



Antero Resources
1615 Wynkoop Street
Denver, CO 80202
Office 303.357.7310
Fax 303.357.7315

April 30, 2020

West Virginia Department of Environmental Protection
Office of Oil and Gas
601 57th Street
Charleston, WV 25304

To Whom It May Concern:

Please find enclosed the Well Operator's Report of Well Work, Form WR-35 (including As-Drilled Survey Plat, Directional Survey and FracFocus report), Discharge Monitoring Report Form WR-34 and corresponding logs for the following wells off of the **Oxford 97 Pad**:

- Oxford 97 AHS
- Oxford 97 BHS
- Oxford 97 CHS
- Oxford 97 DHS
- Oxford 97 EHS
- Oxford 97 FHS
- Oxford 97 GHS
- Oxford 97 HHS

If you have any questions, please feel free to contact me at (303)-357-7223.

Sincerely,

A handwritten signature in black ink, appearing to read "M. Griffith", with a long horizontal flourish extending to the right.

Megan Griffith
Permitting Agent
Antero Resources Corporation

Enclosures

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

API 47 - 017 - 06484 County Doddridge District West Union
Quad Oxford 7.5' Pad Name Oxford 97 Pad Field/Pool Name -----
Farm name Haessly Land & Timber LLC Well Number Oxford 97 DHS
Operator (as registered with the OOG) Antero Resources Corporation
Address 1615 Wynkoop Street City Denver State CO Zip 80202

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4342646m Easting 516941m
Landing Point of Curve Northing 4342597.44m Easting 516759.83m
Bottom Hole Northing 4345306m Easting 515537m

Elevation (ft) 1333' 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)
Air - Foam & 4% KCL
Mud - Polymer

Date permit issued 3/15/2019 Date drilling commenced 3/26/2019 Date drilling ceased 6/10/2019
Date completion activities began 10/5/2019 Date completion activities ceased 11/19/2019
Verbal plugging (Y/N) N/A 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 108', 505' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 1378', 1544' Void(s) encountered (Y/N) depths No
Coal depth(s) ft None Identified Cavern(s) encountered (Y/N) depths No
Is coal being mined in area (Y/N) No

Reviewed by:

API 47-017 - 06484 Farm name Haessly Land & Timber LLC Well number Oxford 97 DHS

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	24"	20"	58'	New	94#, H-40	N/A	Y
Surface	17-1/2"	13-3/8"	891'	New	48#, H-40	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	3004'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	17199'	New	23#, P-110	N/A	Y
Tubing		2-3/8"	7104'		4.7#, N-80		
Packer type and depth set		N/A					

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	214 sx	15.6	1.18	120	0'	8 Hrs.
Surface	Class A	631 sx	15.6	1.18	826	0'	8 Hrs.
Coal							
Intermediate 1	Class A	890 sx	15.6	1.18	1181	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	675sx (Lead) 2448sx (Tail)	14.5 (Lead), 15.2 (Tail)	1.40 (Lead), 1.26 (Tail)		~500' Into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 17225' MD, 6905' TVD (BHL), 6906' (Deepest Point Drilled) Loggers TD (ft) 17225' MD

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

Plug back procedure N/A

Kick off depth (ft) 6000'

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 - 0

Surface - 1 above guide shoe, 1 above insert float, 1 every 4th joint to surface

Intermediate - 1 above float joint, 1 above float collar, 1 every 4th joint to surface

Production - 1 above float joint, 1 below float collar, 1 every 3rd joint to top of cement

WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS _____

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

WERE TRACERS USED Yes No TYPE OF TRACER(S) USED N/A

API 47- 017 - 06484 Farm name Haessly Land & Timber LLC Well number Oxford 97 DHS

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
*PLEASE SEE ATTACHED EXHIBIT 1					

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)
*PLEASE SEE ATTACHED EXHIBIT 2								

Please insert additional pages as applicable.

