

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

API 47-39-06371 County Kanawha District Union
Quad St. Albans Pad Name _____ Field/Pool Name WV\$U
Farm name WV\$U Board of Governors Well Number #3
Operator (as registered with the OOG) Reserve Oil and Gas, Inc
Address 929 Charleston Road City Spencer State WV Zip 25276

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 504623 NAD83 4248624 UTM NAD83 Easting 1748343 NAD83 0432917 UTM NAD83
Landing Point of Curve Northing N/A Easting N/A
Bottom Hole Northing N/A Easting N/A

Elevation (ft) 606 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 02/12/2015 Date drilling commenced 3/18/2015 Date drilling ceased 3/28/2015
Date completion activities began 4/14/2015 Date completion activities ceased 4/14/2015
Verbal plugging (Y/N) No Date permission granted N/A Granted by N/A

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

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Freshwater depth(s) ft 80ft Open mine(s) (Y/N) depths No JUL 10 2015
Salt water depth(s) ft N/A Void(s) encountered (Y/N) depths No
Coal depth(s) ft N/A Cavern(s) encountered (Y/N) depths No Office of Oil and Gas
Is coal being mined in area (Y/N) No WV Dept. of Environmental Protection

Reviewed by:

R.F.
✓

08/14/2015

API 47- 39 - 06371 Farm name WV SU Board of Governors Well number WV SU #3

| CASING STRINGS | Hole Size | Casing Size | Depth | New or Used | Grade w/ft | Basket Depth(s) | Did cement circulate (Y/N) * Provide details below* |
|---------------------------|---------------|---------------|-----------|-------------|------------|----------------------------|--|
| Conductor | 20" / 17 1/2" | 20" / 13 3/8" | 20' / 63' | New/New | 142 # | No | None in N/Excavator/CTS |
| Surface | 12 3/8" | 9 5/8" | 336' | New | 26 # | 1 @ 84' | Yes, 5 bbls |
| Coal | | | | | | | |
| Intermediate 1 | 8 7/8" | 7" | 1740' | New | 23 # | N/A | Yes, 5 bbls |
| Intermediate 2 | | | | | | | |
| Intermediate 3 | | | | | | | |
| Production | 6 1/4" | 4 1/2" | 4497' | New | 11.6 # | 56 jts: 10, 20, 30, 40, 50 | No |
| Tubing | | | | | | | |
| Packer type and depth set | | | | | | | |

Comment Details _____

| 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 | Type 1 | 80 | 15.6 | 1.18 | 26.8 bbl | CTS | 24 hrs |
| Surface | Type 1 | 125 | 15.6 | 1.18 | 79.0 bbl | CTS | 24 hrs |
| Coal | | | | | | | |
| Intermediate 1 | Type 1 | 195 | 13.8 | 1.83 | 66.0 bbl | CTS | 24 hrs |
| Intermediate 2 | | | | | | | |
| Intermediate 3 | | | | | | | |
| Production | Super Yield 260 | 120 | 11.8 | 2.63 | 56.0 bbl | 1656' est. | 24 hrs |
| Tubing | | | | | | | |

Drillers TD (ft) 4500 Loggers TD (ft) 4483

Deepest formation penetrated Devonian Shale 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 _____

20" : 0
 13 3/8" : 0
 9 5/8" : 1
 7" : 0
 4 1/2" : 6 @ jts: 10, 20, 30, 40, 50, 60

WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS _____

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WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

WERE TRACERS USED Yes No TYPE OF TRACER(S) USED _____

Office of Oil and Gas
WV Dept. of Environmental Protection

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PERFORATION RECORD

| Stage No. | Perforation date | Perforated from MD ft. | Perforated to MD ft. | Number of Perforations | Formation(s) |
|-----------|------------------|------------------------|----------------------|------------------------|------------------------------|
| 1 | 4/14/2015 | 4127 | 4472 | 40 | Devonian Shale |
| 2 | 4/14/2015 | 3341 | 3850 | 33 | Lower Huron / Devonian Shale |
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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) | ^{158 HCL} Amount of Water (bbls) | Amount of Nitrogen/other (units) |
|-----------|-------------------|---------------------|------------------------------|------------------------------|------------|--------------------------|---|----------------------------------|
| 1 | 4/14/2015 | 56 | 2300 | N/A | N/A | N/A | 600 gallons | 827 mcf |
| 2 | 4/14/2015 | 54 | 2236 | N/A | N/A | N/A | 600 gallons | 827 mcf |
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| PRODUCING FORMATION(S) | DEPTHS |
|------------------------|--|
| <u>Lower Huron</u> | <u>3334 to 3713</u> TVD <u>3341 to 3720</u> MD |
| <u>Devonian Shale</u> | <u>3713 to 4465</u> <u>3720 to 4472</u> |
| | |
| | |

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 90 psi Bottom Hole _____ psi DURATION OF TEST 16 hrs

OPEN FLOW Gas 0 mcfpd Oil _____ bpd NGL _____ bpd Water _____ bpd GAS MEASURED BY Estimated Orifice Pilot

| LITHOLOGY/ FORMATION | TOP | | BOTTOM | | DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC) |
|-------------------------|---------------------|--------------------|-------------------|-------------------|--|
| | DEPTH IN FT NAME | DEPTH IN FT TVD | DEPTH IN FT MD | DEPTH IN FT MD | |
| | 0 | | 0 | | |
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Office of Oil and Gas
WV Dept. of Environmental Protection

See Attachment A

Please insert additional pages as applicable.

Drilling Contractor Kanawha Valley Drilling LLC
Address 929 Charleston Road City Spencer State WV Zip 25276

Logging Company Nabors
Address 515 West Greens Rd, Suite 100 City Houston State TX Zip 77067

Cementing Company ConServ / Nabors
Address 779 Charleston Rd / 515 West Greens Rd, St 100 City Spencer / Houston State WV/TX Zip 25276 / 77067

Stimulating Company Nabors
Address 515 West Greens Rd, Suite 100 City Houston State TX Zip 77067

Please insert additional pages as applicable.

Completed by Ryan Fields Telephone 304-927-6970
Signature Ryan Fields Title Equipment Yard Manager Date 7/6/2015

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

