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

API 47 017 06484 County Doddi	ridge I	District West Un	ion				
Quad Oxford Pad Name Oxf	97	Field/Pool Name N/A					
Farm name Haessly Land & Timber, LLC Well Number Oxf 97 DHS							
Operator (as registered with the OOG) $\underline{\mbox{Noble Energy,}}$							
Address 1000 Noble Energy Drive City Ca		State PA	<sub>Zip</sub> _15317				
As Drilled location NAD 83/UTM Attach an as-drill  Top hole Northing as drilled plat to be upon completion  Bottom Hole Northing	of the well. Easti	ng					
Elevation (ft) 1335 GL Type of Well	■New □ Existing	Type of Report	■Interim □Final				
Permit Type   Deviated   Horizontal   Horizontal	ntal 6A 🗆 Vertical	Depth Type	□ Deep ■ Shallow				
Type of Operation □ Convert □ Deepen ■ Drill	□ Plug Back □ Redril	ling □ Rework	□ Stimulate				
Well Type □ Brine Disposal □ CBM ■ Gas □ Oil □ Se	condary Recovery   So	lution Mining 🗆 St	orage 🗆 Other				
Type of Completion			□ Other				
Date permit issued 07/24/2014 Date drilling compate completion activities began Not completed	nmenced 12/04/2014 Date completion active	vities ceased	na				
Please note: Operator is required to submit a plugging appli	cation within 5 days of ve	erbal permission to p	REGEIVED Office of Oil and Gas				
Freshwater depth(s) ft266',503',810'	Open mine(s) (Y/N) de	epths	NJAN 1 7 2017				
Salt water depth(s) ft none noted for offsets	Void(s) encountered (	Y/N) depths	N N				
Coal depth(s) ft NA  Is coal being mined in area (Y/N)	Cavern(s) encountered	(Y/N) depths	WV Department of invironmental Protection				
Is coal being mined in area (Y/N) NO		_	Reviewed hy:				

API 47- 017	06484	Farm 1	name_F	laessly L	and & 1	imber,	LLC Well	number_O	xf 97 D	HS
CASING STRINGS	Hole Size	Casing Size	Г	)epth	New or Used	Grade wt/ft		Basket Pepth(s)		nent circulate (Y/ N) de details below*
Conductor	26"	20"		8.6'	New	1	I-55	орац(в)	1	de deutis below
Surface	17.5"	13 3/8"	89	31.2'	New		J-55			Υ
Coal		1								<u> </u>
Intermediate 1	12.38"	9 5/8"	30	03.6'	New	HC	K-55		(i)	N
Intermediate 2			-	00.0	71011	110			_	
Intermediate 3						ļ —				<del> </del>
Production	8-3/4" & 8-1/2"	5 1/2"	17.	199.4'	New	P.	110		15	N
Tubing			'''			<del>                                     </del>			-	
Packer type and d	epth set					1				
Comment Details										
CEMENT DATA	Class/Type of Cement	Numb of Sac		Slurry wt (ppg)		Yield t ³/sks)	Volume (ft <sup>3</sup> )	Ceme Top (N		WOC (hrs)
Conductor	58.6'	50		16.0		.56	78	18.		8
Surface	Type 1 / Clas	s A 763		15.6	1	1.18	900.34	18.	.6	8
Coal										
Intermediate 1	Type 1 / Clas	s A stage (1)	1185	15.6	Stage	(1) 1.18	1398.3	18.	6	8
Intermediate 2								į.		
Intermediate 3							·			
Production	Type 1 / Clas	s A Lead 512 Ta	il 3280	14.5	lead 1.5	8 Tai! 1.27	Total 4974.5	6 18.	.6	8
Tubing										
Drillers TD (ft Deepest forma Plug back pro	tion penetrated	Marcellus				D (ft) <u>172</u> to (ft)	200'			
Kick off depth	(ft) 5952'				_					
Check all wire	line logs run	□ caliper □ neutron		ensity esistivity	□ deviat □ gamma	ed/directi a ray		luction nperature	□sonic	;
Weil cored [	Yes □ No	Conventi	onal	Sidewal	1	W	ere cuttings o	collected [	Yes 🗆	No
DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING  No centralizers used on conductor.  11 Centralizers on Surface Casing 36 Centralizers on Intermediate String (Bow string centralizers on first two joints then every third joint to 100' from surface).  304 Centralizers on Production String (rigid bow string every joint to KOP, rigid bow spring every third joint from KOP to top of cernent).										
		·					<del></del>			
WAS WELL O	WAS WELL COMPLETED AS SHOT HOLE   Yes   No DETAILS   JAN 17 case									
WAS WELL (	COMPLETED C	PEN HOLE?	□ Ye	s 🛮 No	DETA	AILS		<del>- 14/1 /</del>	- '', 1	2017
WERE TRACI	ERS USED 🗆	Yes No	TYE	PE OF TRA	CER(S) I	JSED		Environ	nenta	tment of
										-011