API 47- 017 - 06484 Farm name Haessly Land & Timber LLC Well number Oxford 97 DHS

PRODUCING FORMATION(S)	DEPTHS		
		TVD	MD
Marcellus	6798' (TOP)		7162' (TOP)

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 2800 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 3712 mcfpd Oil 49 bpd NGL --- bpd Water 1 bpd GAS MEASURED BY Estimated Orifice Pilot

LITHOLOGY/ FORMATION	TOP	BOTTOM	TOP	BOTTOM	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	

***PLEASE SEE ATTACHED EXHIBIT 3**

Please insert additional pages as applicable.

Drilling Contractor Patterson UTI Drilling Company LLC
Address 207 Carlton Drive City Eighty Four State PA Zip 15330

Logging Company KLX Energy Services
Address 3040 Post Oak Boulevard City Houston State TX Zip 77056

Cementing Company C&J Energy Services
Address 1650 Hackers Creek City Jane Lew State WV Zip 26378

Stimulating Company Baker Hughes
Address 837 Philippi Pike City Clarksburg State WV Zip 26301

Please insert additional pages as applicable.

Completed by Megan Griffith Telephone 303-357-7223
Signature  Title Permitting Agent Date 4.30.20

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

API 47-017-06484 Farm Name Haessly Land & Timber LLC Well Number Oxford 97 DHS

EXHIBIT 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	10/24/2019	17058	16895.15	60	Marcellus
2	10/25/2019	16860.18	16697.33	60	Marcellus
3	10/25/2019	16662.36	16499.51	60	Marcellus
4	10/25/2019	16464.54	16301.69	60	Marcellus
5	10/26/2019	16266.72	16103.87	60	Marcellus
6	10/26/2019	16068.9	15906.05	60	Marcellus
7	10/26/2019	15871.08	15708.23	60	Marcellus
8	10/27/2019	15673.26	15510.41	60	Marcellus
9	10/27/2019	15475.44	15312.59	60	Marcellus
10	10/27/2019	15277.62	15114.77	60	Marcellus
11	10/27/2019	15079.8	14916.95	60	Marcellus
12	10/28/2019	14881.98	14719.13	60	Marcellus
13	10/28/2019	14684.16	14521.31	60	Marcellus
14	10/28/2019	14486.34	14323.49	60	Marcellus
15	10/28/2019	14288.52	14125.67	60	Marcellus
16	10/29/2019	14090.7	13927.85	60	Marcellus
17	10/29/2019	13892.88	13730.03	60	Marcellus
18	10/29/2019	13695.06	13532.21	60	Marcellus
19	10/29/2019	13497.24	13334.39	60	Marcellus
20	10/30/2019	13299.42	13136.57	60	Marcellus
21	10/30/2019	13101.6	12938.75	60	Marcellus
22	10/30/2019	12903.78	12740.93	60	Marcellus
23	10/30/2019	12705.96	12543.11	60	Marcellus
24	10/31/2019	12508.14	12345.29	60	Marcellus
25	10/31/2019	12310.32	12147.47	60	Marcellus
26	10/31/2019	12112.5	11949.65	60	Marcellus
27	11/1/2019	11914.68	11751.83	60	Marcellus
28	11/1/2019	11716.86	11554.01	60	Marcellus
29	11/1/2019	11519.04	11356.19	60	Marcellus
30	11/1/2019	11321.22	11158.37	60	Marcellus
31	11/2/2019	11123.4	10960.55	60	Marcellus
32	11/2/2019	10925.58	10762.73	60	Marcellus
33	11/2/2019	10727.76	10564.91	60	Marcellus
34	11/3/2019	10529.94	10367.09	60	Marcellus
35	11/3/2019	10332.12	10169.27	60	Marcellus
36	11/3/2019	10134.3	9971.45	60	Marcellus
37	11/3/2019	9936.48	9773.63	60	Marcellus
38	11/4/2019	9738.66	9575.81	60	Marcellus
39	11/4/2019	9540.84	9377.99	60	Marcellus
40	11/4/2019	9343.02	9180.17	60	Marcellus
41	11/4/2019	9145.2	8982.35	60	Marcellus
42	11/5/2019	8947.38	8784.53	60	Marcellus
43	11/5/2019	8749.56	8586.71	60	Marcellus
44	11/5/2019	8551.74	8388.89	60	Marcellus
45	11/5/2019	8353.92	8191.07	60	Marcellus
46	11/6/2019	8156.1	7993.25	60	Marcellus
47	11/6/2019	7958.28	7795.43	60	Marcellus
48	11/6/2019	7760.46	7597.61	60	Marcellus
49	11/6/2019	7562.64	7399.79	60	Marcellus
50	11/6/2019	7364.82	7201.97	60	Marcellus

