

PM

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

API 47 - 033 - 05758 County HARRISON District TEN MILE
Quad SALEM 7.5' Pad Name W.B. CARPENTER Field/Pool Name WOLF SUMMIT
Farm name JUNKINS, EARL & BELVA Well Number 135
Operator (as registered with the OOG) H.G. ENERGY LLC
Address 5260 DuPONT ROAD City PARKERSBURG State WV Zip 26101

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4,347,316 M Easting 542,627 M
Landing Point of Curve Northing _____ Easting _____
Bottom Hole Northing 4,347,386 M Easting 542,828 M

Elevation (ft) 1,390' 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 8/20/13 Date drilling commenced 10/25/13 Date drilling ceased 10/31/13
Date completion activities began 12/4/13 Date completion activities ceased 12/5/13
Verbal plugging (Y/N) 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 None Open mine(s) (Y/N) depths N
Salt water depth(s) ft None Void(s) encountered (Y/N) depths N
Coal depth(s) ft 738'-746' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

RECEIVED
Office of Oil and Gas
MAR 28 2014
WV Department of
Environmental Protection

Reviewed by:

04/18/2014

API 47-033 - 05758 Farm name JUNKINS, EARL & BELVA Well number 135

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	12 1/4"	11 5/8"	30'	Used	LS		Sand In
Surface	8 3/4"	7"	836'	New	LS	64'	Y
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	6 1/2"	4 1/2"	3307'	New	J-55		Y
Tubing							
Packer type and depth set							

Comment Details Circulated Est. 10 bbls to surface on 7" surface cement job. Circulated Est. 10 bbls to surface on 4 1/2" cement job.

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							
Surface	Reg Neat	215	15.6	1.18	254	Surface	8
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	50:50 Pozmix/ Econo	200/85	14.2/11.8	1.27/2.93	254/250	450'	8
Tubing							

Drillers TD (ft) 3361' Loggers TD (ft) 3320'
 Deepest formation penetrated Fifth Sand Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 869'

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 _____
15 Centralizers every 64' from bottom on 4 1/2", Centralizer placed mid string on 7"

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	12/4/13	3179'	3188'	36	Fifth Sand

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	12/5/13	10	1507	2468	1569	10,000	315	

Please insert additional pages as applicable.

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PRODUCING FORMATION(S)	DEPTHS	
Fifth Sand	3033'-3044'	3176'-3190'
	TVD	MD

Please insert additional pages as applicable.

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)
Sand/Shale	0	738	0	738	
Pittsburgh Coal	738	746	738	746	
Sand/Shale	746	2084	746	2159	
Big Lime	2084	2166	2159	2248	
Big Injun	2166	2219	2248	2307	
Shale	2219	2627	2307	2745	
Fifty Foot	2627	2648	2745	2767	
Shale	2648	2717	2767	2840	
Sand	2717	2871	2840	3004	
Shale	2871	3033	3004	3176	
Fifth Sand	3033	3044	3176	3190	Drilled directional N 68 degrees E a distance of 776'
Shale	3044	3195	3190	3361	
TD	3195		3361		

Please insert additional pages as applicable.

Drilling Contractor Decker Drilling
 Address 11565 State Route 676 City Vincent State OH Zip 45784

Logging Company Weatherford International
 Address 777 North River Avenue City Weston State WV Zip 26452

Cementing Company Baker Hughes
 Address 2228 Phillippi Pike City Clarksburg State WV Zip 26301

Stimulating Company Producers Service Corp.
 Address 109 South Graham Street City Zanesville State OH Zip 43701

Please insert additional pages as applicable.

Completed by Roger Heldman Telephone 304-420-1107
 Signature  Title Operations Mgr Date 3/24/14

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