

State of West Virginia DEPARTMENT OF ENERGY Division of Oil and Gas

MB

Well Operator's Report of Well Work

raim Name: Carbon Fuel	Opera	ator Well No.	CF #33					
Location: Elevation: 677'		Quadrangle: Cedar Grove						
District: Cabin Creek	County: Kanawha							
Latitude: 10,400' Feet South of	•	Degrees 1		30 Second				
Longitude: 9,600' Feet West of		Degrees 2						
Company: Northstar Energy Corporation	Casing &	Used in	Left	Cement				
1018 Kan. Blvd. E., Suite 309	Tubing		2010	Fill Up				
Charleston, WV 25301	Size	Drilling	in well	Cu. Ft.				
Agent: W. Thomas White								
Inspector: Carlos Hively	13 3/8"		-	- 1				
Permit Issued: 11-25-02								
Well work Commenced: 12-17-02	9 5/8"	395′	395′	349				
Well work Completed: 12-23-02								
Verbal Plugging Permission granted on: N/A	7"	1463.35′	1463.35′	262				
Rotary x Cable Tool Rig								
Total Depth (feet): LTD-2302' DTD-2306'	4 1/2"	-	2257.00′	147				
Fresh water depths (ft): 78'		î	in the second	***************************************				
Salt water depths (ft):			Office of Call. Permittin	Gas				
Is coal being mined in area: no		l	1 6:11 ((2))	9				
Coal Depths: none recorded			JUN 16:	2003				
ODEN EL ONY DATA				1				
OPEN FLOW DATA: Producing formation(s): Big Lime, Big Injun, Weir, Berea Pay zone depth (ft) Pay zone depth (ft)								
Producing formation(s): Big Lime, Big Injun, Weir, Berg								
Gas: Initial open flow no show MCF/D				Bbl/d				
Final open flow 280 MCF/D Final open flow Bbl/								
Time of open flow between initial and final tests:168 Hours								
Static rock Pressure 450 psig (surface pressure)after 168 Hours								
Second producing formation(s):		Pay 7	one denth (f	t) See back				
Gas: Initial open flowMCF/D		Oil: Initia	one depth (i	Bbl/d				
Final open flow MCF/D		Final	open flow_	Bbl/d				
Time of open flow between initial and fi	inal tests:	1 11141	Hours					
Static rock Pressurepsig (surfa	ace pressur	e)after	Hours					
NOTE: ON BACK OF THIS FORM PUT THE FOLLO	WING; 1).	. DETAILS () F					
PERFORATED INTERVALS, FRACTURING OR STI	MULATIN	IG, PHYSICA	AL CHANG	Е,				
ETC. 2). THE WELL LOG WHICH IS A SYSTEMATI	C DETAIL	LED GEOLO	GICAL REC	CORD OF				
ALL FORMATIONS, INCLUDING COAL ENCOUNT	ERED BY	THE WELL	BORE.					

DATE: 6-12-03

12-29-2002

MIRU Fisher Well Surveys, run GR/CTL/CCL. Logger's TD – 2250'. Calc TOC – 1040', Actual TOC – 1550'. Marker joint at 1442-1452'. Perforate Berea.

12-30-2002

MIRU DS Schlumberger Oilfield Services to conduct 3-stage completion. Top pressure set at 4000 psi. 250 gals. 15% HCl in hole. Break on fluid.

1st Stage - Berea (2163-2170', 14 holes) 75 Quality Foam Frac
6 Bbls. (250 gals) 15% HCl, 36,019 lbs. 20/40 sand, 1-4 ppg, 157 Bbls. Twtr, 223 Mscf, N₂ flush
BKDN - 920 psi, ATP - 2228 psi, AIR - 19.5 BPM, ISIP - 2359 psi, 3 Min SI - 2195 psi

Perforate Lower Weir. 3 3/8" frac baffle at 1987'. Dropped frac ball in 6 Bbls. (250 gals) 15% Hcl, followed by N2 breakdown.

Shutdown after breakdown to perforate Upper Weir.

2nd Stage - Lower Weir (1923-1932', 12 holes) 75 Quality Foam Frac
 6 Bbls. (250 gals) 15% HCl, 20,490 lbs. 20/40 sand, 1-4 ppg, 93 Bbls. Twtr, 218 Msc, N₂ flush BKDN - 3823 psi, ATP - 2450 psi, AIR - 20 BPM

Dropped 20 perf balls in 6 Bbls. HCl to ball out Lower Weir

3rd Stage - Upper Weir (1817-1834', 12 holes) 75 Quality Foam Frac 6 Bbls. (250 gals) 15% HCl, 23,196 lbs. 20/40 sand, 1-4 ppg, 91 Bbls. Twtr, 212 Mscf, N₂ flush BKDN - 2966 psi, ATP - 2950 psi, AIR - 20 BPM, ISIP - 2430 psi

Perforate Big Injun. 3 9/16" baffle at 1768'. Dropped frac ball in 6 Bbls. (250 gals) 15% HCl, followed by N2 breakdown.

Shutdown after Big Injun breakdown to perforate Big Lime. Backside pressured up as last hole was perforated.

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4th Stage – Big Injun (1724-1730', 12 holes)

5th Stage – Big Lime (1610-1685', 11 holes)

RDMO DS Schlumberger and Fisher Well Surveys. RU flowback and open well on 1/4" choke.

Invitor mont i Protection 1/4" choke.

Permitting

Formation Depths take	n from Gamma	Ra	y Log		
Sub Base	0	-	10'		
Shale	10	-	85′	Wet at 78'	
Sand	85	-	150'		
Sand & Shale	150	-	200'		
Sand	200	-	239'		
Shale	239	-	284'		
Sand	284	-	355'		
Sand & Shale	355	-	430'		
Shale	430	-	515′		
Sand & Shale	515	-	560′		
Salt Sand	560	-	982'		
Sand & Shale	982	-	1109′		
Shale	1109	-	1160′		
Maxton	1160	-	1325'		
Sand & Shale	1325	-	1441'		
Little Lime	1441	-	1481'		
Sand & Shale	1481	-	1510′		
Big Lime	1510	-	1721'		
Big Injun	1721	-	1743′		200
Silt & Shale	1743	-	1816′	Gas check at 1747'- no show	Office ୯୮୦% ଓ Gas Permitting
Weir	1816	-	1937'		i Commung
Shale	1937	-	2141'	Gas check at 1970'- no show	JUN 16 2003
Sunbury	2141	-	2153'		
Berea	2153	-	2175'		WV Dependent of
Shale	2175			Gas check at 2213'- no show	Lastva Chitrocoul Trock public

Total Depth

2302'

Well logged by Allegheny Wireline Services, Inc.