API 47-017-06484 Farm Name Haessly Land & Timber LLC Well Number Oxford 97 DHS

EXHIBIT 2

Stage No.	Stimulations Date	Avg Pump Rate	Avg Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/ other (units)
1	10/24/2019	70.76027	8343.208	3763	4179	395480	7606.576	N/A
2	10/25/2019	69.73828	7977.516	6414	4190	395900	7071.816	N/A
3	10/25/2019	76.17293	8130.673	6186	3542	395400	7064.48	N/A
4	10/25/2019	77.46987	8245.023	5615	3233	396028	7186.98	N/A
5	10/26/2019	81.11085	8001.83	5586	3576	395700	7012.323	N/A
6	10/26/2019	77.69805	8390.26	5991	3302	395700	7015.633	N/A
7	10/26/2019	81.61187	8090.649	4527	3628	395250	7081.775	N/A
8	10/27/2019	72.83054	8166.383	5812	3471	395400	7273.455	N/A
9	10/27/2019	76.47482	7948.987	6425	3456	395550	6983.365	N/A
10	10/27/2019	74.569	7974.817	5403	3672	395700	6993.995	N/A
11	10/27/2019	76.85793	8286.747	6070	3705	395700	7027.945	N/A
12	10/28/2019	77.69146	8254.628	5925	3645	400900	6969.585	N/A
13	10/28/2019	83.25333	8138.431	6204	3717	395800	6959.845	N/A
14	10/28/2019	79.864	8283.239	5776	3764	395800	6968.295	N/A
15	10/28/2019	79.79331	8262.042	5613	3949	395800	7039.655	N/A
16	10/29/2019	76.10473	8061.113	5492	3639	396100	6919.395	N/A
17	10/29/2019	79.23146	7964.033	6179	4208	395800	6992.825	N/A
18	10/29/2019	76.23926	8290.255	5760	4372	395600	6876.185	N/A
19	10/29/2019	85.40338	8235.434	5550	3998	395850	6900.485	N/A
20	10/30/2019	81.06682	8317.51	5554	3571	395550	6921.015	N/A
21	10/30/2019	86.1527	8148.38	5858	3931	395600	6887.175	N/A
22	10/30/2019	83.01875	8280.721	5848	3759	395550	6840.755	N/A
23	10/30/2019	83.35393	7817.577	6194	3595	395350	6959.105	N/A
24	10/31/2019	81.76832	7969.588	5677	3501	395850	6768.115	N/A
25	10/31/2019	83.72522	7666.585	5984	3632	395200	6911.075	N/A
26	10/31/2019	79.66877	7702.432	5926	4028	395040	7051.105	N/A
27	11/1/2019	86.16823	7643.825	6024	3685	395650	7081.355	N/A
28	11/1/2019	88.77279	8038.303	6976	3890	395400	7142.205	N/A
29	11/1/2019	81.93798	7453.194	5718	3987	395250	7960.165	N/A
30	11/1/2019	80.89435	7678.734	5817	4061	395800	6747.495	N/A
31	11/2/2019	82.3303	7296.363	5628	3824	395200	6841.425	N/A
32	11/2/2019	84.62807	7797.924	5663	4714	396350	6789.19	N/A
33	11/2/2019	87.41566	7418.242	5602	3731	396200	6895.61	N/A
34	11/3/2019	85.33562	7627.655	5642	3519	395300	6792.53	N/A
35	11/3/2019	88.63045	7276.655	6061	3746	395100	6692.16	N/A
36	11/3/2019	86.7086	7821.344	6090	4180	395400	6714.37	N/A
37	11/3/2019	85.22616	7078.16	5744	3485	395300	6782.88	N/A
38	11/4/2019	83.15439	7179.016	5741	3775	395130	6668.62	N/A
39	11/4/2019	85.63921	7173.476	5788	4454	395900	6706.65	N/A
40	11/4/2019	80.99859	7601.178	5812	4823	396020	6768.78	N/A
41	11/4/2019	83.61687	6765.225	5805	3806	395190	6645.87	N/A
42	11/5/2019	79.51832	7177.538	5820	4839	396400	6761.21	N/A
43	11/5/2019	81.52383	6747.897	5658	4121	395200	6698.654	N/A
44	11/5/2019	85.09076	7247.021	5762	4038	396450	6764.17	N/A
45	11/5/2019	80.37308	6569.559	5753	3952	395200	6547.24	N/A
46	11/6/2019	79.40238	6853.932	5371	3287	395300	6651.96	N/A
47	11/6/2019	83.04744	6899.017	5853	3749	395500	6665.24	N/A
48	11/6/2019	85.44556	6992.905	5618	3473	395880	6625.38	N/A
49	11/6/2019	84.39806	6438.929	6229	3693	395300	6625.59	N/A
50	11/6/2019	78.57667	6580.86	5535	3157	395550	6700.86	N/A
AVG		81.1	7,790	5,787	3,864	17,808,038	312,284	TOTAL

