710 | |
| Big Lime | 1672 | 1864 | 1710 | 1911 | |
| Big Injun | 1864 | 1908 | 1911 | 1956 | |
| Shale | 1908 | 2322 | 1956 | 2388 | |
| Coffee Shale | 2322 | 2341 | 2388 | 2408 | |
| Berea | 2341 | 2363 | 2408 | 2432 | |
| Shale | 2363 | 2490 | 2432 | 2564 | |
| | | | | | |
| | | | | | |

Please insert additional pages as applicable.

Drilling Contractor Naoh Horn Well Drilling
Address 1070 Sandy Valley LN City Oakwood State VA Zip 24631

Logging Company Appalachian Well Surveys
Address 10291 Ohio Ave City Cambridge State OH Zip 43725

Cementing Company See attached
Address _____ City _____ State _____ Zip _____

Stimulating Company Reliance Well Service
Address 510 Cranberry St, Suite 301 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 Mgr Date 10/29/21

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

11/12/2021

Robert Fowler 516 (API # 47-043-03616)

Surface Casing Cementing: Formation Cementing Inc, P.O. Box 2267, Zanesville, OH 43702-2267

Long Sting Casing Cementing: lightening Energy Services, 104 Heliport loop Rd., Bridgeport, WV 26330



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

Invoice

| P.O.# | Inv. Date | Invoice # |
|-------|------------|-----------|
| 12060 | 10/21/2021 | 12144 |

| Job Date | DUE DATE |
|------------|------------|
| 10/21/2021 | 11/20/2021 |

HG Energy, LLC
 5260 DuPont Rd
 Parkersburg, WV 26101

| API# | Lease | Well# | State | County | Stages | Terms & Type |
|------|---------------|-------|-------|---------|--------|--------------|
| | Robert Fowler | 516 | WV | Lincoln | 1 | Oil/Gas |

| Description | Quantity | Unit Price | Amount |
|--|----------|------------|--------|
| Pump Truck Charge (#131) | 1 | | |
| Blender Truck Charge (#210) | 1 | | |
| Control Van Charge (#710) | 1 | | |
| Acid Truck Charge (#507) | 1 | | |
| Acid HCL 15% | 250 | | |
| 4 N 1 - Inhibitor & Iron Control (in acid) | 0.5 | | |
| Sand: Bulk 20/40 API/100 LB (#623) | 50 | | |
| Pro Gel 4.0L - Liquid Guar | 30 | | |
| BXL 10C - Crosslinker | 10 | | |
| BXL-A - Breaker Activator | 10 | | |
| AP-1 - Oxidizing Breaker | 10 | | |
| Pro CLA Firm LP - Clay Control | 10 | | |
| NE-21 Non-Emulsifier/Surfactant | 10 | | |
| BioClear 1000 - Dry Biocide | 1 | | |
| DISCOUNT FOR PAYMENT WITHIN TERMS | 1 | | |
| NON DISCOUNTED ITEMS | | | |
| Mileage (6 Trucks @ 200 miles/way) | 2,400 | | |
| Fuel Surcharge | 1 | | |

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

11/12/2021



Reliance

Well Services, LLC

X-Link Frac

HG Energy, LLC
Treater: Joe Stevens
Date: 10/21/2021
Lease: Robert Fowler
Well #: 516
Lincoln County, WV



Reliance
WELL SERVICES, LLC

510 Cranberry Street
Savoy, VA 22186
Phone: 540.343.8807
Fax: 540.343.8844
E-mail: info@reliance-ws.com
24 Hour: 540.343.8802

Operator: HG Energy, LLC
Lease: Robert Fowler
Well #: 516
Location: Lincoln County, WV

