

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

API 47-39-06372 County Kanawha District Spring Hill Corporation
Quad Charleston West Pad Name _____ Field/Pool Name State Police
Farm name WV State Police 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 494512 NAD83 / 4245543 NAD83 Easting 1763112 NAD83 / 0437418 NAD83
Landing Point of Curve Northing N/A Easting N/A
Bottom Hole Northing " Easting "

Elevation (ft) 583 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 03/11/2015 Date drilling commenced 4/6/2015 Date drilling ceased 4/18/2015
Date completion activities began 4/28/2015 Date completion activities ceased 4/28/2015
Verbal plugging (Y/N) No Date permission granted N/A Granted by N/A

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

JUL 10 2015

Freshwater depth(s) ft 40ft, 78ft, 245ft Open mine(s) (Y/N) depths No
Salt water depth(s) ft 980ft 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

Office of Oil and Gas
WV Dept. of Environmental Protection
Reviewed by:
R.F.
7/24/15
08/14/2015

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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"	55'	New	40.0	N/A	CTS
Surface	12 3/8"	9 5/8"	210'	New	26.0	1 @ 84'	No, grout backside
Coal							w/ 70 sacks
Intermediate 1	8 7/8"	7"	1489'	New	23.0	N/A	Yes, 5 bbl
Intermediate 2	8 7/8"	5 1/2"	1727'	Used	15.0	N/A	No, CT 990'
Intermediate 3							
Production	4 3/4"	3 1/2"	4430'	Used	7.7	N/A	
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 + 38% oil	60	15.6	1.18	20.0 bbl	CTS	24 hrs
Surface	Type 1 + 38% oil + 1/4 flake	140	15.6	1.18	57.0 bbl	CTS	24 hrs
Coal							
Intermediate 1	Type 1 + 38% oil + 1/4 flake	190	12.3/15.6	2.24/1.18	105.5 bbl	CTS	24 hrs
Intermediate 2	Type 1	102	15.6	1.18	34.2 bbl	990'	24 hrs
Intermediate 3							
Production	Super Yield 260	75	11.8	2.63	35 bbl		24 hrs
Tubing							

Drillers TD (ft) 4436 Loggers TD (ft) 4408

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" : 0
9 5/8" : 1
7" : 0
5 1/2" : 0
3 1/2" : 0

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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 _____

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PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	4/28/2015	3600	4400	60	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	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	4/28/15	48,000 SCF	3960	3998	2960	N/A	1200 gallons	1,800,000 mcf

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PRODUCING FORMATION(S)	DEPTHS	
Huron	3593 to 3853 TVD	3600 to 3860 MD
Devonian Shale	3853 to 4393	3860 to 4400

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 350 psi Bottom Hole _____ psi DURATION OF TEST 24 hrs

OPEN FLOW Gas 73 mcfpd Oil _____ bpd NGL _____ bpd Water _____ bpd GAS MEASURED BY Estimated Orifice Pilot

LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME 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.S, ETC)
	0		0		
					See attached

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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 Con Serv / Nabors
Address 929 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

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

