

PM

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

API 47-017-06412H6A County Doddridge District Southwest
Quad Oxford 7.5' Pad Name OXFD11HS Field/Pool Name Oxford
Farm Name MORRIS, I. L. Well Number OXFD11DHS
Operator (as registered with the OOG) CNX Gas Company LLC
Address P.O. Box 1248 City Jane Lew State WV Zip 26378

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top Hole Northing 4,335,755.00 m Easting 520,428.00 m
Landing Point of Curve Northing 4,336,439.44 m Easting 520,464.08 m
Bottom Hole Northing 4,338,050.06 m Easting 519,844.53 m

Elevation (ft) 1340' 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

Drilled 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)
Mineral Oil Based Mud, Bactericide, Polymers and Weighting Agents.

Date Permit Issued 02/12/2014 Date drilling commenced 07/27/2014 Date drilling ceased 10/10/2014
Date completion activities began 04/19/2015 Date completion activities ceased 05/03/2015
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/A

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

Freshwater depth(s) ft 50', 620' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 1,730' Void(s) encountered (Y/N) depths N
Coal depth(s) ft None Reported Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

APPROVED
NAME: Jacqueline Shantz
DATE: 2/11/2016

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CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement Circulate (Y/N) * Provide details to the right *
Conductor	24"	20"	100'	N	J-55 94# / 100'	N/A	Y
Surface	17 1/2"	13 3/8"	1223'	N	J-55 54.5# / 1223'	N/A	Y
Coal	-	-	-	-	-	-	-
Intermediate 1	12 1/4"	9 5/8"	2818'	N	J-55 36# / 2818'	N/A	Y
Intermediate 2	-	-	-	-	-	-	-
Intermediate 3	-	-	-	-	-	-	-
Production	8 3/4"	5 1/2"	14806'	N	P-110 20# / 14806'	N/A	N
Tubing	5 1/2"	2 3/8"	7213.5'	N	P-110 4.7# / 7213.5'	N/A	N
Packer Type and Depth Set		None					

Comment Details _____

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft 3/sks)	Volume (ft 3)	Cement Top (MD)	WOC (hrs)
Conductor	Class A	127	15.2	1.18	150	Surface	24
Surface	Class A	1030	15.6	1.18	1224	Surface	8
Coal	-	-	-	-	-	-	-
Intermediate 1	Class A	935	15.6	1.18	1101	Surface	8
Intermediate 2	-	-	-	-	-	-	-
Intermediate 3	-	-	-	-	-	-	-
Production	Class A (Lead) / Class A (Tail)	767 / 1994	14.2 / 14.8	1.24 / 1.25	951 / 2493	1585.6'	8
Tubing	-	-	-	-	-	-	-

Drillers TD (ft) 6939' Loggers TD (ft) 6933'

Deepest formation penetrated: Marcellus Plug back to (ft) N/A

Plug back procedure: N/A

Kick Off Depth (ft) 2909'

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 _____
Conductor - No centralizers used. Fresh Water - Bow spring centralizers on first joint then every fourth joint to 100 feet from surface.
Intermediate - Bow spring centralizers one on the first two joints and every fourth joint until inside surface casing. Production - Rigid bow spring centralizer on first joint then every 2 casing joints (free floating) through the lateral and the curve. (Note: cementing the 5 1/2" casing completely in open hole lateral and curve.)

WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS Plug and Perforation Shot Hole

WAS WELL COMPLETED OPEN HOLE Yes No DETAILS _____

WERE TRACERS USE Yes No TYPES OF TRACER(S) USED _____

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PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number Of Perforations	Formation(s)
					See Attached

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Avg Pump Rate (BPM)	Avg Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen / other (gals)
								See Attached

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Please insert additional pages as applicable.