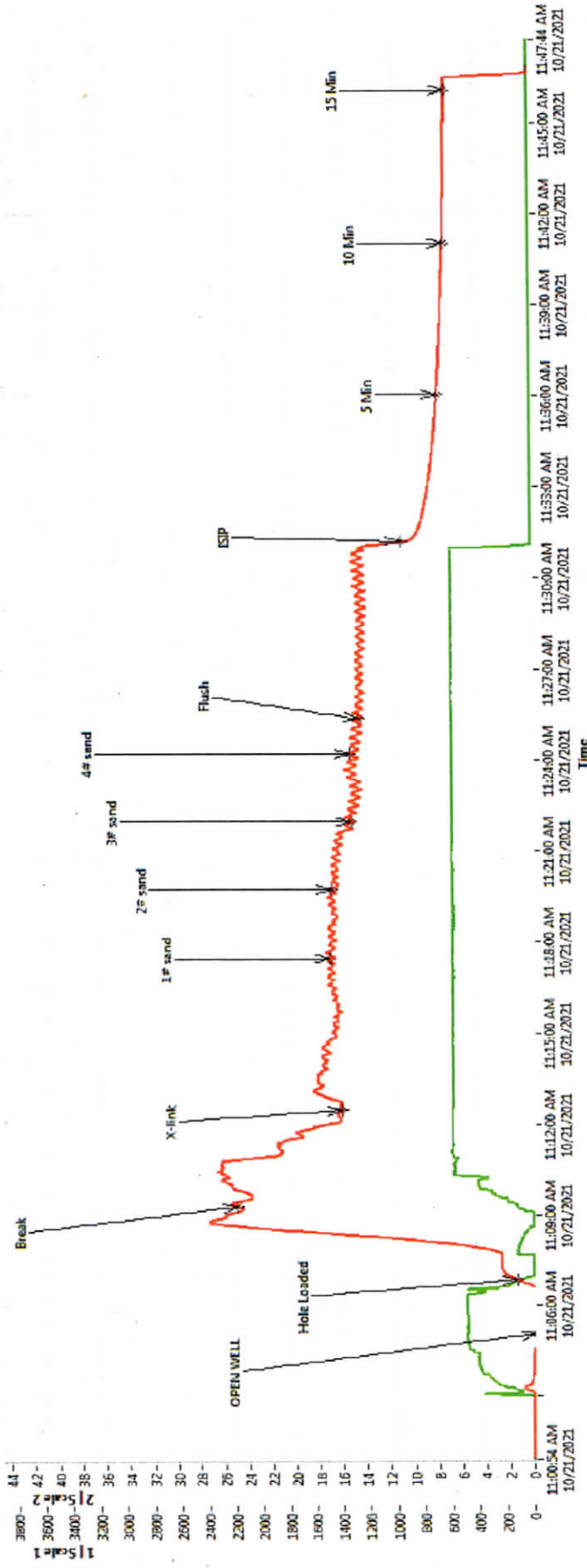
Supervisor: Joe Stevens
Pump Time: 1:09 PM
Flush Time: 1:38 PM
Date: 10/21/2021

| Stage | Depth | Breakdown | Clean Vol H2O | Slurry Discharge | Acid 15% HCL | (in acid) 4 N 1 | API 20/40 Sand | Ave. Treating | 5 min. SIP | 10 min. SIP | 15 min. SIP | Pro Gel 4.0L Guar Gel | BXL-10C X-Linker | BXL-A Breaker Activator | AP-1 Breaker | Pro CLA Firm LP Clay Control | Pro NE-21 Non Emulsifier | BioClear 1000 Biocide |
|--------------|-------|-----------|---------------|------------------|---------------|-----------------|----------------|---------------|------------|-------------|-------------|-----------------------|------------------|-------------------------|--------------|------------------------------|--------------------------|-----------------------|
| | (ft) | (psi) | (bbls) | (bbls) | (gals) | (gals) | (sacks) | (psi) | (psi) | (psi) | (psi) | (lbs) | (gals) | (gals) | (lbs) | (gals) | (gals) | (lbs) |
| 1 | 2424 | 2,393 | 162 | 123 | 250.00 | 0.50 | 50.00 | 1,419 | 681 | 629 | 608 | 30.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 1.00 |
| Total | | | | | 250.00 | 0.50 | 50.00 | | | | | 30.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 1.00 |

Comments: Stage 1 10/21/2021: Treated per design.

