

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

API 47-39-06366 County Kanawha District Union  
Quad St. Albans Pad Name \_\_\_\_\_ Field/Pool Name WVSU  
Farm name WVSU Board of Governors Well Number #2  
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 502455 NAD83 4147963 UTM Easting 1746960 NAD83 0432496 UTM NAD83  
Landing Point of Curve Northing \_\_\_\_\_ Easting \_\_\_\_\_  
Bottom Hole Northing \_\_\_\_\_ Easting \_\_\_\_\_

Elevation (ft) 595 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 05/20/2014 Date drilling commenced 9/3/2014 Date drilling ceased 9/15/2014  
Date completion activities began 10/1/2014 Date completion activities ceased 10/1/2014  
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

Freshwater depth(s) ft 70', 95' Open mine(s) (Y/N) depths No  
Salt water depth(s) ft N/A Void(s) encountered (Y/N) depths No  
Coal depth(s) ft None Cavern(s) encountered (Y/N) depths No  
Is coal being mined in area (Y/N) No

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Reviewed by:  
R. F.

DEC 16 2014

API 47- 39 - 06366 Farm name WVSU Board of Governors Well number WVSU #2

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	17 1/2"	13 3/8"	20'	New	40 #	NO	yes
Surface	12 1/4"	9 5/8"	336'	New	26 #	1	yes 6 bbl to pit
Coal							
Intermediate 1	8 7/8"	7"	1760'	New	17 #	1 @ 275'	yes 5 bbl to pit
Intermediate 2							
Intermediate 3							
Production	6 1/2"	4 1/2"	4441'	New	11.6 #	NA	
Tubing							
Packer type and depth set							

Comment Details \_\_\_\_\_

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft <sup>3</sup> /sks)	Volume (ft <sup>3</sup> ) BBL	Cement Top (MD)	WOC (hrs)
Conductor	Type 1	100	15.6	1.18	21.0	0 (Surface)	24 hrs
Surface	Type 1	130	15.6	1.18	79.0	0 (Surface)	24 hrs
Coal							
Intermediate 1	Type 1	215	13.8	1.83	71.8	0 (Surface)	24 hrs
Intermediate 2							
Intermediate 3							
Production	Stronglite 250	150	12.3	2.34	69.0	785	24 hrs
Tubing							

Drillers TD (ft) 4455 Loggers TD (ft) 4443  
 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  
13 3/8" : \_\_\_\_\_  
9 5/8" : 1  
7" : 1  
4 1/2" : NA

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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API 47- 39 - 06366 Farm name WVSU Board of Governors Well number WVSU #2

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	10/1/2014	3937	4257	20	Devonian Shale
2	10/1/2014	3326	3821	20	Huron, Devonian Shale

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	SCF/MIN Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	15% HCL Amount of Water (bbls)	Amount of Nitrogen/other (units)
1	10/1/2014	43,643	2347	2550	1564	N/A	250 gal	501,363 SCF
2	10/1/2014	43,643	1808	1880	956	N/A	750 gal	1,000,992 SCF

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<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>Huron shale</u>	<u>3326</u> TVD	<u>3795</u> MD
<u>Devonian shale</u>	<u>3795</u>	<u>4257</u>

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface 470 psi Bottom Hole \_\_\_\_\_ psi DURATION OF TEST 24 hrs

OPEN FLOW Gas 84 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 <sub>2</sub> S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	
	0		0		

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Please insert additional pages as applicable.

see attachment A for formation info

Drilling Contractor Kanawha Valley Drilling  
Address 727 Charleston Road City Spencer State WV Zip 25276

Logging Company Nabors Completion & Production Services Co.  
Address 515 West Greens Road, Suite 100 City Houston State TX Zip 77067

Cementing Company Universal Well Services  
Address Rt 5 Hall Road City Buckhannon State WV Zip 26201

Stimulating Company Universal Well Services  
Address Rt 5 Hall Road City Buckhannon State WV Zip 26201

Please insert additional pages as applicable.

Completed by Ryan Fields Telephone 304-927-5033  
Signature Ryan Fields Title office assistant Date 10/23/2014

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

