

10/05/2018

WR-35
Rev. 8/23/13

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

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SEP 10 2018

WV Department of
Environmental Protection

API 47 - 039 - 06383 County Kanawha District Spring Hill Corp.
Quad Charleston West Pad Name _____ Field/Pool Name _____
Farm name Thomas Memorial Hospital Well Number 1
Operator (as registered with the OOG) RESERVE OIL & GAS INC.
Address 929 Charleston Rd. 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 493,422 Easting 1,760,495
Landing Point of Curve Northing NA Easting N/A
Bottom Hole Northing 403,422 Easting 1,760,495

Elevation (ft) 603 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 10-7-2016 Date drilling commenced 1-17-2018 Date drilling ceased 2-2-2018
Date completion activities began 8-15-2018 Date completion activities ceased 8-15-2018
Verbal plugging (Y/N) _____ Date permission granted _____ Granted by _____

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

Freshwater depth(s) ft 40' - 1/4"; 70' - 3" Open mine(s) (Y/N) depths N
Salt water depth(s) ft _____ Void(s) encountered (Y/N) depths N
Coal depth(s) ft _____ Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed

Ben W. White
10-4-18

Reviewed by: _____

2018 01 01

2018 01 01

Handwritten signature and date: *[Signature]*
10/05/2018

Reviewed

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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	17 1/2	13 3/8	58	NEW	LS	NA	Y
Surface	12 1/4	9 5/8	252	NEW	LS 26#	84	Y 5 bbls,
Coal							
Intermediate 1	8.75	7	1748	New	LS 17#	224	Y 5 bbls
Intermediate 2							
Intermediate 3							
Production	6.25	4.5	4438	New	10.5	4036, 3515, 2836, 2226	N
Tubing							
Packer type and depth set							

Comment Details 9 5/8. on primary job (121 sks) circulated 5 bbls. The cement fell back and was grouted with an additional 81 sks to surface

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	146	15.6	1.18	172	Surface	12
Surface	Type 1	202	15.6	1.2	242	Surface	12
Coal							
Intermediate 1	Type 1	Lead 100 Tail 125	13 & 15.6	1.89 & 1.2	189 & 120	Surface	12
Intermediate 2							
Intermediate 3							
Production	Lite Slurry	130	11.8	2.7	351	1960	24
Tubing							

Drillers TD (ft) 4460 Loggers TD (ft) 4475
 Deepest formation penetrated Lower Huron 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 _____

9 5/8 84'

7" 224 & 1059

4 1/2 4408, 4036, 3515, 3348, 3179, 2936, 2226

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	8-15-2018	4438	4126	40	Lower Huron
2	8-15-2018	4027	3333	60	Upper Huron

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Please insert additional pages as applicable.

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STIMULATION INFORMATION PER STAGE

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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)	Amount of Nitrogen/other (units)
1	8-15-18	55000 scf	2,500	2315	1668	0	0	805,898 scf
2	8-15-18	59000 scf	1,700	1430	1131	0	0	1,304,000 scf

Please insert additional pages as applicable.

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PRODUCING FORMATION(S)	DEPTHS	
Lower Huron	4438 - 4136	TVD 4438 - 4136 MD
Upper Huron	4027 - 3333	4027 - 3333

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GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

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

OPEN FLOW Gas _____ 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 ₂ S, ETC)
Clays, rock silt	0	105	0	105	Clays, rock, silt
Sand, Shale, Silt	105	135	105	135	Sands, Shale, Silt
Maxton	1222	1387	1222	1387	Sand
Shale	1387	1414	1387	1414	Shale
Little Lime	1414	1445	1414	1442	Lime,
Big Lime	1445	1622	1445	1672	Lime
Squaw sand	1622	1633	1622	1633	Sand
Injun	1633	1675	1633	1675	Sand
Silt/Shale	1675	2090	1675	2090	Silts and shale
Coffee Shale	2090	2109	2090	2109	Shale
Berea	2109	2126	2109	2106	Sand stonesilt (gas/ oily)
Shale/Silts	2126	2892	2126	2892	Shale silts
Shale	2892	3332	2892	3332	Shale
Shale	3332	4438	3332	4438	Shale, (Gas)

Please insert additional pages as applicable.

Drilling Contractor CONSERV
Address 929 Charleston Rd. City Spencer State WV Zip 25276

Logging Company CONSERV
Address _____ City _____ State _____ Zip _____

Cementing Company CONSERV
Address _____ City _____ State _____ Zip _____

Stimulating Company RELIANCE WELL SERVICE
Address 5226 KY, 1428 KY City ALLEN State KY Zip 41601

Please insert additional pages as applicable.

Completed by J. Scott Freshwater Telephone 304-927-5228
Signature _____ Title Vice President Date 9/6/18