

WR-35  
Rev (8-10)

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

DATE: January 3, 2013/ Rev.5/01/15  
API #: 47-051-0902

Farm name: Axiall Corporation/ Eagle Natrium, LLC Operator Well No.: #17 Relief Well

LOCATION: Elevation: 680.71 ft. Quadrangle: New Martinsville, WV

District: Franklin County: Marshall  
Latitude: 1680 Feet South of 39 Deg. 45 Min. 00 Sec.  
Longitude: 3625 Feet West of 80 Deg. 50 Min. 00 Sec.

Company:

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Axiall Corp., N. St. Rt. 2, New Martinsville, WV 26155	24" C.S.	93 ft.	93 ft.	180
Agent: J. Thomas Horan	20" C.S.	98 ft.	98 ft.	100
Inspector:	13-3/8" H-40	947 ft.	947 ft.	650
Date Permit Issued: April 3, 2003	9-5/8" H-40	1802 ft.	1802 ft.	625
Date Well Work Commenced: April 3, 2003	7" J-55	3907 ft.	3907 ft.	400
Date Well Work Completed: Approx. 4/24/03				
Verbal Plugging: Not Applicable				
Date Permission granted on: Not Applicable				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): 4410 ft.				
Total Measured Depth (ft): 4410 ft.				
Fresh Water Depth (ft.):				
Salt Water Depth (ft.):				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.):				
Void(s) encountered (N/Y) Depth(s)				

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OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Not Applicable Pay zone depth (ft) \_\_\_\_\_

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d

Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests \_\_\_\_\_ Hours

Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

Second producing formation Not Applicable Pay zone depth (ft) \_\_\_\_\_

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d

Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests \_\_\_\_\_ Hours

Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

J. Thomas Horan  
Signature

5/1/15  
Date

05/08/2015

Were core samples taken? Yes \_\_\_\_\_ No X

Were cuttings caught during drilling? Yes \_\_\_\_\_ No X

Were N/Y/N Electrical, N/Y/N Mechanical, N/Y/N or Geophysical logs recorded on this well?

**NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.**

Perforated Intervals, Fracturing, or Stimulating:

N/A

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Formations Encountered: \_\_\_\_\_ Top Depth \_\_\_\_\_ / \_\_\_\_\_ Bottom Depth  
Surface: \_\_\_\_\_

#17 Relief Well (API #47-051-0902) was installed in April 2003 to intercept adjacent #17 Brine Well (API #47-051-0534) for the purpose of de-pressurizing (killing) #17 Brine Well. At the time #17 Brine Well was scheduled for plugging and abandonment. Faulty casing in the upper portion of #17 Brine Well prevented the well from being de-pressurized by normal methods. #17 Brine Well was subsequently plugged in April 2003.

Based on discussions with Ms. Kay Holtsclaw of the West Virginia DEP, Office of Oil and Gas, the 1967 lithology data for #17 Brine Well was summarized and provided as representative information for #17 Relief Well.

**RAWE DRILLING CO.**  
Oil, Gas and Water Well Contractors  
PHONE GL. 5-3470  
NEW MARTINSVILLE, W. VA.

May 27, 1967

Log of drive pipe for # 17 Brine well  
all measurements from ground elevation

Clay & rocks	0	-	24'
Clay & fine sand	24	-	47'
Sand & fine gravel (dark)	47	-	71'
Sand & fine gravel	71	-	92'
Shale	92	-	93'
Rock	93	-	97'
Shale	97	-	99'
Lime	99	-	101'-9"

Sand & gravel shut off

Water was shut off when finished drilling

Casing bottom 93' from top of ground

Hole 101'-9" from top of ground

Casing left 5'-3" above ground

Hole dug around top of casing for cement collar, 5' deep,

4' diameter, filled with 3' of concrete.

Casing 12-1/2" I. D. - 13 7/8" O.D.

Total amount of casing used with threads off 100'-3"

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STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION

Rotary   
Spudder   
Cable Tools   
Storage

Quadrangle New Martinsville, W.Va.-Ohio

WELL RECORD

Permit No. MARS-534

Oil or Gas Well Brine  
(KIND)