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PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number Of Perforations	Formation(s)
1	4/19/2015	14747	14745	12	Marcellus
2	4/20/2015	14681	14540	40	Marcellus
3	4/20/2015	14508	14367	40	Marcellus
4	4/21/2015	14335	14194	40	Marcellus
5	4/21/2015	14162	14021	40	Marcellus
6	4/23/2015	13989	13852	40	Marcellus
7	4/23/2015	13816	13675	40	Marcellus
8	4/23/2015	13643	13502	40	Marcellus
9	4/24/2015	13470	13329	40	Marcellus
10	4/26/2015	13297	13156	40	Marcellus
11	4/26/2015	13124	12983	40	Marcellus
12	4/27/2015	12951	12810	40	Marcellus
13	4/27/2015	12778	12637	40	Marcellus
14	4/27/2015	12605	12464	40	Marcellus
15	4/28/2015	12432	12291	40	Marcellus
16	4/28/2015	12259	12118	40	Marcellus
17	4/28/2015	12086	11945	40	Marcellus
18	4/28/2015	11913	11773	40	Marcellus
19	4/29/2015	11741	11601	40	Marcellus
20	4/29/2015	11569	11429	40	Marcellus
21	4/29/2015	11397	11257	40	Marcellus
22	4/30/2015	11225	11085	40	Marcellus
23	4/30/2015	11053	10913	40	Marcellus
24	4/30/2015	10881	10741	40	Marcellus
25	4/30/2015	10709	10569	40	Marcellus
26	4/30/2015	10537	10397	40	Marcellus
27	5/1/2015	10365	10225	40	Marcellus
28	5/1/2015	10193	10053	40	Marcellus
29	5/1/2015	10021	9881	40	Marcellus
30	5/1/2015	9849	9709	40	Marcellus
31	5/1/2015	9677	9537	40	Marcellus
32	5/1/2015	9505	9365	40	Marcellus
33	5/2/2015	8955	8813	40	Marcellus
34	5/2/2015	8779	8637	40	Marcellus
35	5/2/2015	8603	8461	40	Marcellus
36	5/2/2015	8427	8285	40	Marcellus
37	5/2/2015	8251	8109	40	Marcellus
38	5/2/2015	8075	7933	40	Marcellus
39	5/2/2015	7899	7757	40	Marcellus

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PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number Of Perforations	Formation(s)
40	5/2/2015	7723	7581	40	Marcellus
41	5/3/2015	7547	7405	40	Marcellus
42	5/3/2015	7371	7229	40	Marcellus

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STIMULATION INFORMATION PER STAGE

Stage No.	Stimulations Date	Avg Pump Rate (BPM)	Avg Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen / other (gals)
1	4/19/2015	61.2	8187	8195	4416	100100	5103	3437
2	4/20/2015	80.2	8331	6597	5290	233850	6777	3577
3	4/20/2015	73.1	8068	7520	5687	234100	7712	3521
4	4/21/2015	74.4	8200	7052	5643	233550	6608	3486
5	4/21/2015	78.3	8201	7072	5625	234000	6004	3530
6	4/23/2015	68	8079	7226	5531	234000	5892	1905
7	4/23/2015	74	8250	6351	5699	234150	6047	1543
8	4/23/2015	76.1	8121	6366	5559	234250	6041	3493
9	4/24/2015	48.4	8840	6959	8449	213100	9480	3855
10	4/26/2015	75.4	8270	6644	5406	233050	6369	3593
11	4/26/2015	70	8013	6489	5516	233750	6121	3427
12	4/27/2015	75.9	8062	6780	5473	233550	6138	3408
13	4/27/2015	74.7	8294	6218	5785	233550	6598	3625
14	4/27/2015	78.4	8229	6583	5657	233750	6296	3430
15	4/28/2015	82.7	8498	6670	6472	234400	6219	3569
16	4/28/2015	83.2	8460	6748	6263	233100	6012	3562
17	4/28/2015	82.3	8251	6767	5590	233900	5854	3403
18	4/28/2015	88.9	8290	6779	5704	233650	6018	3405
19	4/29/2015	80.3	7956	6435	5727	233800	5938	3362
20	4/29/2015	85	8471	7234	5610	233750	6166	3470
21	4/29/2015	78.9	8135	6093	5777	233800	7732	3516
22	4/30/2015	79.8	8042	6202	5623	234700	5269	3312
23	4/30/2015	82.6	8232	6451	6555	233050	5249	3338
24	4/30/2015	75.5	7960	6716	6922	233850	5225	3324
25	4/30/2015	78.7	7984	6836	5603	233650	5107	3330
26	4/30/2015	78.9	7993	7076	5591	233850	5158	3326
27	5/1/2015	79.8	7933	6720	5863	233950	4972	3320
28	5/1/2015	78.5	7944	6498	6457	234550	5464	3349
29	5/1/2015	84.8	7886	6966	6300	233400	5143	3329
30	5/1/2015	86.2	7937	6498	6627	234400	5209	3338
31	5/1/2015	84	7940	6860	5518	234000	4981	3323
32	5/1/2015	76.9	7978	7161	5533	234100	4986	3354
33	5/2/2015	82.5	7795	7320	5335	233750	4948	3319
34	5/2/2015	82	7734	6799	5605	234450	4880	3314
35	5/2/2015	87.9	7905	6555	6491	233800	5046	3331
36	5/2/2015	85.2	7809	7033	6670	234150	5983	3393
37	5/2/2015	85.4	7796	6724	6390	233400	5897	3382
38	5/2/2015	84.1	7814	6724	5821	233250	5889	3397
39	5/2/2015	84.9	7635	6331	5515	235000	5738	3374

