

feet from Carlos V from Francis Office of Oil & Gas

DEC 3 0 2009

WV Department of Environmental Protection

WR	-35
Rev	(5-01)

DATE: $\frac{3/19/07}{47-031-00030}$

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

Well Operat	or's Report of Well Wo	ork		•
Farm name: Michael Wilkins	Operator V	Well No.: _	12454	
LOCATION: Elevation: 1765 ft	Quadrangl	e: <u>Needm</u>	ore	·.
District: Lost River Latitude: 14,545 Feet South of Longitude 7,238 Feet West of	County:	1. 00 Se	c. c.	·
Company: Columbia Gas Transmission Corp				
	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address: 17.00 MacCorkle Ave SE Charleston, WV 25325-1273	24" 94# Gr. B-35	40	36	none – sanded in
Agent: Paul Amick	20" 59# Gr. B-35	100	86	150 sks
Inspector: Bill Hatfield / Craig Duckworth Date Permit Issued: 12/20/05	13-3/8" 48# H-40	579	560	550 sks
Date Well Work Commenced: 4/5/06 Date Well Work Completed: 1/10/07	9-5/8" 40# J-55	2006	1980	600 sks
Verbal Plugging: Date Permission granted on: not applicable	7" 23# N-80	6542	6515	425 sks
Rotary X Cable Rig Total Depth (feet): 6929	2-3/8" 4.7# J-55	6502	6502	none
Fresh Water Depth (ft.): 306, 480,	· · · · · · · · · · · · · · · · · · ·			
Salt Water Depth (ft.): 1400			8	Office of Oil & Gas
Is coal being mined in area (N/Y)? no				
Coal Depths (ft.): ft				NOV 3 U 2009
OPEN FLOW DATA		1	Enviro	V Department of onmental Protection
Producing formation Oriskany Sand Gas: Initial open flow 1,000 MCF/ Final open flow 1,000 MCF/ Time of open flow between initial and	d Oil: Initial of Final open final tests 90 Di	open flow flow <u>0</u> avs	0	Bbl/d
Static rock Pressure 1300 psig (s				
Second Producing formation <u>not applicable</u> Pay zone depth (ft)				
Time of open flow between initial and Static rock Pressure psig (s	final tests		Hour	
NOTE: ON BACK OF THIS FORM PUT THE INTERVALS, FRACTURING OR STIMULATE LOG WHICH IS A SYSTEMATIC DETAILED INCLUDING COAL ENCOUNTERED BY THE Signed:	NG, PHYSICAL CHA	ATOM TOTAL	7 (1) (1)	~~~~~

By: James E. Amos - Senior Storage Engineer - Columbia Gas Transmission Corp Date: 3/19/07

Hardy Well 12454

Well drilled to Oriskany Sandstone for underground natural gas storage.

Formation Record	Top (MD ft)	Bottom (MD ft)
Upper Marcellus	6128	6156
Purcell	6156	6296
Lower Marcellus	6296	6426
Onondaga	6426	6440
Needmore	6440	6538
Oriskany	6538	6870
Helderberg	6870	6929
TD		6929

Wellbore Telemetry (NAD 27 SPC WV-North Zone)

Surface:

N/S = 198,670 ft

E/W = 2,193,766 ftE/W = 2,194,058 ft

Final Depth: N/S = 198,830 ft MD = 6929 ft TVD = 6797 ft

* Refer to revised survey plat and Schlumberger survey data report.

Perforations:

none

Stimulation:

Fractured

4,000 gals 15% HCl acid

807 bbls fluid 255 MSCF N2 51,800 lbs sand.

Avg BH rate:

30 BPM

ATP:

3300 psig

Electric Logs Ran:

7/18/06

GR-Density-CNL-Induction

7/18/06

Sonic-FMI

7/21/06

GR-Segmented Bond Log

7/31/06

GR-Density-CNL-Induction

7/31/06

Sonic-FMI