

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

DATE: 03/23/12
API #: 47-103-02579

Farm name: Jolliffe, Joe Operator Well No.: Joe Jolliffe Unit 1 1H

LOCATION: Elevation: 1,358' Quadrangle: Littleton 7.5'

District: Center County: Wetzel
Latitude: 7,200' Feet South of 39 Deg. 40' Min. 00.0 Sec.
Longitude 4,105' Feet West of 80 Deg. 32' Min. 30.0 Sec.

Company: Grenadier Energy Partners, LLC

Address: CT Corporation 707 Virginia Street East 15th Floor Charleston, WV 25301	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Agent: Dianna Stamper	24"	40'	40'	Grouted In
Inspector: Derek Haught	16"	425'	425'	445 cu.ft (CTS)
Date Permit Issued: 10/01/2010	11-3/4"	1629'	1629'	915 cu.ft (CTS)
Date Well Work Commenced: 06/01/11	8-5/8"	2706'	2706'	716 cu.ft (CTS)
Date Well Work Completed: 12/07/11	5-1/2"	11,040'	11,040'	2781 cu.ft (CTS)
Verbal Plugging:				
Date Permission granted on:				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): 7501'				
Total Measured Depth (ft): 11,099'				
Fresh Water Depth (ft.): Est. 290'				
Salt Water Depth (ft.): N/A				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): 631'-636'				
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 Marcellus Shale Pay zone depth (ft) 7646' - 10838' MD (7501' TVD)

Gas: Initial open flow 6928 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 4400 psig (surface pressure) after 168 Hours

Second producing formation _____ 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.

Bryan Hawley
Signature

3/23/12
Date

Were core samples taken? Yes _____ No

Were cuttings caught during drilling? Yes No _____

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list Yes - GR _____

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:

Perforations: Total Perforated Interval (7644' - 10,838' MD)

Fluid: 89,461 bbl Slickwater pumped in 9 Stages

Sand: 1,797,814 lbs 100 mesh sand, 1,886,210 lbs 40/70 sand

Plug Back Details Including Plug Type and Depth(s): N/A

Formations Encountered:	Top Depth	Bottom Depth
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See Attached Sheet

Formation/Lithology	From	To
Sand & Shale	47	60
Red Rock	60	70
Sand & Shale	70	120
Red Rock	120	135
White Sand	135	148
Sand & Shale	148	155
Red Rock	155	168
Sand & Shale	168	240
Red Rock	240	279
Shale	279	500
Sand & Shale	500	631
Coal	631	636
Sand & Shale	636	800
Red Rock & Shale	800	850
Sand & Shale	850	1102
Coal	1102	1107
Sand & Shale	1107	1115
Sand	1115	1137
Sand & Shale	1137	1191
Red Rock	1191	1352
Sand & Shale	1352	1360
Red Rock & Shale	1360	1386
Red Rock	1386	1415
Red Rock Sand & Shale	1415	1438
Sand & Shale	1438	1550
Red Rock	1550	1581
Sand & Shale	1581	1738
Sand	1738	1801
Sand & Shale	1801	1864
Sand	1864	1964
Freeport Coal	1964	1976
Sand & Shale	1976	2063
Sand	2063	2240
Sand & Shale	2240	2262
Salt and Sand	2262	2300
Lime	2300	2365
Sand & Shale	2365	2369
Big Injun	2369	2400
Sand & Shale	2400	3135
Gordon	3135	3145
Sand	3145	3180
Sand & Shale	3180	6956
Sonya Shale	6956	7190
Genesee Shale	7190	7275
Geneseo Shale	7275	7301
Tully Lime	7301	7305
Hamilton	7305	7423
Marcellus Shale	7423	N/A

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