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40	5/2/2015	85	7835	7340	5920	235250	5625	3380
41	5/3/2015	86	7669	6615	5537	232800	5605	3388
42	5/3/2015	84.5	7832	7678	6874	259990	5996	3396

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PRODUCING FORMATION(S)	DEPTHS	TVD	MD
<u>MARCELLUS</u>	<u>6899'- 6933'</u>	<u>7210'- 7920'</u>	

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump
 SHUT-IN PRESSURE Surface 3125 psi Bottom Hole 2100 psi DURATION OF TEST 55 hrs
 OPEN FLOW Gas 3297.58 mcfpd Oil 0 bpd NGL 0 bpd Water 96 bpd GAS MEASURED BY Estimated Orifice Pilot

LITHOLOGY / FORMATION	TOP DEPTH IN FT TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY TYPE OF FLUID (FRESHWATER,BRINE,GAS,H2S, ETC)
					SEE ATTACHED

Please insert additional pages as applicable.

Drilling Contractor Patterson UTI
 Address 207 Carlton Drive City Eighty Four State PA Zip 15330
 Logging Company Horizon
 Address 7136 South Yale, Suite 414 City Tulsa State OK Zip 74136-6378
 Cementing Company CalFrac
 Address 2001 Summit View Rd City Smithfield State PA Zip 15478
 Stimulating Company CalFrac
 Address 2001 Summit View Rd City Smithfield State PA Zip 15478

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Please insert additional pages as applicable.

Completed by CNX Gas WV Operations Company, LLC - Drilling and Completions Telephone 304-884-2600
 Signature Steve Spitler Title Steve Spitler - Completions Manager-Gas WV Date 11/5/15

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LITHOLOGY / FORMATION	TOP	BOTTOM	TOP	BOTTOM	DESCRIBE ROCK TYPE AND RECORD QUANTITY TYPE OF FLUID (FRESHWATER,BRINE,GAS,H2S, ETC)
	DEPTH IN FT	DEPTH IN FT	DEPTH IN FT	DEPTH IN FT	
	TVD	TVD	MD	MD	
FILL	0	100	0	100	
SS/GRAVEL/SHALE	100	200	100	200	
REDROCK/SS/SHALE	200	370	200	370	
SS/REDROCK/SHALE	370	500	370	500	
SHALE/REDROCK	500	850	500	850	
REDROCK/ SHALE	850	975	850	975	
SS/ REDROCK/SHALE	975	1030	975	1030	
SHALE/SILTSTONE/SS	1030	1105	1030	1105	
REDROCK/ SILTSTONE/SHALE	1105	1286	1105	1286	
REDSILT/SHALE	1286	1360	1286	1360	
SILTSTONE/ SHALE/ SS	1360	1395	1360	1395	
SS	1395	1425	1395	1425	
SHALE	1425	1520	1425	1520	
SS/SHALE	1520	1585	1520	1585	
SS	1585	1620	1585	1620	
SHALE/SS	1620	1830	1620	1830	
SS	1830	1950	1830	1950	
SHALE/SS	1950	2160	1950	2160	
LS	2160	2190	2160	2190	
SS/SHALE	2190	3000	2190	3000	
SHALE	3000	3330	3000	3350	
SHALE/ SILTSTONE	3330	3729	3350	3750	
SHALE	3729	3890	3750	3820	
SILTSTONE	3890	3935	3820	3950	
SHALE/ SILTSTONE	3935	4935	3950	5000	
SAND/ SHALE	4935	5925	5000	6026	
BURKETT	6828	6852	7042	7090	
TULLY	6852	6872	7090	7134	
HAMILTON	6872	6899	7134	7210	
UPPER MARCELLUS	6899	6905	7210	7231	
MIDDLE MARCELLUS	6905	6931	7231	7470	
CHERRY VALLEY	6931	6933	7470	7920	
LOWER MARCELLUS	6933		7920		

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