

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



API 47-085-10121 County Ritchie District Murphy
Quad Smithville 7.5' Pad Name none Field/Pool Name Eva Field
Farm name Heartwood Forestland Fund Well Number Gregg Heirs M2
Operator (as registered with the OOG) Murvin & Meier Oil Co.
Address P. O. Box 396 City Olney State IL Zip 62450

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4,321,464 Easting 494,570
Landing Point of Curve Northing n/a Easting n/a
Bottom Hole Northing 4,321,464 Easting 494,570

Elevation (ft) 1083 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)
soap TD 200

Date permit issued June 23, 2014 Date drilling commenced October 26, 2015 Date drilling ceased November 4, 2015
Date completion activities began November 18, 2015 Date completion activities ceased December 19, 2015
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 80' Open mine(s) (Y/N) depths _____
Salt water depth(s) ft None Void(s) encountered (Y/N) depths _____
Coal depth(s) ft None Cavern(s) encountered (Y/N) depths _____
Is coal being mined in area (Y/N) N

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N
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Reviewed by:
APPROVED
NAME: Michael Doff
DATE: 3/12/16
03/25/2016
03/21/16

WR-35
Rev. 8/23/13

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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	24"	20"	20'	new	94		Y
Surface	17"	11 3/4"	300'	new	42	40'	Y
Coal							
Intermediate 1	10.625"	8 5/8"	1225'	new	23	300'	Y
Intermediate 2							
Intermediate 3							
Production	7.875"	4 1/2"	2514'	new	10.5	1920'	N
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	Construction	10	15.6	1.18	11.8	CTS	8
Surface	A	300	15.6	1.18	354	CTS	8
Coal							
Intermediate 1	A	300	15.6	1.18	354	CTS	8
Intermediate 2							
Intermediate 3							
Production	CBL Poz	185	13.5	1.54	285	1650'	
Tubing							

Drillers TD (ft) 2550' Loggers TD (ft) 2569'
 Deepest formation penetrated Injun Plug back to (ft) n/a
 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 4 1/2" x 7 7/8": 2473' 2389' 2306' 2222' 2139' 2055' 2004' 1920'

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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 _____

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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	12-17-2015	2420	2422	4	Injun
2		2152	2170	36	Injun

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	12/17/15	30	1815	1533	1265	50,000	970	128,000 scf

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Please insert additional pages as applicable.

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PRODUCING FORMATION(S) DEPTHS
same as perforation record _____ TVD _____ MD

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 200 psi Bottom Hole _____ psi DURATION OF TEST 72 hrs

OPEN FLOW Gas Oil NGL Water GAS MEASURED BY
20 mcfpd show bpd - bpd - bpd 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		
Fill	0	4	0	4	
Sd, Sh, RR	4	2059	4	2059	fresh water - 80'
Big Lime	2059	2138	2059	2138	
Injun	2138	2180	2138	2180	
Shale	2180	2542	2180	2542	
Berea	2542	2546	2542	2546	
Shale	2546	2568	2546	2568	
total depth	2568		2568		

Please insert additional pages as applicable.

Drilling Contractor Top Drilling
 Address 107 Lancaster Street Suite 301 City Marietta State OH Zip 45750

Logging Company Casedhole Solutions
 Address P. O. Box 267 City Weatherford State OK Zip 73096

Cementing Company CJ Energy Services
 Address 3990 Rogerdale City Houston State TX Zip 77042

Stimulating Company Producer Services Corp.
 Address 109 South Graham Street City Zanesville State OH Zip 43701

Please insert additional pages as applicable.

Completed by Kate M. Blackford Telephone 618-395-4405
 Signature *Kate M. Blackford* Title Executive Vice-President Date 2/8/2016
 WV Department of Environmental Protection
 Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

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