

APPROVED

NAME: Carl A. Flu

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DATE: 1/23/17

State of West Virginia

Department of Environmental Protection - Office of Oil and Gas Well Operator's Report of Well Work

API 47-017-06481 County Doddridge District West Union
 Quad Oxford Pad Name Oxf 97 Field/Pool Name N/A
 Farm name Haessly Land & Timber, LLC Well Number Oxf 97 AHS
 Operator (as registered with the OOG) Noble Energy, Inc.
 Address 1000 Noble Energy Drive City Canonsburg State PA Zip 15317

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
 Top hole Northing as drilled plat to be submitted by CNX Easting _____
 Landing Point of Curve Northing upon completion of the well. Easting _____
 Bottom Hole Northing _____ Easting _____

Elevation (ft) 1360 GL Type of Well New Existing Type of Report Interim Final
 Permit Type Deviated Horizontal Horizontal 6A Vertical Depth Type Deep Shallow
 Type of Operation Convert Deepen Drill Plug Back Redrilling Rework Stimulate
 Well Type Brine Disposal CBM Gas Oil Secondary Recovery Solution Mining Storage Other _____
 Type of Completion Single Multiple Fluids Produced Brine Gas NGL Oil Other _____
 Drilled with Cable Rotary

Drilling Media Surface hole Air Mud Fresh Water Intermediate hole Air Mud Fresh Water Brine
 Production hole Air Mud Fresh Water Brine
 Mud Type(s) and Additive(s)
Synthetic Oil Based

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Date permit issued 07/24/2014 Date drilling commenced 12/23/2014 Date drilling ceased 02/25/2015
 Date completion activities began Not completed Date completion activities ceased _____
 Verbal plugging (Y/N) _____ Date permission granted _____ Granted by _____

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft 266',503',810' Open mine(s) (Y/N) depths N
 Salt water depth(s) ft none noted for offsets Void(s) encountered (Y/N) depths N
 Coal depth(s) ft NA Cavern(s) encountered (Y/N) depths N
 Is coal being mined in area (Y/N) No

Reviewed by: _____

01/27/2017

API 47-017-06481

Farm name Haessly Land & Timber, LLC

Well number Oxf 97 AHS

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/ N) * Provide details below*
Conductor	26"	20"	58.4'	New	J-55		
Surface	17.5"	13 3/8"	903.8'	New	J-55		Y
Coal							
Intermediate 1	12.38"	9 5/8"	2999.8'	New	HCK-55		N
Intermediate 2							
Intermediate 3							
Production	8-3/4" & 8-1/2"	5 1/2"	16,725.2'	New	P-110		Y
Tubing							
Packer type and depth set							

Comment Details _____

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ²)	Cement Top (MD)	WOC (hrs)
Conductor							
Surface	Type 1 / Class A	778	15.6	1.18	918.04	18.4	8
Coal							
Intermediate 1	Type 1 / Class A	stage (1) 1185	15.6	Stage (1) 1.18	1398.3	18.4	8
Intermediate 2							
Intermediate 3							
Production	Type 1 / Class A	3801	14.5	1.27	4827.27	18.4	8
Tubing							

Drillers TD (ft) 16742'

Loggers TD (ft) 16742'

Deepest formation penetrated Marcellus

Plug back to (ft) _____

Plug back procedure _____

Kick off depth (ft) 5983'

Check all wireline logs run

- caliper density deviated/directional induction
 neutron resistivity gamma ray temperature sonic

Well cored Yes No

Conventional Sidewall

Were cuttings collected Yes No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING

9 Centralizers on Surface Casing 36 Centralizers on Intermediate String (Bow string centralizers on first two joints then every third joint to 100' from surface)

281 Centralizers on Production String (rigid bow string every joint to KOP, rigid bow spring every third joint from KOP to top of cement)

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WAS WELL COMPLETED AS SHOT HOLE Yes No

DETAILS _____

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WAS WELL COMPLETED OPEN HOLE? Yes No

DETAILS _____

WERE TRACERS USED Yes No

TYPE OF TRACER(S) USED _____

Oxf 97

Formations	Top	Base
Shale and Sandstone	0	2123
Big Lime & Big Injun	2123	2323
Price	2323	2623
Shale and Sandstone	2623	2890
Fourth	2890	2907
Shale and Sandstone	2907	2982
Fifth	2982	2990
Shale and Sandstone	2990	3570
Speechley	3570	3601
Shale	3601	4107
Balltown A	4107	4132
Shale and Sandstone	4132	4321
Balltown B	4321	4378
Shale and Sandstone	4378	4366
Bradford	4366	4377
Shale and Sandstone	4377	4625
Riley	4625	4647
Shale and Sandstone	4647	5157
Benson	5157	5189
Shale and Sandstone	5189	5437
Alexander	5437	5484
Shale	5484	6474
Cashaqua	6474	6602
Middlesex	6602	6651
West River	6651	6727
Burkett	6727	6756
Tully Limestone	6756	6759
Hamilton	6759	6790
Marcellus	6790	6840
Onondaga	6840	

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