EXHIBIT 3

LITHOLOGY/ FORMATION	TOP DEPTH (TVD)	BOTTOM DEPTH (TVD)	TOP DEPTH (MD)	BOTTOM DEPTH (MD)
	From Surface	From Surface	From Surface	From Surface
Silty Sandstone	60	160	60	160
Sandstone	160	270	160	270
Silty sandstone tr coal	270	320	270	320
Shaly siltstone tr coal	320	530	320	530
Shaly siltstone	530	640	530	640
Silty Sandstone	640	790	640	790
Silty sandstone	790	860	790	860
Silty Sandstone	860	1,070	860	1,070
Siltstone	1,070	1,260	1,070	1,260
Siltstone tr coal	1,260	1,425	1,260	1,425
Sandstone tr coal	1,425	1,750	1,425	1,750
Shaly siltstone tr coal	1,750	1,790	1,750	1,790
Silty sandstone tr coal	1,790	1,959	1,790	N/A
Big Lime	1,959	2,626	1,959	2,626
Fifty Foot Sandstone	2,626	2,714	2,626	2,714
Gordon	2,714	2,995	2,714	2,995
Fifth Sandstone	2,995	3,081	2,995	3,081
Bayard	3,081	3,863	3,081	3,864
Speechley	3,863	4,113	3,864	4,114
Balltown	4,113	4,550	4,114	4,551
Bradford	4,550	5,009	4,551	5,015
Benson	5,009	5,287	5,015	5,319
Alexander	5,287	6,613	5,319	6,808
Sycamore	6,428	6,595	6,612	6,790
Middlesex	6,595	6,725	6,808	6,988
Burkett	6,725	6,756	7,006	7,053
Tully	6,756	6,798	7,071	7,162
Marcellus	6,798	NA	7,162	NA

*Please note Antero determines formation tops based on mud logs that are only run on one well on a multi-well pad. The measured depth (MD) data on subsequent wells may be slightly different due to the well's unique departure.

