

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

DATE: 8-14-2012
API #: 47-069-00078

Farm name: Thelma Hays 3H Operator Well No.: 833117

LOCATION: Elevation: 1250' Quadrangle: Bethany, WV

District: Liberty County: Ohio
Latitude: 3490' Feet South of 40 Deg. 10 Min. 00 Sec.
Longitude 5570' Feet West of 80 Deg. 32 Min. 30 Sec.

Company: Chesapeake Appalachia, L.L.C.

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
P.O. Box 18496 Oklahoma City, OK 73154-0496	20"	100'	100'	353 Cu. Ft.
Agent: Eric Gillespie	13 3/8"	656'	656'	718 Cu. Ft.
Inspector: Bill Hendershot & Joe Taylor	9 5/8"	2074'	2074'	988 Cu. Ft.
Date Permit Issued: 4-12-2011	5 1/2"	11595'	11595'	3003 Cu. Ft.
Date Well Work Commenced: 5-23-2011				
Date Well Work Completed: 5-15-2012				
Verbal Plugging:				
Date Permission granted on:				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): 6447 (cement plugs @ 5530' & 5709')				
Total Measured Depth (ft): 11600'				
Fresh Water Depth (ft.): 200'				
Salt Water Depth (ft.): 800'				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): 590'				
Void(s) encountered (N/Y) Depth(s) Y 590'				

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

Producing formation Marcellus Pay zone depth (ft) 6,604' - 11,461'

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

Final open flow 1,459* MCF/d Final open flow 186 Bbl/d

Time of open flow between initial and final tests 30 Hours *Calculated

Static rock Pressure 4,073* psig (surface pressure) after _____ 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.

Marlene Williams
Signature

8-15-2012
Date

01/11/2013

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Were core samples taken? Yes _____ No N

Were cuttings caught during drilling? Yes 7 No _____

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list GR, neutron, density, and resistivity
open hole logs run from 0-6447' MD; LWD GR from 5314-11600' MD.

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:

(See Attached)

Plug Back Details Including Plug Type and Depth(s): Cement plugs @ 5530' - 5980' & 5709' - 6442'

<u>Formations Encountered:</u>	<u>Top Depth</u>	<u>Bottom Depth</u>
<u>Surface:</u>		

(See Attached)

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PERFORATION RECORD ATTACHMENT

Well Number and Name: 833117 ThelmaHays 3H

PERFORATION RECORD			STIMULATION RECORD							
Date	Interval Perforated		Date	Interval Treated		Fluid		Propping Agent		Average Injection
	From	To		Type	Amount	Type	Amount			
4/13/2012	11,102	11,461	5/10/2012	11,102	11,461	Sik wtr	7,928	Sand	423,760	80
5/11/2012	10,460	11,023	5/12/2012	10,460	11,023	Sik wtr	11,433	Sand	638,680	80
5/12/2012	9,817	10,381	5/13/2012	9,817	10,381	Sik wtr	10,472	Sand	642,540	78
5/14/2012	9,174	9,738	5/14/2012	9,174	9,738	Sik wtr	10,747	Sand	642,240	80
5/14/2012	8,532	9,095	5/14/2012	8,532	9,095	Sik wtr	9,704	Sand	537,640	79
5/14/2012	7,889	8,453	5/15/2012	7,889	8,453	Sik wtr	10,319	Sand	640,080	80
5/15/2012	7,247	7,810	5/15/2012	7,247	7,810	Sik wtr	9,942	Sand	642,071	80
5/15/2012	6,604	7,168	5/15/2012	6,604	7,168	Sik wtr	9,973	Sand	638,840	79

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VERTICAL PILOT HOLE

Formation/Lithology	Top Depth, TVD/MD (ft)	Bottom Depth, TVD/MD (ft)
LS/SH	0	300
SS/LS	300	589
PITTSBURG COAL	589	595
LS/SH/SS	595	790
SS	790	1510
SH/SS	1510	1620
BIG LIME (LS)	1620	1646
BIG INJUN (SS)	1646	1920
SHALE	1920	6198
GENESEO (SH)	6198	6217
TULLY (LS)	6217	6260
HAMILTON (SH)	6260	6366
MARCELLUS (SH)	6366	6431
ONONDAGA (LS)	6431	
TD OF PILOT HOLE		6447

LATERAL SIDETRACK WELLBORE

Formation/Lithology	Top Depth, MD (ft)	Top Depth, TVD (ft)	Bottom Depth, MD (ft)	Bottom Depth, TVD (ft)
LS/SH	0	0	300	300
SS/LS	300	300	589	589
PITTSBURG COAL	589	589	595	595
LS/SH/SS	595	595	790	790
SS	790	790	1510	1510
SH/SS	1510	1510	1620	1620
BIG LIME (LS)	1620	1620	1646	1646
BIG INJUN (SS)	1646	1646	1920	1920
SHALE	1920	1920	6211	6164
GENESEO (SH)	6211	6164	6238	6166
TULLY (LS)	6238	6166	6294	6229
HAMILTON (SH)	6294	6229	6535	6343
MARCELLUS (SH)	6535	6343		
TD OF LATERAL			11600	6266

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