WR-35
Rev. 8/23/13

pm

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

API 47 - 039 - 06363 County Kanawha District Union
Quad St. Albans Pad Name ____ Field/Pool Name WVSU
Farm name Board of Governors, WVSU Well Number #1
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 4247780 Easting 0432920
Landing Point of Curve Northing ____ Easting ____
Bottom Hole Northing ____ Easting ____

Elevation (ft) 594 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 8/29/2013 Date drilling commenced 4/8/2014 Date drilling ceased 5/2/2014
Date completion activities began 5/16/2014 Date completion activities ceased 5/18/14
Verbal plugging (Y/N) N/A 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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Office of Oil and Gas
JUL 1 0 2014
WV Department of
Environmental Protection

Freshwater depth(s) ft 80', 98', & 575' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 1130' Void(s) encountered (Y/N) depths No
Coal depth(s) ft N/A Cavern(s) encountered (Y/N) depths No
Is coal being mined in area (Y/N) No

Reviewed by:
R.F.

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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	N/A	20"	15'	New	N/A	N/A	filled with dirt
Surface	17½"	13⅜"	63'	New	26lb	N/A	to surface by hand
Coal							
Intermediate 1	12¼"	9⅝"	336'	New	26 lb	84'	No,
Intermediate 2	8⅞"	7"	1730'	New	17lb	295'	Yes, 10bbls to pit,
Intermediate 3							
Production	6½"	4½"	4409.95	New	11.6lb	JTS: 10,20,30,40,50	
Tubing							
Packer type and depth set							

Comment Details Grouted backside of 9⅝" w/ 50 sacks cement and cement stayed up.

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	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Surface	Type 1	40	N/A	N/A	N/A	0	13hrs
Coal							
Intermediate 1	Type1/3% CaCl .25flake	150	15.6	1.18	177.0	0	18hrs
Intermediate 2	Type1/25gel 3% CaCl .25flake	270	14.8	1.40	378.0	0	10hrs
Intermediate 3							
Production	Strong Life 250/Kolseal	160	12.6	2.11	337.6	0	
Tubing							

Drillers TD (ft) 4425 Loggers TD (ft) 4416
Deepest formation penetrated Rhinestreet Plug back to (ft) 4410
Plug back procedure N/A

Kick off depth (ft) N/A

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": N/A
13⅜": N/A
9⅝": N/A
7": N/A
4½": JTS: 10, 20, 30, 40, 50, 60

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	5/16/14	4396	3961	40	Huron / Shale / Rhinestreet
2	5/16/14	3838	3340	40	Sand and Shale / Huron

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) 7½% HCL	Amount of Nitrogen/other (units)
1	5/16/14	52,511	2442	3254	1733		274 gallons	1,000,731 N2
2	5/16/14	53,014	2039	3061	1602		823 gallons	1,000,975 N2

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PRODUCING FORMATION(S)	DEPTHS	
Sand and Shale	3333 - 3339 TVD	3340 - 3346 MD
Huron	3339 - 4113	3346 - 4120
Shale	4113 - 4251	4120 - 4258
Rhinestreet	4251 - 4389	4258 - 4396

Please insert additional pages as applicable.

GAS TEST ☐ Build up ☐ Drawdown ☒ Open Flow OIL TEST ☐ Flow ☐ Pump

SHUT-IN PRESSURE Surface 120 psi Bottom Hole _____ psi DURATION OF TEST 26 hrs

OPEN FLOW Gas 304 mcfpd Oil _____ bpd NGL _____ bpd Water _____ bpd GAS MEASURED BY ☐ Estimated ☒ Orifice ☐ Pilot

LITHOLOGY/ FORMATION NAME	TOP DEPTH IN FT 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_2S, ETC)
	0		0		
					See attachment A

Please insert additional pages as applicable.

Drilling Contractor Kanawha Valley Drilling
Address 929 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 Service
Address Rt 5, Hall Road City Buckhannon State WV Zip 26201

Stimulating Company Universal Well Service
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 7/8/2014

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

08/15/2014

Formation	TOP (TVD)	BOTTOM (TVD)	TOP (MD)	BOTTOM (MD)	Remarks
K.B to G.L.			0	7	80' hole damp
Fill	0	48	7	55	
Rock	48	73	55	80	98' 3" stream
Sand and Shale	73	353	80	360	Started soaping
Grey Sand / Shale	353	573	360	580	
Coarse Sand	573	593	580	600	575' 1/4" stream
Shale	593	913	600	920	hole damp
Salt Sand	913	1158	920	1165	
Sand and Shale	1158	1393	1165	1400	1130' big water
Little Lime	1393	1488	1400	1495	3" to 4" stream
Big Lime	1493	1638	1500	1645	
Injun	1638	1673	1645	1680	1517' switch to
Sand and Shale	1673	2125	1680	2132	fluid
Berea	2125	2137	2132	2144	
Sand and Shale	2137	3339	2144	3346	2950' gas check
Huron	3339	4113	3346	4120	No show
Shale	4113	4251	4120	4258	
Rhinestreet	4251	4418	4258	4425	

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