

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

API 47 - 043 - 03488 County LINCOLN District DUVAL
Quad GRIFFITHSVILLE 7.5' Pad Name MAY, EDNA Field/Pool Name GRIFFITHSVILLE
Farm name COY, RANDALL & PATRICIA Well Number 229
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 4,232,186 M Easting 415,870 M
Landing Point of Curve Northing _____ Easting _____
Bottom Hole Northing _____ Easting _____

Elevation (ft) 960' 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 9/6/16 Date drilling commenced 10/27/15 Date drilling ceased 10/29/15
Date completion activities began 9/7/16 Date completion activities ceased 9/9/16
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 Gas
Salt water depth(s) ft 1170' Void(s) encountered (Y/N) depths None
Coal depth(s) ft 565'- 572' Cavern(s) encountered (Y/N) depths None
Is coal being mined in area (Y/N) N

APPROVED

NAME: Quake Thornton
DATE: 9/22/16

Reviewed by: _____
Date: _____

10/28/2016

API 47-043 - 03488 Farm name COY, RANDALL & PATRICIA Well number 229

| 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" | 636' | New | LS | 64' | Y |
| Coal | | | | | | | |
| Intermediate 1 | | | | | | | |
| Intermediate 2 | | | | | | | |
| Intermediate 3 | | | | | | | |
| Production | 6 1/4" | 4 1/2" | 2598.7' | New | J-55 | | Y |
| Tubing | 4" | 2 3/8" | 2431' | Used | J-55 | | |
| Packer type and depth set | | | | | | | |

Comment: Details Circulated Est. 50 sks to surface on 7" surface cement job. Circulated Est. 13 sks to surface on 4 1/2" cement job.
2 3/8" tubing set on Parmaco packer at 2431'

| 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 | 160 | 15.6 | 1.18 | 189 | Surface | 8 |
| Coal | | | | | | | |
| Intermediate 1 | | | | | | | |
| Intermediate 2 | | | | | | | |
| Intermediate 3 | | | | | | | |
| Production | 50:50 Pozmix | 110/125 | 13.2/14.2 | 1.64/1.27 | 180/186 | 70' | 8 |
| Tubing | | | | | | | |

Drillers TD (ft) 2630' Loggers TD (ft) 2594'
 Deepest formation penetrated Berea Plug back to (ft) N/A
 Plug back procedure N/A

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 _____
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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PERFORATION RECORD

| Stage No. | Perforation date | Perforated from MD ft. | Perforated to MD ft. | Number of Perforations | Formation(s) |
|-----------|------------------|------------------------|----------------------|------------------------|--------------|
| 1 | 11/4/15 | 2448' | 2458' | 40 | Berea |
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Please insert additional pages as applicable.

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 | 11/6/15 | 4 | 1314 | 2425 | 1421 | 1,000 | 153 | |
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Please insert additional pages as applicable.

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| <u>PRODUCING FORMATION(S)</u> | <u>DEPTHS</u> | <u>TVD</u> | <u>MD</u> |
|-------------------------------|---------------|------------|-----------|
| Berea | 2444'- 2466' | | |
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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

| <u>LITHOLOGY/ FORMATION</u> | <u>TOP</u> | <u>BOTTOM</u> | <u>TOP</u> | <u>BOTTOM</u> | <u>DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H₂S, ETC)</u> |
|---------------------------------|---------------------------------|----------------------------|---------------------------|---------------------------|--|
| | <u>DEPTH IN FT NAME TVD</u> | <u>DEPTH IN FT TVD</u> | <u>DEPTH IN FT MD</u> | <u>DEPTH IN FT MD</u> | |
| Sand/Shale | 0 | 565 | 0 | | |
| Pittsburgh Coal | 565 | 572 | | | |
| Sand/Shale | 572 | 1730 | | | |
| Big Lime | 1730 | 1930 | | | |
| Big Injun | 1930 | 2034 | | | |
| Shale | 2034 | 2423 | | | |
| Coffee Shale | 2423 | 2444 | | | |
| Berea | 2444 | 2466 | | | |
| Shale | 2466 | 2630 | | | |
| TD | 2630 | | | | |
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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 11000 Performance PL City Youngstown State OH Zip 44502

Cementing Company Universal Services
 Address 14 Sewer Plant 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 Feldman Telephone 304-420-1107
 Signature *Roger Feldman* Title Operations Manager Date 9/9/16

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