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Farm name Haessly Land & Timber, LLC Well number Oxf 97 DHS

## PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
	well not complete				
			_		
-					
			· · · · · · · · · · · · · · · · · · ·	-	
3					
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Please insert additional pages as applicable.

## STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
					<u> </u>			
				H			6	
-		-						
			<u> </u>					
			<u> </u>					
							Office of	OEIVED Oil and Gas
						-	10	1 7 2017
	711					E	WV De	partment of

Please insert additional pages as applicable.

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API 47- 017	06484	Farm	<sub>name</sub> Haessi	y Land &	Timber, LL	C_Well 1	number_Oxt	f 97 DHS
PRODUCING	FORMATION(	S)	<u>DEPTHS</u>					
		<del></del>		TVD		MD		
				_ 112 _				
Please insert ad	lditional pages a	s applicable.	51	-				
GAS TEST	□ Build up □	Drawdown	□ Open Flow	C	DIL TEST 🗆	Flow [	Pump	
SHUT-IN PRE	SSURE Surf	ace	_psi Botto	m Hole	psi	DURAT	TION OF TE	ESThrs
OPEN FLOW	Gas	Oil	NGL	7	Water	GAS M	(EASURED	BY
	mcf	pd	bpd					rifice □ Pilot
LITHOLOGY/ FORMATION	TOP DEPTH IN FT	BOTTOM DEPTH IN FT	TOP DEPTH IN FT	BOTTOM DEPTH IN FI	T DESCRIBE	ROCK TYF	PE AND RECO	ORD QUANTITYAND
	NAME TVD 0	TVD	MD 0	MD	TYPE OF FI	LUID (FRE	SHWATER, BI	RINE, OIL, GAS, H <sub>2</sub> S, ETC)
						-		
			-					
	_							
							<del></del> -	
			i					
<del></del> -							<del></del>	
				-				
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Please insert ad	ditional pages a	s applicable.						
Drilling Contra	ctor Whipstock 2	3 Top Hole & Pro	ecision 543 Horizo	intal Rig				
Address 13646	Route 403 Hwy	N / 5400D Big 1	yler Rd City	Clymer / Cl	harleston	State	PA/WV Zi	p_15728-7815 / 25313
Logging Comp	any Baker Hug	ihes						
Address 400 Te	echnology Drive		City	Canonsbur	g	State	PA Zi	p_15317
Camenting Con	npany Schluml	perger						Trada gran
Address 4600	J. Barry Ct., Suite	e 200	City	Canonsbur	g	State	PA OM	PECEIVED Per of Oil and Gas
Stimulating Co.	mpany					St. 4-		JAN 17 2017
Address Please insert ad	ditional pages a	s applicable	City			State		
Completed by					Telephone	724-82	WV Environ	Department of mental Protection
Signature	mel	juger	<u>/</u> Title R	egulatory An	aiyst, ili		Date 01/09/	2017 ToteCtion

Submittal of Hydraulic Fracturing Chemical Disclosure Information

Attach copy of FRACFOCUS Registry

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
Bailtown 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

6790

6840

6840

Marcellus

Onondaga