

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

API 47-041-05662 County Lewis District Freemans Creek
Quad Vadis Pad Name _____ Field/Pool Name Fink Storage
Farm name John Tierney Heirs Well Number 13148
Operator (as registered with the OOG) Dominion Transmission, Inc.
Address 445 W. Main St City Clarksburg State WV Zip 26301

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4329425.61 Easting 530261.3325
Landing Point of Curve Northing _____ Easting _____
Bottom Hole Northing _____ Easting _____

Elevation (ft) 1093.64 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)
Fresh water based drilling mud, composed of water, sodium chloride, starch, xanthan gum, sodium bicarbonate, caustic soda, soda ash, and biocide.

Date permit issued 5-25-2012 Date drilling commenced 9-3-2013 Date drilling ceased 9-15-2013
Date completion activities began 10-2-2013 Date completion activities ceased 10-10-2013
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 78' & 84' Open mine(s) (Y/N) depths _____
Salt water depth(s) ft None Void(s) encountered (Y/N) depths _____
Coal depth(s) ft 7'-9' Cavern(s) encountered (Y/N) depths _____
Is coal being mined in area (Y/N) N

RECEIVED
Office of Oil & Gas
DEC 18 2013
None
WV Department of Environmental Protection

Reviewed by: _____

02/28/2014

API 47- 041 - 05662 Farm name John Tierney Heirs Well number 13148

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	18"	16"	33	N	J-55 / 65 lb		
Surface	15 3/4"	10 3/4"	820	N	J55 / 40 1/2lb		Y
Coal							
Intermediate 1	9 7/8"	7"	2590	N	J55 / 20 lb		Y
Intermediate 2							
Intermediate 3							
Production	6 1/4"	4 1/2 "	5013	N	M-65 / 10.5 lb		N
Tubing							
Packer type and depth set							

Comment Details Surface Job circulated 36 bbls of Cement to surface : Intermediate Job circulated 32 bbls to surface: Production Job not planned to circulate to surface; cement top @ approximately 1800'

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	Class A	577	15.6	1.20	692	CTS	8
Coal							
Intermediate 1	Class A	690	15.4	1.23	848	CTS	24
Intermediate 2		150	15.9	1.15	172		
Intermediate 3							
Production	Poz	260	13.5	1.53	398	CT @ 1800	
Tubing							

Drillers TD (ft) 5057 Loggers TD (ft) 5054
 Deepest formation penetrated Siltstone immediately below Benson 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 See attached sheet

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	10-1-13	4876	4886	20	Benson
2	10-2-13	4402	4432	20	Bradford
3	10-2-13	3798	3976	20	Balltown
4	10-2-13	3482	3557	20	Speechley
5	10-2-13	3288	3354	20	Warren

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	10-2-13	25	3176	3753	2630	31,793	163	4519 SCF
2	10-2-13	24	3228	3577	2810	10,311	139	3691 SCF
3	10-2-13	26	3039	2937	2633	25,606	185	4761 SCF
4	10-2-13	22	2451	3568	2180	12,612	131	2084 SCF
5	10-2-13	25	2439	2475	1810	11,265	137	1803 SCF

Please insert additional pages as applicable.

Formation Description
Dominion Transmission
Well # 13148

Formation	Top	Bottom	Show
Fill	0	7	
Coal	7	9	
Sand & Shale	9	220	Damp @ 78' : 1 1/2" Stream @ 84'
Shale & Red Rock	220	235	
Shales	235	1060	
Sand	1060	1164	
Sand & Shale	1164	1360	
Sand	1360	1520	
Shale & Siltstone	1520	1724	
Salt Sands	1724	1830	
Shale	1830	1990	
Little Lime	1990	2010	
Shale	2010	2034	
Big Lime	2034	2150	
Big Injun	2050	2192	Oil Show @ 2100
Shale	2192	2216	
Weir	2216	2286	
Shale	2286	2410	
Gantz	2410	2434	
Shale	2434	2730	
30???	2730	2736	
Shale	2736	3260	
Warren	3280	3355	
Shales & Siltstones	3355	3482	
Speechley	3482	3568	Gas Check @ 3529 ordor
Sand & Shale	3568	3798	
Balltowns	3798	3976	
Shales & Siltstones	3976	4406	Gas Check @ 4000 ordor
Bradford	4406	4434	
Shales & Siltstones	4434	4874	
Benson	4874	4884	
Shales	4884	TD	
TD	5054		

Centralizer Placement

47-041-05662

13148

Casing String

Centralizer Placement (Jt#)

10 ³/₄

1-10 ; 13;15;20 ; 30

7"

1-13 ; 15;18;21;24;27;30;33;39;42;45;48;51;54

4 ¹/₂

3;4;12;13;14;22;23;24;31;32;33;36;37;38;55;56;57;58;59;60;