State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Discharge Monitoring Report
Oil and Gas General Permit

Company Name: Antero Resources Corporation
API No: 47-017-06484 County: Doddridge
District: West Union Well No: OXFD97 DHS
Farm Name: Haessly Land & Timber, LLC
Discharge Date/s From: (MMDDYY) 12/27/19 To: (MMDDYY) 01/26/20
Discharge Times. From: 0:00 To: 24:00
Total Volume to be Disposed from this facility (gallons): 1,304,420
Disposal Option(s) Utilized (write volumes in gallons):

- (1) Land Application: _____ (Include a topographical map of the Area.)
(2) UIC: 101,119 Permit No. 3400923821, 3400923823, 3400923824, 3416729731, 3410523652, 3410523619, 4708509721, 3416729543, 3416729464, 3416729445
(3) Offsite Disposal: _____ Site Location: _____
(4) Reuse: 1,203,301 Alternate Permit Number: _____
(5) Centralized Facility: _____ Permit No. _____
(6) Other method: _____ (Include an explanation)

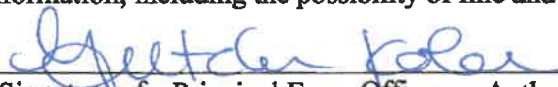
Follow Instructions below to determine your treatment category:

Optional Pretreatment test: n/a Cl- mg/l n/a DO mg/l

1. Do you have permission to use expedited treatment from the Director or his representative? (Y/N) n/a If yes, who? _____ and place a four (4) on line 7. If not go to line 2
2. Was Frac Fluid or flowback put into the pit? (Y/N) n/a If yes, go to line 5. If not, go to line 3.
3. Do you have a chloride value pretreatment (see above)? (Y/N) n/a If yes, go to line 4. If not, go to line 5.
4. Is the Chloride level less than 5000 mg/l? (Y/N) n/a If yes, then enter a one (1) on line 7.
5. Do you have a pretreatment value for DO? (See above) (Y/N) n/a If yes, go to line 6. If not, enter a three (3) in line 7.
6. Is the DO level greater than 2.5 mg/l? (Y/N) n/a If yes, enter a two (2) on line 7. If not, enter a three (3) on line 7.
7. n/a is the category of your pit. Use the Appropriate section.
8. Comments on Pit condition: n/a No Pit on site.

Name of Principal Exec. Officer: Gretchen Kohler
Title of Officer: Senior Environmental and Regulatory Manager
Date Completed: 3/16/20

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. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.



Signature of a Principal Exec. Officer or Authorized agent.

Category 1
Sampling Results
API No : _____

Parameter	Predischarge		Discharge		Units
	Limits	Reported	Limits	Reported	
pH	6-10	_____	6-10	_____	S.U
Settling Time	5	_____	N/A	N/A	Days
Fe	6	_____	6	_____	mg/l
D.O.	2.5	_____	2.5	_____	mg/l
Settleable Sol.	0.5	_____	0.5	_____	mg/l
Cl	5,000	_____	5,000	_____	mg/l
Oil	Trace	_____	Trace	_____	Obs.
TOC**		_____	Monitor	_____	mg/l
Oil and Grease		_____	Monitor	_____	mg/l
Total Al***		_____	Monitor	_____	mg/l
TSS		_____	Monitor	_____	mg/l
Total Mn	Monitor	_____	Monitor	_____	mg/l
Volume		_____	Monitor	_____	Gal
Flow		_____	Monitor	_____	Gal/min
Disposal Area		_____	Monitor	_____	Acres

