

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

DATE: 10/8/2011
API #: 47-502250 F

Farm name: Berwin Winifrede Operator Well No.: BW-49 (F)

LOCATION: Elevation: 1073 FT Quadrangle: Belle 7.5'

District: Sherman County: Boone
Latitude: 1,220 Feet South of 38 Deg. 07 Min. 59 Sec.
Longitude: 5,870 Feet West of 81 Deg. 36 Min. 32 Sec.

Company: Northstar Energy Corp

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
900 Lee St. E Ste. 940 Charleston, WV	Conduct.	35'	35'	
Agent: James Abcouwer	9 5/8"	580'	580'	578
Inspector: Barry Stollings	7"	1698'	1698'	343
Date Permit Issued: 03/31/2008	4 1/2"		5174'	408
Date Well Work Commenced: 7/24/2009				
Date Well Work Completed: 7/24/2009				
Verbal Plugging:				
Date Permission granted on:				
Rotary Cable Rig				
Total Vertical Depth (ft): 5186'				
Total Measured Depth (ft): 5174'				
Fresh Water Depth (ft.): 245'				
Salt Water Depth (ft.): 1257'				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): 658'-678'				
Void(s) encountered (N/Y) Depth(s) N				

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

Producing formation Huron Pay zone depth (ft) 4346
Gas: Initial open flow 420 MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow 280 MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests 48 Hours
Static rock Pressure 380 psig (surface pressure) after 48 Hours

Second producing formation Lime Pay zone depth (ft) 2046
Gas: Initial open flow cmgd 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.


Signature

10-10-11
Date

03/15/2013

5-02250F

Were core samples taken? Yes _____ No

Were cuttings caught during drilling? Yes _____ No

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

Perforated Intervals, Fracturing, or Stimulating:

2 fracture zones performed on the well BJ Services Tested lines to 4200 psi
 1st- Lower Huron Perf Intervals 4783'-5100' Nitrogen Fracture, 22 holes total Total N2 =10061 bbls.
 200 gal. 7.5% HCL in Hole. Broke and displaced treated water with 75 Mscf N2 dropped 13 pref ba

2nd- Middle Huron Perf Intervals 3728'-4352' N2 Fracture, 18 holes total, Total Nitrogen = 15082 bbl
 100 gal. 7.5% HCL in Hole. Broke and displaced treated water with 75 Mscf N2 dropped 18 pref ba

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

Sub Base	0'	10'
Fill	10'	21'
Sand and Shale	21'	935'
Upper Maxon	1610'	1636'
Lower Maxon	1685'	1705'
Little Lime	1720'	1785'
Big Lime	1808'	1995'
Big Injun	2006'	2039'
Middle Weir	2059'	2085'
Lower Weir	2203'	2240'
Berea	2452'	2462'
Middle Huron	3777'	3954'
Lower Huron	4044'	4284'
Marcellus Shale	5132'	5186'