Company <u>PPG Industries</u>	Casing and Tubing	Used in Drilling	Left in Well	Packers
Address <u>New Martinsville, West Virginia</u>	Size			
Farm <u>Reconstruction Finance Corp.</u> Acres <u>N/A</u>	16			Kind of Packer
Location (waters) <u>East Bank Ohio River - Natrium Ground</u>	13	95'	95'	
Well No. <u>17</u> Elev. R.T. <u>680</u>	9-5/8"	1714'	1714'	Size of
District <u>Franklin</u> County <u>Marshall</u>	8 1/4			Depth set
The surface of tract is owned in fee by <u>PPG Industries</u>	6 3/16			
Address <u>New Martinsville</u>	4 1/2			Perf. top
Mineral rights are owned by <u>PPG Industries</u>	3			Perf. bottom
Address <u>New Martinsville</u>	7"-26#	6729'	6729'	Perf. top
Drilling commenced <u>May 16, 1967</u>	Liners Used			Perf. bottom
Drilling completed <u>July 24, 1967</u>				
Date Shot <u>N/A</u> From <u>--</u> To <u>--</u>	Attach copy of cementing record. <u>9-5/8" - 1714' - 6-15-67</u>			
With	CASING CEMENTED <u>7" SIZE 6729</u> No. Ft. <u>7-14-67</u> Date			
Open Flow <u>--</u> /10ths Water in <u>--</u> Inch	Amount of cement used (bags) <u>9-5/8" = 725</u> bags; <u>7" = 1300</u> bags			
<u>--</u> /10ths Merc. in <u>--</u> Inch	Name of Service Co. <u>Halliburton</u>			
Volume <u>--</u> Cu. Ft.	COAL WAS ENCOUNTERED AT <u>204</u> FEET <u>48</u> INCHES			
Rock Pressure <u>No data</u> lbs. <u>--</u> hrs.	<u>400?</u> FEET <u>60</u> INCHES <u>1025</u> FEET <u>36</u> INCHES			
Oil <u>--</u> bbls., 1st 24 hrs.	<u>--</u> FEET <u>--</u> INCHES <u>--</u> FEET <u>--</u> INCHES			
WELL ACIDIZED (DETAILS) <u>--</u>				
WELL FRACTURED (DETAILS) <u>--</u>				

RESULT AFTER TREATMENT (Initial open Flow or bbls.) --

ROCK PRESSURE AFTER TREATMENT -- HOURS --

Fresh Water -- Feet -- Salt Water -- Feet --

Producing Sand -- Depth --

Formation	Color	Hard or Soft	Measured Top	Measured Bottom	T.V.D. Top	T.V.D. Bottom	Remarks
Monongahela			0	204			
Conemaugh			204	818			
Pittsburgh Coal			204	208			RECEIVED Office of Oil and Gas  MAY 04 2015
Lime & Shale			208	400			
Coal?			400	405			
Sand & Shale			405	524			
Saltsburg Sand			524	554			
Brush Creek Lime			691	697			WV Department of Environmental Protection
Allegheny			818	1068			
Upper Freeport Lime			818	828			
Lower Kitt. Coal			1025	1028			
Pottsville			1068	1242			
Homewood Sands			1068	1176			
Maxton Sand			1198	1230			
Mississippian			1242	2020			
Little Lime			1242	1258			
Pencil Cove Shale			1258	1260			
Greenbrier			1334	1402			
Big Injun Sand			1416	1629			
Weir Group			1790	1852			
Berea Sand			1985	2020			
DuPontian			2020	6410			

Formation	Color	Hard or Soft	Top	Bottom	T.V.D. Top	T.V.D. Bottom	Remarks
Catskill			2020	2225			
Top Chemung			2225	?			
Top Riley			2795	2950	2793	2947	
Benson Sand			2950	2958	2947	2955	
Marcellus Shale			5102	5880	5070	5835	
Onondaga Lime			5880	6105	5835	6057	
Oriskany (Ridgely)			6105	6156	6057	6107	
Oriskany (Spriver)			6156	6403	6107	6353	
Helderberg Lime			6403	6510	6353	6460	
Silurian System			6510	--	6460		
Keyser Lime			6510	6763	6460	6713	
Top Salina Group			6763	--	6713	--	
Salt			6763	6861	6713	6811	
Anhydrite w/innerbedded salt			6861	6865	6811	6815	
Salt			6865	6902	6815	6852	
Anhydrite & Dolomite			6902	6917	6852	6867	
Salt			6917	6919	6867	6869	
Anhydrite & Dolomite			6919	6973 (TD)	6869	6923 (TD)	

NOTE: This well was directionally drilled, and both the measured depths and the true vertical depths are given above. All depths are from the surface of the ground; i.e., from an elevation of 680 feet above sea level.

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Date \_\_\_\_\_, 18\_\_\_\_

APPROVED \_\_\_\_\_, Owner

By \_\_\_\_\_  
(Title)