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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: May 22, 2013
API #: 47-051-01583

Farm name: PPG Industries, Inc. Operator Well No.: #29 Brine Well

LOCATION: Elevation: 774.0 ft. Quadrangle: New Martinsville, WV

District: Franklin County: Marshall
Latitude: 6.300 Feet South of 39 Deg. 45 Min. 00 Sec.
Longitude 10.215 Feet West of 80 Deg. 47 Min. 30 Sec.

Company:

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
PPG Industries, Inc., N. St. Rt. 2, New Martinsville, WV 26155	30" A 53	6 ft.	6 ft.	300
Agent: J. Thomas Horan	20" J-55	203 ft.	203 ft.	432
Inspector: Carl McCune	13-3/8" K-55	2184 ft.	2184 ft.	2140
Date Permit Issued: September 12, 2012	9-5/8" L-80	6383 ft.	6383 ft.	2118
Date Well Work Commenced: Feb. 2, 2013	7" L-80	1800 ft.	1800 ft.	Not applic.
Date Well Work Completed: March 25, 2013				
Verbal Plugging: Not Applicable				
Date Permission granted on: Not Applicable				
Rotary X Cable Rig				
Total Vertical Depth (ft): 6978 ft.				
Total Measured Depth (ft): 11,100 ft.				
Fresh Water Depth (ft.): 180,200				
Salt Water Depth (ft.): 6873 ft. (rock salt)				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.):				
Void(s) encountered (N/Y) Depth(s)				

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WV Department of Environmental Protection

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.T. Horan
Signature

5/pe/13
Date

12/06/2013

Were core samples taken? Yes _____ No X

Were cuttings caught during drilling? Yes X No _____

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

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:

Perforation, fracturing, and stimulating not performed. Log for geological record not performed.

Formations Encountered: _____ Top Depth / _____ Bottom Depth
Surface:

GEOLOGIC DATA FOR COLUMBIA-SOUTHERN CHEMICAL CORPORATION'S
BRINE WELLS - No. 8 & No. 9
FRANKLIN DISTRICT, MARSHALL COUNTY, NATRIUM, WEST VIRGINIA

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GRADE: 633'

<u>ERA</u>	<u>SYSTEM</u>	<u>SERIES OR GROUP</u>	<u>FORMATION OR MEMBER</u>	<u>ELEV. WELL NO. 8</u>	<u>ELEV. WELL NO. 9</u>
Genezoic	Quartnary	Recent	(Alluvium)	0- 79	0- 60
Paleozoic				79-T.D.	60-T.D.
	Pennsylvanian			79-1246	60-1250
		Mononghelia		79- 246	60- 256
			Swickley Coal	165- 167	164- 167
			Pittsburgh Coal	240- 246	250- 256
		Conemaugh		246- 780	256- 785
			Ames Lime	478- 481	469- 487
			Saltsburg Sd. (Cow Run)	502- 541	495- 528
			Mahoning Lime	742- 763	735- 753
		Allegheny		780-1051	785-1035
			Upper Freeport Coal	Absent	Absent
			Upper Freeport Lime	795- 806	797- 803
			Lewer Freeport Coal	850- ?	845- (Horizon)
			Upper Kittanning Coal	Absent	882- 884
			Lewer Kittanning Coal (Horizon)	1010	1023
		Pottsville		1051-1246	1035-1252
			Hcmewood Sand	1051-1074	1035-1050
			Connoquessing Sand	1107-1120	1109-1115
		Mississippian		1246-1966	1252-1960
		(These are affected by (as (unconformity in (Northern W.Va. & Western (Penna.	(Mauch Chunk (St. Genevie (Greenbrier Lime (Loyalhanna Lime & Sand	1286-1391 1286-1327 1327-1391	1292-1387 1292-1321 1321-1378

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<u>ERA</u>	<u>SYSTEM</u>	<u>SERIES OR GROUP</u>	<u>FORMATION OR MEMBER</u>	<u>ELEV. WELL NO. 8</u>	<u>ELEV. WELL NO. 6</u>
		Burlington		1391-1945	1378-1955
			Pocono Formation	1391-1966	1378-1960
			Weir Sand	1764-1800	1758-1768
			Berea Sand	1945-1966	1955-1960
	Devonian				
		Upper	(Venango-Catshill (Chemung (Portage	1966-2590 ? 2590 ? -	1960-2576 ? 2576 ? -
		Middle	(Genesee (Hamilton (Marcellus) (Tioga Bentonite (Onondaga Lime	-4435 ? ? 4435-5245 5245-5818 5815 5818-6042	-4430 ? 4430-5236 ? 5236-5818 5820 5821-6040
		Lower	(Oriskany Sand (Helderburg Lime	6042-6109 6109-6397	6040-6119 6119-6406
	Silurian				
		Cayugan		6397-T.D.	6406-T.D.
			Tonoloway Lime	6397-T.D.	6406-T.D.
			Salina Formation	6397-6497	6406-6507
			Salt	6497-T.D.	6507-T.D.
				6715-6762	6720-6746
				6771-6780	6753-6776
				6785-6814	6780-6810
				T.D.-6818	6816-6826
					6834-6837
					T.D.-6840