11/12/2021

HG ENERGY, LLC - ROBERT FOWLER #516 - STAGE 1 COMMENTS



1 | Pressure
 2 | Discharge Rate

JOB COMMENTS AND DETAILS

| | |
|-----------------|-----------------------------------|
| Job Name | Robert Fowler #516 |
| Location | Lincoln 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 (gal) | Grand Total (gal) | Stage Total (bbt) | Grand Total (bbt) |
|------------------------|-------------|------------|----------------|-------------------|-------------------|-------------------|-------------------|
| 10/21/2021 11:05:06 AM | OPEN WELL | -16.05 | 5.58 | 360.65 | 360.65 | 8.59 | 8.59 |
| 10/21/2021 11:06:53 AM | Hole Loaded | 121.47 | 1.30 | 732.64 | 732.64 | 17.44 | 17.44 |
| 10/21/2021 11:09:18 AM | Break | 2178.88 | 1.33 | 781.09 | 781.09 | 18.60 | 18.60 |
| 10/21/2021 11:12:29 AM | X-link | 1402.03 | 6.79 | 1537.58 | 1537.58 | 36.61 | 36.61 |
| 10/21/2021 11:17:28 AM | 1# sand | 1490.72 | 6.79 | 2948.33 | 2948.33 | 70.20 | 70.20 |
| 10/21/2021 11:19:45 AM | 2# sand | 1478.97 | 6.69 | 644.31 | 3592.63 | 15.34 | 85.54 |
| 10/21/2021 11:21:58 AM | 3# sand | 1333.54 | 6.69 | 623.43 | 4220.82 | 14.84 | 100.50 |
| 10/21/2021 11:24:12 AM | 4# sand | 1341.49 | 6.70 | 628.18 | 4853.77 | 14.96 | 115.57 |
| 10/21/2021 11:25:23 AM | Flush | 1266.45 | 6.74 | 334.70 | 5188.48 | 7.97 | 123.54 |
| 10/21/2021 11:31:13 AM | ISIP | 950.97 | 0.00 | 1620.14 | 6808.62 | 38.57 | 162.11 |
| 10/21/2021 11:36:04 AM | 5 Min | 681.54 | 0.00 | 1620.14 | 6808.62 | 38.57 | 162.11 |
| 10/21/2021 11:41:03 AM | 10 Min | 629.32 | 0.00 | 1620.14 | 6808.62 | 38.57 | 162.11 |
| 10/21/2021 11:46:06 AM | 15 Min | 608.36 | 0.00 | 1620.14 | 6808.62 | 38.57 | 162.11 |

Quality Control Job Sheet

| | |
|----------|--------------------|
| Customer | HG Energy, LLC |
| Date | 10/21/2021 |
| Well | Robert Fowler #516 |

| PHYSICAL INVENTORY | | | |
|---------------------------|---------------------------|------------------------|---------------------|
| Chemical | Starting Inventory | Final Inventory | Total Pumped |
| Pro Gel 4.0L | 230.00 | 200.00 | 30.00 |
| BXL-10C | 20.00 | 10.00 | 10.00 |
| BXL-A | 20.00 | 10.00 | 10.00 |
| AP-1 Breaker | 20.00 | 10.00 | 10.00 |
| Pro CLA Firm LP | 20.00 | 10.00 | 10.00 |
| Pro NE-21 | 20.00 | 10.00 | 10.00 |
| BioClear 1000 | 2.00 | 1.00 | 1.00 |

| Acid | Acid Volume Out | 4 N 1 Added | Acid Voume In | Total |
|-------------|------------------------|--------------------|----------------------|--------------|
| Acid 15% | 500 | 0.5 | 250 | 250 |