



State of West Virginia
Division of Environmental Protection
Section of Oil and Gas
Well Operator's Report of Well Work

Farm Name: Edward Gower 8H

Operator Well No.: 831386

LOCATION Elevation: 1594'
District: Warren
Latitude: 10670 ft South of 39° 02' 30"
Longitude: 6620 ft West of 80° 12' 30"

Quadrangle: Century
County: Upshur

Company: Chesapeake Appalachia, L.L.C.
P.O. Box 18496
OKC, OK 73154-0496

Casing & Tubing	Used in Drilling	Left in Well	Cement Fill-Up Cu.Ft.
20"	40'	40'	Driven
13 3/8"	529'	529'	CTS
9 5/8"	2084'	2084'	CTS
5 1/2"	12,466'	12,466'	As needed

Agent: Eric Gillespie
Inspector: Bill Hatfield
Date Permit Issued: 10/15/2009
Date Well work commenced: 3/3/2010
Date Well Work completed: 9/28/2010
Verbal Plugging Permission
Granted on / /
Rotary Cable Rig
Total Depth (ft): 12466 TVD (ft): 7700'
Fresh Water Depth (ft): 425'
Salt Water Depth (ft.): NA
Is coal being mined in area (Yes No
Coal Depths (ft): none
Was this well logged and plugged back?
Yes ___ No ___ if yes -
depth cement plug set _____'

Open Flow Data

1st Producing Formation Pay Zone Depth 7,998 ft to 12,320 ft
Gas: Initial Open Flow 2,439 Mcf/day Oil: Initial Open Flow bbl/day
Final Open Flow N/A Mcf/day Final Open Flow bbl/day
Time of Open Flow between Initial and Final Tests In hours
Line
Static Rock Pressure 3,465 psig after N/A hours

2nd Producing Formation Pay Zone Depth ft to ft
Gas: Initial Open Flow N/A Mcf/day Oil: Initial Open Flow bbl/day
Final Open Flow N/A Mcf/day Final Open Flow bbl/day
Time of Open Flow between Initial and Final Tests hours
Static Rock Pressure N/A psig after hours

3rd Producing Formation Pay Zone Depth ft to ft
Gas: Initial Open Flow N/A Mcf/day Oil: Initial Open Flow bbl/day
Final Open Flow N/A Mcf/day Final Open Flow bbl/day
Time of Open Flow between Initial and Final Tests hours
Static Rock Pressure N/A psig after hours

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.

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Perforated Intervals

1 st Stage	Marcellus	50	holes from	11,998 ft to	12,320 ft
2 nd Stage	Marcellus	50	holes from	11,598 ft to	11,920 ft
3 rd Stage	Marcellus	50	holes from	11,198 ft to	11,520 ft
4 th Stage	Marcellus	50	holes from	10,798 ft to	11,120 ft
5 th Stage	Marcellus	50	holes from	10,394 ft to	10,720 ft
6 th Stage	Marcellus	50	holes from	9,998 ft to	10,320 ft
7 th Stage	Marcellus	50	holes from	9,598 ft to	9,920 ft
8 th Stage	Marcellus	50	holes from	9,198 ft to	9,520 ft
9 th Stage	Marcellus	50	holes from	8,798 ft to	9,120 ft
10 th Stage	Marcellus	50	holes from	8,398 ft to	8,716 ft
11 th Stage	Marcellus	50	holes from	7,998 ft to	8,313 ft

