

WR-35
Rev (9-11)

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas
Well Operator's Report of Well Work

DATE: April 23, 2012
API #: 47-067-00845

Farm name: Nicholas-Clay Land & Mineral Operator Well No.: NCL&M 4

LOCATION: Elevation: 1489.32 Quadrangle: Lockwood 7.5'

District: Jefferson County: Nicholas
Latitude: 7,800 Feet South of 38 Deg. 20 Min. 0 Sec.
Longitude 7,100 Feet West of 81 Deg. 02 Min. 30 Sec.

Company: Range Resources - Pine Mountain, Inc

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
<u>406 W Main St., PO Box 2136</u> <u>Abingdon, VA 24210</u>	<u>11-3/4</u>	<u>30</u>		
Agent: <u>Geary Legg</u>	<u>8-5/8</u>	<u>442</u>	<u>442</u>	<u>115 sk</u>
Inspector: <u>Richard Campbell</u>	<u>4-1/2</u>		<u>1961</u>	<u>160 sk</u>
Date Permit Issued: <u>9/14/2011</u>				
Date Well Work Commenced: <u>11/13/2001</u>				
Date Well Work Completed: <u>3/25/2002</u>				
Verbal Plugging:				
Date Permission granted on:				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): <u>2369 kb</u>				
Total Measured Depth (ft):				
Fresh Water Depth (ft.): <u>105 kb</u>				
Salt Water Depth (ft.): <u>1629 kb</u>				
Is coal being mined in area (N/Y)? <u>N</u>				
Coal Depths (ft.): <u>NA</u>				
Void(s) encountered (N/Y) Depth(s) <u>N</u>				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Lower Maxon Pay zone depth (ft) 1783-1806

Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d

Final open flow 11 MCF/d Final open flow _____ Bbl/d

Time of open flow between initial and final tests 4 Hours

Static rock Pressure 15 psig (surface pressure) after 72 Hours

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

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Ear Landrum
Signature

4/23/2012
Date

05/11/2012

Were core samples taken? Yes _____ No

Were cuttings caught during drilling? Yes No _____

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list _____

Hi Res GR/Dens/Temp/Audio/PE/Caliper _____

NOTE: IN THE AREA BELOW 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 THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

Perforated Intervals, Fracturing, or Stimulating:

1st stage: Perf 1783-1790 kb 8h; 1795-1806 kb 12h, 20h total. Attempt to frac, unable to breakdown

Re-perforate: Perf 1783, 1787, 1789, 1795, 1797, 1799, 1801, 1802, 1803, 1805 kb, 10h

Ballout w/12 bbl 28% HCl

Re-frac: Frac w/426 bbl 25# x-link. Avg Rate - 11 bpm (dh), Avg Press - 2780 psi, Max Press - 3600 psi

Total 20/40 sand - 40,100#

ISIP - 2000 psi

Plug Back Details Including Plug Type and Depth(s): Hole gelled at TD. Open hole bridged @ 2015' kb, did not clean out to TD.

Formations Encountered: _____ Top Depth / _____ Bottom Depth
Surface: _____

Formations Encountered	Top Depth	Bottom Depth
Shale and Sand	0	920
Salt Sand	920	1030
Shale and Sand	1030	1447
Upper Maxon	1447	1528
Shale	1528	1662
Shale and Sand	1662	1771
Lower Maxon	1771	1843
Shale and Sand	1843	1915
Little Lime	1915	1952
Shale	1952	1961
Blue Monday	1961	1976
Shale	1976	2004
Big Lime	2004	2225
Shale	2225	2369
TD	2369	