





STATE OF WEST VIRGINIA DEPARTMENT OF MINES OIL AND GAS DIVISION

Quadrangie Morefleld

Permit No <u>HARDY-9</u>

WELL RECORD

Permit No E	ARDY-9		W W Amena Rosen Storen			Oil or	Gas Well Gas
Address P. O.	Box 1273	Gas Company Charleston ET AL		-	Used in Drilling	Left in Well	Packers
Location : water Well No District	73) Tid F 9301 5047/4 Discourse	County Ha	Elev 2054,861	Size 20" 13_3/8	38' Cemen	ted 15 sac 325 "	kakind of Packer
Mineral rights s	are owned by_	_AddressC. P. Wilki	na, et al	8 1 9-5/	/8 2187' " 6761 "	725 57 250	Size of
Drilling commer	rcedS	_Address <u>Need</u> 0-27-63		3			Perf. top
Date Shot	Fr	<u>-22-63</u> omT	·o				Perf. bottom Perf. top
Open Flow	/10ths Water	· in	Inch				Perf. bottom
Volume 1	,500 M - C	riskany	Cu. Ft.	CASING CE			No. Ft. Dat
	ED			FE	ETINC	HES	FEET INCHES FEET INCHES
ROCK PRESSU	RE AFTER T	NT REATMENT 9 Feet				Fee	
Formation	Color	Hard or Soft	Тор	Bottom	Oil, Gas or Water	Depth	Remarks
Sand - Shale Shale Marcellus S Metablintoni Meedmore Sh Oriskany Sa Helderberg Total Depth	hale ite iale ind Lime		0 4750 5800 ? 6660 6660 6756 7005 7020'	4750 5800 6660 6756 7005 7020	(1,000 gal gallons regular) 150,000 s	acidized -24-63 with lons mud a retarded,	- 200 M th 20,000 gallons acid & 10,000 9,000 gallons the nitrogen fracture -
		6660 2055 46	20313111234	56.69	1,500 M Shut in 12-		
	6756 2055 4701	7005 2053 4950	1000 1000 1000 1000 1000 1000 1000 100	Old Hard	LOGS RUE: Gamma Ray Density Induction Temperature	0-7020 6750-7020 6750-7020 6750-7020	
	-		a				

WR-35 Rev (5-01)

Signed:

DATE: $\frac{5/3/07}{47-031-00009}$ W

State of West Virginia Department of Environmental Protection Office of Oil and Gas

Well Operator's Report of Well Work

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Farm name: _James & Virginia Rupert	Open	Operator Well No.: _9301					
LOCATION: Elevation: 2043 ft	Quad	Quadrangle: Needmore					
District: Lost River	C						
Latitude: 10,163 Feet South of	Cou	inty: Hardy	Y				
Longitude 2,294 Feet West of	78 Deg. <u>02</u>	39 Deg. <u>02 Min. 30 Sec.</u>					
	70 Deg50	17111 3	Sec.				
Company: Columbia Gas Transmission Corp							
	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.			
Address: 1700 MacCorkle Ave SE		3					
Charleston, WV 25325-1273	This is an exi	sting production	n well that was c	onverted to a			
Agent: Paul Amick	natural gas ste	natural gas storage well – no casing was pulled or ran –					
Inspector: Bill Hatfield / Craig Duckworth	tubing was pulled and re-ran						
Date Permit Issued: 3/13/06							
Date Well Work Commenced: 7/20/06							
Date Well Work Completed: 5/1/07				1			
Verbal Plugging:		1					
Date Permission granted on: not applicable							
Rotary X Cable Rig							
Total Depth (feet): 7020 ft							
Fresh Water Depth (ft.): not applicable		The state of the s		1			
Salt Water Depth (ft.): not applicable	TO THE OWNER OF THE PERSON OF						
	OTHER DE L	<u> </u>					
Is coal being mined in area (N/Y)? no	4	onsi N					
Coal Depths (ft.): <u>ft</u>		1					
		arment of an arment of a second	1	1			
OPEN FLOW DATA	/ Wy Oet	Well brought					
	A CONTINUE	the transfer of the second					
Producing formation Oriskany Sand	Pay zone der	$m(\pi) = 6/56$	- 7005				
Gas: Initial open flow <u>not applicable</u>	MCF/d Oil: 1	initial open flo	w not applic	able Bbl/d			
Final open flow 2000 MCF/6	final oper	ı flow 0	Bbl/d				
Time of open flow between initial and i	final tests no	t applicable	Hours				
Static rock Pressure 1200	psig (surface	pressure) after	r 72+ I	Hours			
		<u> </u>		10415			
Second Producing formation <u>not applical</u>	ble Pav	zone denth (ft)	not annlicab	ıle.			
Gas: Initial open flow MCF/d	Oil: Initial on	en flow	<u>not applicati</u>	3b1/d			
Final open flow MCF/d	Final open	flow	E)U)/U			
Time of open flow between initial and f	inal tests	I IIO W	DU/U				
Static rock Pressure psig (st	urface pressure	a) ofter	riours				
psig (si	urrace pressure	e) andr	Hours				
				JUN 2 2 201			
NOTE: ON BACK OF THIS EODM DUT THE	COLLOYMIC	4)					

NOTE: ON BACK OF THIS FORM 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 ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

By: James E. Amos – Senior Storage Engineer – Columbia Gas Transmission Corp Date: 5/3/07

This is an existing production well that was converted to a natural gas storage well. Below is a summary of work performed.

- 1) Well was killed, tubing pulled, logged, tubing re-ran, new API wellhead installed, and acid stimulation.
- 2) Baker Atlas' GR-Neutron-CCL, Segmented Bond Log, and MicroVertilog. Schlumberger GR-Density-CNL-Lateralog and FMI.
- * Note that no earthen pit was utilized. Flowback treatment fluids recovered via steel tanks and transported to LAD in Wheeling, WV for disposal/processing.

JUN 2 2 2007