Fracturing / Stimulation

1 st Stage	Type of Treatment Slickwater		
	Total Acid 5,000 Gal of 15% HCl		Breakdown Pressure 7,039 psi
	Average Rate 85 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>		ATP 7,845 psi MTP 8,577 psi
	Total Fluid 10,239 bbl	Total Nitrogen 0 scf	Total Sand 124,426 lb of 100 mesh
			Total Sand 205,144 lb of 30/50
	ISIP 4,950 psi	5 min 4,700 psi	
2 nd Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl		Breakdown Pressure 6,270 psi
	Average Rate 93 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>		ATP 8,644 psi MTP 9,456 psi
	Total Fluid 8,586 bbl	Total Nitrogen 0 scf	Total Sand 120,500 lb of 100 mesh
			Total Sand 228,500 lb of 30/50
	ISIP 5,141 psi	5 min 4,580 psi	
3 rd Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl		Breakdown Pressure 6,100 psi
	Average Rate 90 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>		ATP 7,879 psi MTP 8,657 psi
	Total Fluid 8,289 bbl	Total Nitrogen 0 scf	Total Sand 120,000 lb of 100 mesh
			Total Sand 241,500 lb of 30/50
	ISIP 5,218 psi	5 min 4,806 psi	
4 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl		Breakdown Pressure 5,589 psi
	Average Rate 96 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>		ATP 7,233 psi MTP 8,562 psi
	Total Fluid 8,222 bbl	Total Nitrogen 0 scf	Total Sand 122,000 lb of 100 mesh
			Total Sand 204,700 lb of 30/50
	ISIP 5,029 psi	5 min 4,670 psi	
5 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl		Breakdown Pressure 6,014 psi
	Average Rate 85 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>		ATP 7,310 psi MTP 8,300 psi
	Total Fluid 9,924 bbl	Total Nitrogen 0 scf	Total Sand 121,200 lb of 100 mesh
			Total Sand 280,600 lb of 30/50
	ISIP 5,184 psi	5 min 4,678 psi	
6 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl		Breakdown Pressure 6,423 psi
	Average Rate 90 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>		ATP 7,262 psi MTP 8,297 psi
	Total Fluid 8,476 bbl	Total Nitrogen 0 scf	Total Sand 121,400 lb of 100 mesh
			Total Sand 279,000 lb of 30/50
	ISIP 0 psi	5 min psi	

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7 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 5,685 psi	
	Average Rate 99 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 7,572 psi	MTP 7,808 psi
	Total Fluid 8,632 bbl	Total Nitrogen 0 scf	Total Sand 120,116 lb of 100 mesh
			Total Sand 264,922 lb of 30/50
	ISIP 4,972 psi	5 min 4,972 psi	
8 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 7,672 psi	
	Average Rate 87 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 7,640 psi	MTP 8,363 psi
	Total Fluid 8,415 bbl	Total Nitrogen 0 scf	Total Sand 121,200 lb of 100 mesh
			Total Sand 282,800 lb of 30/50
	ISIP 5,302 psi	5 min 5,302 psi	
9 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 7,994 psi	
	Average Rate 84 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 7,520 psi	MTP 8,725 psi
	Total Fluid 8,519 bbl	Total Nitrogen 0 scf	Total Sand 120,000 lb of 100 mesh
			Total Sand 282,600 lb of 30/50
	ISIP 5,148 psi	5 min 5,148 psi	
10 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 6,422 psi	
	Average Rate 86 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 7,578 psi	MTP 8,341 psi
	Total Fluid 8,502 bbl	Total Nitrogen 0 scf	Total Sand 121,440 lb of 100 mesh
			Total Sand 291,000 lb of 30/50
	ISIP 5,405 psi	5 min 5,405 psi	
11 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 6,121 psi	
	Average Rate 87 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 7,778 psi	MTP 8,230 psi
	Total Fluid 8,299 bbl	Total Nitrogen 0 scf	Total Sand 120,000 lb of 100 mesh
			Total Sand 272,900 lb of 30/50
	ISIP 5,426 psi	5 min 5,426 psi	

Well Log

Formation Name	Top	Bottom	Comments
SS/LS	0	600	All depths KBTVD
SHALE W/ SS	600	830	
SS/SH	830	1782	
BIG LIME	1782	1960	
BIG INJUN	1960	2020	
SHALE	2020	2160	
SS W/ SILTSTONE	2160	2340	
SHALE W/ SS	2340	3260	
SHALE	3260	7490	
GENESEO	7490	7525	
TULLY	7525	7560	
HAMILTON	7560	7663	
MARCELLUS	7663		
TD		7701	

Signed:

Marlene Williams

CHESAPEAKE APPALACHIA, LLC

By: Marlene Williams, Regulatory Analyst II

Date: 10-31-2012

12/07/2012