

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

API 47-049-01939 County Marion District Mannington  
Quad Glovers Gap 7.5' Pad Name Cunningham Field/Pool Name Logansport  
Farm name C.H. Cunningham Well Number 608270  
Operator (as registered with the OOG) Equitrans, L.P.  
Address 625 Liberty Ave. City Pittsburgh State PA Zip 15222

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey  
Top hole Northing 4374209.3 Easting 547298.1  
Landing Point of Curve Northing 4374335.6 Easting 547420.8  
Bottom Hole Northing 4374754.2 Easting 547828.4

Elevation (ft) 1025' 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)  
Bentonite with KCl

Date permit issued 5/6/2008 Date drilling commenced 9/6/2008 Date drilling ceased 10/10/2008  
Date completion activities began \_\_\_\_\_ Date completion activities ceased \_\_\_\_\_  
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 800' Open mine(s) (Y/N) depths N  
Salt water depth(s) ft 1820' Void(s) encountered (Y/N) depths N  
Coal depth(s) ft 810' Cavern(s) encountered (Y/N) depths \_\_\_\_\_  
Is coal being mined in area (Y/N) Y

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Reviewed by:  
SAW WILDER  
06/01/2018

WR-35  
Rev. 8/23/13

API 47-049 - 01939 Farm name C.H. Cunningham Well number 608270

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	17.5"	16"	64'	New	N/A		Y
Surface							
Coal	12.25"	9.625"	851'	New	J-55 40#		Y
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	8.75"	7"	2438'	New	J-55 20#	1342', 172'	Y
Tubing							
Packer type and depth set							

Comment Details \_\_\_\_\_

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor	Class A					Surface	8
Surface							
Coal	Class A	385	14.7	1.41	393	Surface	8
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	Class A	430	13.1	1.41	449	Surface	18
Tubing							

Drillers TD (ft) 4413' MD Loggers TD (ft) 2171' TVD  
 Deepest formation penetrated Big Injun Plug back to (ft) 1171' TVD  
 Plug back procedure Plugged back vertical hole from 2171' to 1171' with 208 sacks (225 Cu. Ft.) Class A at 16.5 ppg with a yield of 1.08

Kick off depth (ft) 1475' MD

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 Total of 25 centralizers on production string on joints:  
 1,2,3,4,5,6,7,8,9,10,11,12,13,14,16,18,19,20,21,22,23,27,37,47, and 57.

WAS WELL COMPLETED AS SHOT HOLE  Yes  No DETAILS \_\_\_\_\_

WAS WELL COMPLETED OPEN HOLE?  Yes  No DETAILS 2438' MD to 4413' MD in the Keener Sand

WERE TRACERS USED  Yes  No TYPE OF TRACER(S) USED \_\_\_\_\_

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<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>Keener</u>	<u>2085'-2109'</u> TVD	_____ MD
_____	_____	_____
_____	_____	_____
_____	_____	_____

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface 1000 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 BOTTOM DEPTH IN FT TOP DEPTH IN FT BOTTOM DEPTH IN FT DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H<sub>2</sub>S, ETC)

	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	
	0		0		
Pittsburgh Coal	805	813			
1st Gas Sand	1510	1546			
1st Salt Sand	1603	1670			
2nd Salt Sand	1758	1839			
Maxton	1961	2014			
Little Lime	2018	2021			
Big Lime	2030	2080			
Keener	2085	2109			
Big Injun	2116	2219			

Please insert additional pages as applicable.

Drilling Contractor Highland Drilling  
Address 900 Virginia Street East City Charleston State WV Zip 25301

Logging Company Schlumberger  
Address 229 Capital Street City Charleston State WV Zip 25301

Cementing Company Halliburton  
Address New Jackson S Mill Road City Jane Lew State WV Zip 26378

Stimulating Company \_\_\_\_\_  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Please insert additional pages as applicable.

Completed by Brian A. Hall Telephone 304-627-6419  
Signature \_\_\_\_\_ Title Senior Storage Specialist Date 2/13/2018

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

06/01/2018