



*ATS*

State of West Virginia  
DEPARTMENT OF ENERGY  
Division of Oil and Gas  
Well Operator's Report of Well Work

Farm Name: Carbon Fuel  
Location: Elevation: 1387'  
District: Cabin Creek  
Latitude: 10,360' Feet South of  
Longitude: 180' Feet West of

Operator Well No. CF #31  
Quadrangle: Belle 7.5'  
County: Kanawha  
38 Degrees 12 Minutes 30 Seconds  
81 Degrees 30 Minutes 00 Seconds

Company: Northstar Energy Corporation  
1018 Kan. Blvd. E., Suite 309  
Charleston, WV 25301

Agent: W. Thomas White  
Inspector: Carlos Hively  
Permit Issued: 11-25-02  
Well work Commenced: 1-2-03  
Well work Completed: 1-10-03  
Verbal Plugging Permission granted on: N/A  
Rotary x Cable Tool      Rig  
Total Depth (feet): LTD- 3017' DTD-3018'  
Fresh water depths (ft): 404', 794'  
Salt water depths (ft):       
Is coal being mined in area: no  
Coal Depths: none recorded

Casing & Tubing Size	Used in Drilling	Left in well	Cement Fill Up Cu. Ft.
13 3/8"	28'	28'	-
9 5/8"	434'	434'	356
7"	2142'	2142'	380
4 1/2"	-	2951.40'	147

RECEIVED  
Office of Oil & Gas  
Permitting  
JUN 16 2003  
WV Department of  
Environmental Protection

**OPEN FLOW DATA:**

Producing formation(s): Big Lime, Big Injun, Weir, Berea Pay zone depth (ft) See back  
Gas: Initial open flow show MCF/D Oil: Initial open flow      Bbl/d  
Final open flow 407 MCF/D Final open flow      Bbl/d  
Time of open flow between initial and final tests: 168 Hours  
Static rock Pressure 475 psig (surface pressure) after 168 Hours

Second producing formation(s):      Pay zone depth (ft) See back  
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

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.

FOR: Northstar Energy Corporation  
BY: W. Thomas White  
DATE: 6-12-03

AUG 01 2003

KAN 5539

**1-9-2003**

MIRU Fisher Well Surveys, run GR/CTL/CCL. CH Logger's TD - 2986'. Calc TOC - 1735'. Marker joint at 2198'-2208'.

**1-10-2003**

MIRU DS Schlumberger Oilfield Services to conduct 5-stage completion. Top pressure set at 4000 psi. 250 gals. 15% HCl in hole. Break on fluid.

**1<sup>st</sup> Stage - Berea (2862-2867', 12 holes) 75 Quality Clear Frac**

6 Bbls. (250 gals) 15% HCl, 25,360 lbs. 20/40 sand, 1-4 ppg, 122 Bbls. Twtr, 209 Mscf N<sub>2</sub>, flush BKDN - 1485 psi, ATP - 2520 psi, AIR - 19.5 BPM, ISIP - 2410 psi, 3 Min SI - 2296 psi

Perforate Weir. 3 3/8" frac baffle at 2729'. Drop frac ball in 7 Bbls. (295 gals.) 15% HCl, followed by N<sub>2</sub> breakdown.

Shutdown after Lower Weir breakdown to perforate Upper Weir.

**2<sup>nd</sup> Stage - Lower Weir (2612-2635', 14 holes) 75 Quality Clear Frac**

7 Bbls. (295 gals) 15% HCl, 35,636 lbs. 20/40 sand, 1-4 ppg, 184 Bbls. Twtr, 443 Mscf, N<sub>2</sub> flush BKDN - 3371 psi, ATP - 2720 psi, AIR - 21 BPM, ISIP - 2240 psi, 3 Min SI - 2098 psi

Dropped 16 perf balls in 6 Bbls. HCl to breakdown Upper Weir

**3<sup>rd</sup> Stage - Upper Weir (2517-2522', 10 holes) 75 Quality Clear Frac**

6 Bbls. (250 gals) 15% HCl, 10,856 lbs. 20/40 sand, 1-4 ppg, 73 Bbls. Twtr, 140 Mscf, N<sub>2</sub> flush BKDN - 2388 psi, ATP - 2320 psi, AIR - 19.5 BPM, ISIP - 1790 psi

Perforate Big Injun. 3 9/16" baffle at 2510'. Dropped frac ball in 6 Bbls. (250 gals) 15% HCl, followed by N<sub>2</sub> breakdown.

Shutdown after Big Injun breakdown, perforate Big Lime.

**4<sup>th</sup> Stage - Big Injun (2427-2440', 14 holes) 75 Quality Clear Frac**

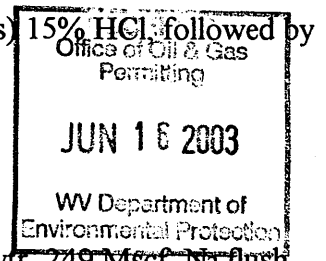
6 Bbls. (250 gals) 15% HCl, 40,633 lbs. 20/40 sand, 1-4 ppg, 151 Bbls. Twtr, 249 Mscf, N<sub>2</sub> flush BKDN - 2507 psi, ATP - 2350 psi, AIR - 19.5 BPM, ISIP - N/A

Dropped 16 perf balls to ball out Big Injun.

**5<sup>th</sup> Stage - Big Lime (2286-2399', 8 holes) N<sub>2</sub> Energized Acid Frac**

40 Bbls. (1667 gals) 15% HCl, 20 Mscf N<sub>2</sub> flush, dropped 6 perf balls thru job. BKDN - 2246 psi, ATP - 2150 psi, AIR - 8 BPM, ISIP - 1500 psi

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



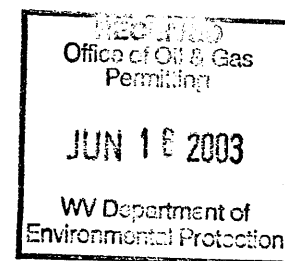
AUG 01 2003

*Formation Depths taken from Driller's Log Book*

Sub Base	0 - 10'
Fill	10 - 25'

*Formation Depths taken from Gamma Ray Log*

Sand	25 - 257'	
Sand & Shale	257 - 780'	Hole wet @ 404'
Sand	780 - 845'	Hole damp @ 794'
Shale	845 - 900'	
Sand	900 - 934'	
Shale & Sand	934 - 1054'	
Shale	1054 - 1093'	
Sand	1093 - 1127'	
Shale	1127 - 1170'	
Sand	1170 - 1216'	
Shale	1216 - 1230'	
Salt Sand	1230 - 1325'	
Shale	1325 - 1433'	
Salt Sand	1433 - 1683'	
Shale	1683 - 1760'	
Sand	1760 - 1777'	
Shale	1777 - 1837'	
<b>Maxton</b>	<b>1837 - 2028'</b>	
Shale	2028 - 2132'	
<b>Little Lime</b>	<b>2132 - 2167'</b>	
Shale	2167 - 2208'	
<b>Big Lime</b>	<b>2208 - 2425'</b>	
<b>Big Injun</b>	<b>2425 - 2445'</b>	
Shale	2445 - 2515'	
<b>Weir</b>	<b>2515 - 2643'</b>	
Shale	2643 - 2848'	
<b>Sunbury</b>	<b>2848 - 2858'</b>	
<b>Berea</b>	<b>2858 - 2869'</b>	
Shale	2869 -	

**Total Depth****3017'**

Well logged by Allegheny Wireline Services, Inc.

AUG 01 2003

KAM 5539