

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

API 47-039-06359 County Kanawha District North Charleston
Quad Charleston East Pad Name n/a Field/Pool Name n/a
Farm name Kanawha County Board of Education Well Number Capital High #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 489,259 (424,926) 38,3676 205 Easting 1,804,064 (0449256) 81.580894
Landing Point of Curve Northing _____ Easting _____
Bottom Hole Northing _____ Easting _____

Elevation (ft) 701 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 06/26/2013 Date drilling commenced 07/25/2013 Date drilling ceased 08/5/2013
Date completion activities began 08/08/2013 Date completion activities ceased 08/08/2013
Verbal plugging (Y/N) n/a Date permission granted n/a Granted by n/a

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NOV 25 2013

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

Freshwater depth(s) ft 70 Open mine(s) (Y/N) depths _____
Salt water depth(s) ft 679, 760, 1015 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:
OCT 15 2013

12/06/2013
WV Department of
Environmental Protection

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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	33.00	New	48.0	None	No, cement by hand to surface
Surface	12 1/4	9 5/8	421.00	New	26.0	1 at 126'	yes, 5 bbls to pit
Coal							
Intermediate 1	8 7/8	7	1646.00	New	17.0	1 at 295'	yes, 5 bbls to pit
Intermediate 2							
Intermediate 3							
Production	6 1/2	4 1/2	4351.65	New	11.6	5 at joints: 10,20,30,40,50	
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	Portland	11				GL	10
Surface	Type 1	160	14.8	1.4	224	GL	7
Coal							
Intermediate 1	Class A	275	15.6	1.18	324.5	GL	16
Intermediate 2							
Intermediate 3							
Production	Tufflite	140	12.0	2.49	348.6	4351	12
Tubing							

Drillers TD (ft) 4405 Loggers TD (ft) 4382
 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": no centralizers used
9 5/8": no centralizers used
7": 3 centralizers were used
4 1/2": 6 centralizers used at joints 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	08/08/2013	3656	4304	40	Huron, Devonian Shale
2	08/08/2013	2970	3575	40	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)	Amount of Nitrogen/other (units)
1	08/08/13	n/a	n/a	n/a	n/a	none	n/a	n/a
2	08/08/13	n/a	n/a	n/a	n/a	none	n/a	n/a

Please insert additional pages as applicable.

