

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

Farm name: Griffin, Vineyard, Mirquet
Location Elevation: 1,136'
District: Geary

Operator Well No: 823954 (Kick 3)
Quadrangle: Looneyville
County: Roane

Latitude 14,847 Feet South of 38 Deg 40 Min 00 Sec
Longitude 6,030 Feet West of 81 Deg 15 Min 00 Sec

Columbia Natural Resources, Inc. (CHK)	Casing & Tubing	Used in drilling	Left in Well	Cement fill up Cu.Ft.
Address: P.O. Box 6070 Charleston, WV 25362	26"	20	20	216 Existing
Agent: Eric B. Gillespie	20"	350	350	400 Existing
Inspector: Ed Gainer (H. Dougherty)				
Date Permit Issued: 1/7/2002	13 3/8"	2122	2122	1880 Existing
Date Well work commenced: 1/22/2002				
Date Well Work completed: 2/24/2002	9 5/8"	6120	6120	354 Existing
Verbal Plugging: Yes (H.H.D.)				
Date Permission granted on: 2/18/2002	7"	9243	9243	780 Existing
<input checked="" type="checkbox"/> Rotary <input type="checkbox"/> Cable <input type="checkbox"/> Rig				
Total Depth (feet): 11,002				
Fresh Water Depth (ft):				
Salt Water Depth (ft.): 1,580, 1,750				
Is coal being mined in area <input checked="" type="checkbox"/> N <input type="checkbox"/> Y				
Coal Depths (ft): N/A				

OPEN FLOW DATA

Producing formation: Trenton/Black River O.H. Pay zone depth (ft) from 9803 to 11,002
Gas: Initial open flow 0 MCF/d MCF/d Oil: Initial open flow None
Final open flow 0 MCF/d Final open flow None
Time of open flow between initial and final tests Hours N/A
Static rock Pressure 0 psig (surface pressure) after 10 Hours

Well was declared dry hole and was plugged to abandon.

2nd producing formation: Pay zone depth (ft) from to; from to
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

3rd producing formation: Pay zone depth (ft) from to; from
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

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NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

WELL OPERATOR: Columbia Natural Resources, Inc. (CHK)

By: R. E. Schindler Date: 7-11-13

07/19/2013

Columbia Natural Resources (CHK)

GROVES 823954 – Kick 3

47-087-24256H

Geary District, Roane County, WV

All depths are measured

<u>Formation</u>	<u>Top</u>	<u>Bottom</u>
Kick off point	9324	
Martinsburg	9324	9803
Trenton	9803	10,175
Black River	10,175	10,864
Wilcox Limestone	10,864	10,912
St. Peter Limestone	10,912	11,002 (TD)

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Office of Oil and Gas
WV Dept. of Environmental Protection

07/19/2013

Columbia Natural Resources, Inc.
GROVES 23954
Straight hole

47-087-24256
Geary District, Roane County, WV

All depths are measured

<u>Formation</u>	<u>Top</u>	<u>Bottom</u>
Shale & siltstone	0	1568
Salt Sand	1568	1804
Shale	1804	1886
Little Lime	1886	1925
Big Lime	1925	2117
Injun	2117	2150
Pocono Shale	2150	2446
Sunbury Shale	2446	2466
Berea	2466	2472
Upper Devonian Sh	2472	2767
Gordon Siltstone	2767	2781
Devonian Shale	2781	3612
Lower Huron	3612	4770
Devonian Shale	4770	4897
Lower Alexander	4897	4974
Devonian Shale	4974	5110
Rhinestreet	5110	5467
Devonian Shale	5467	5734
Marcellus	5734	5776
Onondaga	5776	5940
Oriskany	5940	6000
Helderberg	6000	6273
Salina	6273	6913
Newburg	6913	6932
McKenzie	6932	7276
Rose Hill	7276	7762
Tuscarora	7762	7832
Juniata (red)	7832	8500
Martinsburg (gray)	8500	9803
Trenton	9803	9950
Black River	9950	TD

(10,849')
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