

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

Reviewed _____

Farm name: APPALACHIAN LAND CO. Operator Well No.: 824021

LOCATION: Elevation: 810.00 Quadrangle: MAMMOTH

District: ELK County: KANAWHA
Latitude: 4025 Feet South of 38 Deg. 22Min. 30 Sec.
Longitude 3250 Feet West of 81 Deg. 17 Min. 30 Sec.

Company: COLUMBIA NATURAL RESOURCE
P. O. BOX 6070
CHARLESTON, WV 25362-0000

Agent: W. A. WATSON, JR.

Inspector: CARLOS HIVELY
Permit Issued: 10/04/99
Well work Commenced: 10/08/99
Well work Completed: 03/13/00
Verbal Plugging
Permission granted on: _____
Rotary X Cable _____ Rig
Total Depth (feet) 9591'
Fresh water depths (ft) 60

Salt water depths (ft) _____
870, 1328

Is coal being mined in area (Y/N)? N
Coal Depths (ft): _____

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
20"	199'	199'	401
13 3/8"	1,837'	1,837'	1,917
9 5/8"	5,518'	5,518'	354
7"	8,306'	8,306'	1,216
4 1/2"	8,221'	8,221'	350
2 3/8"		8,158'	

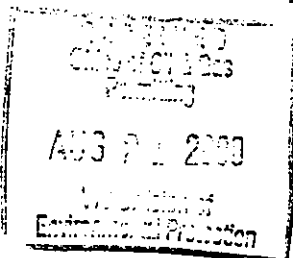
OPEN FLOW DATA

Producing formation Black River Pay zone depth (ft) 9,481' (Natural)
 Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
 Final open flow 15,000* MCF/d Final open flow _____ Bbl/d
 Time of open flow between initial and final tests 24 Hours
 Static rock Pressure 4,575 psig (surface pressure) after 72 Hours
 *Gas Contained 300 PPM H2S

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

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: COLUMBIA NATURAL RESOURCES, INC.
By: _____
Date: 9/11/00



9/13/00

John Adams
Dave Gocke

NR Well #: 824021
 Permit #: 47-39-05307
 Elev: 815
 County: Kanawha
 District: Elk
 Prospect: Mammoth
 Field: Union Carbide-Deep
 Lease: Union Carbide

	Top	Base
Salt Sand	720	1135
Mazon Sand	1320	1635
Flow Line	1835	1865
Broadway Limestone	1665	1820
Kaiser Sand		
Elk Hill		
Wick Sand		
Beckmantown		
Cleveland Shale		
Upper Devonian	2045	4310
Lower Penn. Shale	4310	4320
Oranburg Shale	4320	4770
Railroad Shale	4770	4990
Full Sand		
Beckmantown		
Beckmantown		
Beckmantown		

	Top	Base
Beckmantown		
Elk Sand		
Oranburg Limestone	5310	5435
Beckmantown		
Beckmantown	5435	5455
Beckmantown	5455	5860
Beckmantown	5860	6252
Beckmantown	6252	6282
Beckmantown	9282	8514
Beckmantown	6550	6800
Beckmantown	6970	7045
Beckmantown	7045	7990
Beckmantown	7990	8662
Beckmantown	8662	9001
Beckmantown	9001	9521
Beckmantown	9521	
Beckmantown		

Gas	Volume	Volume
Show Gas 1	9480	15000
Show Gas 2		
Show Gas 3		
Show Gas 4		
Show Gas 5		

Oil	Volume	Volume
Show Oil 1		
Show Oil 2		

Show Water

Formation @ TD Beckmantown Dol.

Pay	Formation	Volume	Volume	Volume	Volume
Pay 1	Black River Ls. (Frac)				
Pay 2					
Pay 3					
Pay 4					
Pay 5					
Pay 6					

IOF	
IRF	
Formation	
Hole Fluid	9# Salt Mud

Logger ID: 8308 Logging Date: 01/21/2000

Logging Suite: GR, LDT, CNL, DLL, T, A, Sonic, Dir, FMS, TD to intermediate casing point, GR to surface.

Remarks: