

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

PM

API 47-039-06365 County Kanawha District E1K
Quad Big Chimney Pad Name _____ Field/Pool Name National Guard
Farm name West Virginia Department of Public Safety, Armory Board 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 4247609 Easting 0449289
Landing Point of Curve Northing _____ Easting _____
Bottom Hole Northing _____ Easting _____

Elevation (ft) 860 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

RECEIVED
Office of Oil and Gas
Date drilling ceased 5/18/2014
WV Department of
Environmental Protection

Date permit issued 4/18/14 Date drilling commenced 5/6/2014
Date completion activities began 5/22/2014 Date completion activities ceased 5/23/2014
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 80', 517' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 1028' 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:
08/15/2014

API 47- 039 - 06365 Farm name WV Dept of Public Safety Well number #1 (National Guard)

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	17 1/2"	13 3/8"	18'	New	48 lb	N/A	surface by hand
Surface	12 1/4"	9 5/8"	336'	New	26 lb	N/A	yes, 10 bbls to pit
Coal							
Intermediate 1	8 7/8"	7"	1814'	New	17 lb	295'	Yes, 5 bbls to pit
Intermediate 2							
Intermediate 3							
Production	6 1/2"	4 1/2"	4505.35'	New	11.6 lb	JTS: 11, 21, 31	41, 51
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 2	7	N/A	N/A	N/A	0	9 hrs
Surface	Type 7	125	15.6	1.17		0	10 hrs
Coal							
Intermediate 1	Type 1 / 28% Ca 28 gal. 25 sulfate	275	14.8	1.40	385.0	0	15 hrs
Intermediate 2	Type 1 NEAT	50	15.6	1.18	59.0	0	15 hrs
Intermediate 3							
Production	Strong L. te 250 / kel / seal	155	12.3	2.34	362.7		
Tubing							

Drillers TD (ft) 4520 Loggers TD (ft) 4510
 Deepest formation penetrated Rhinestreet Plug back to (ft) 4502
 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 _____

13 3/8" N/A
9 5/8" N/A
7" N/A
4 1/2" @ 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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PRODUCING FORMATION(S)	DEPTHS
<u>Lower Huron</u>	<u>3754 - 4360</u> TVD <u>3761 - 4367</u> MD
<u>Rhinestreet</u>	<u>4360 - 4424</u> <u>4367 - 4431</u>
_____	_____
_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 70 psi Bottom Hole _____ psi DURATION OF TEST 16 hrs

OPEN FLOW Gas 267 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	
	0		0		
					<u>See Attachment A</u>

Please insert additional pages as applicable.

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

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

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

Stimulating Company Universal Well Services Inc
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