*** Al is only reported if the pH is above 9.0

Category 2
Sampling Results
API No : _____

Parameter	Predischarge		Discharge		Units
	Limits	Reported	Limits	Reported	
pH	6-10	_____	6-10	_____	S.U
Settling Time	10	_____	N/A	N/A	Days
Fe	6	_____	6	_____	mg/l
D.O.	2.5	_____	2.5	_____	mg/l
Settleable Sol.	0.5	_____	0.5	_____	mg/l
Cl*	12,500	_____	12,500	_____	mg/l
Oil	Trace	_____	Trace	_____	Obs.
TOC**		_____	Monitor	_____	mg/l
Oil and Grease		_____	Monitor	_____	mg/l
Total Al***		_____	Monitor	_____	mg/l
TSS		_____	Monitor	_____	mg/l
Total Mn	Monitor	_____	Monitor	_____	mg/l
Volume		_____	Monitor	_____	Gal
Flow		_____	Monitor	_____	Gal/min
Disposal Area		_____	Monitor	_____	Acres

* Can be 25,000 with inspector's approval,

(Inspector's signature): _____

Date: _____

** Include a description of your aeration technique.

Aeration Code: _____

*** Al is only reported if the pH is above 9.0

Category 3
Sampling Results
API No : _____

Parameter	Predischarge		Discharge		Units
	Limits	Reported	Limits	Reported	
pH	6-10	_____	6-10	_____	S.U
Settling Time	20	_____	N/A	N/A	Days
Fe	6	_____	6	_____	mg/l
D.O.	2.5	_____	2.5	_____	mg/l
Settleable Sol.	0.5	_____	0.5	_____	mg/l
Cl*	12,500	_____	12,500	_____	mg/l
Oil	Trace	_____	Trace	_____	Obs.
TOC**		_____	Monitor	_____	mg/l
Oil and Grease		_____	Monitor	_____	mg/l
Total Al***		_____	Monitor	_____	mg/l
TSS		_____	Monitor	_____	mg/l
Total Mn	Monitor	_____	Monitor	_____	mg/l
Volume		_____	Monitor	_____	Gal
Flow		_____	Monitor	_____	Gal/min
Disposal Area		_____	Monitor	_____	Acres

* Can be 25,000 with inspector's approval,

(Inspector's signature): _____ Date: _____
 ** Include a description of your aeration technique. Aeration Code: _____
 *** Al is only reported if the pH is above 9.0.

Category 4
Sampling Results
API No: _____

Parameter	Predischarge		Discharge		Units
	Limits	Reported	Limits	Reported	
pH	6-10	_____	6-10	_____	S.U
Settling Time	1	_____	N/A	N/A	Days
Fe	Monitor	_____	Monitor	_____	mg/l
D.O.	Monitor	_____	Monitor	_____	mg/l
Settleable Sol.	Monitor	_____	Monitor	_____	mg/l
Cl*	12,500	_____	12,500	_____	mg/l
Oil	Trace	_____	Trace	_____	Obs.
TOC**		_____	Monitor	_____	mg/l
Oil and Grease		_____	Monitor	_____	mg/l
TSS		_____	Monitor	_____	mg/l
Total Mn	Monitor	_____	Monitor	_____	mg/l
Volume		_____	Monitor	_____	Gal
Flow		_____	Monitor	_____	Gal/min
Activated Carbon (0.175)		_____	N/A	N/A	lb/Bl
Date Site Reclaimed	N/A	N/A			10 days from dis.
Disposal Area		_____	Monitor	_____	Acres

* Can be 25,000 with inspector's approval,

(Inspector's signature): _____ Date: _____

LATITUDE 39°15'00"

3,460'

LATITUDE 39°17'30"

LONGITUDE 80°47'30"

6,242'

12,678' TO BOTTOM HOLE

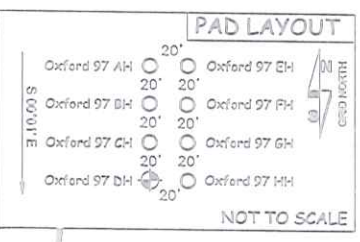
LONGITUDE 80°47'30"

Antero Resources Corporation
Well No. Oxford 97 DH

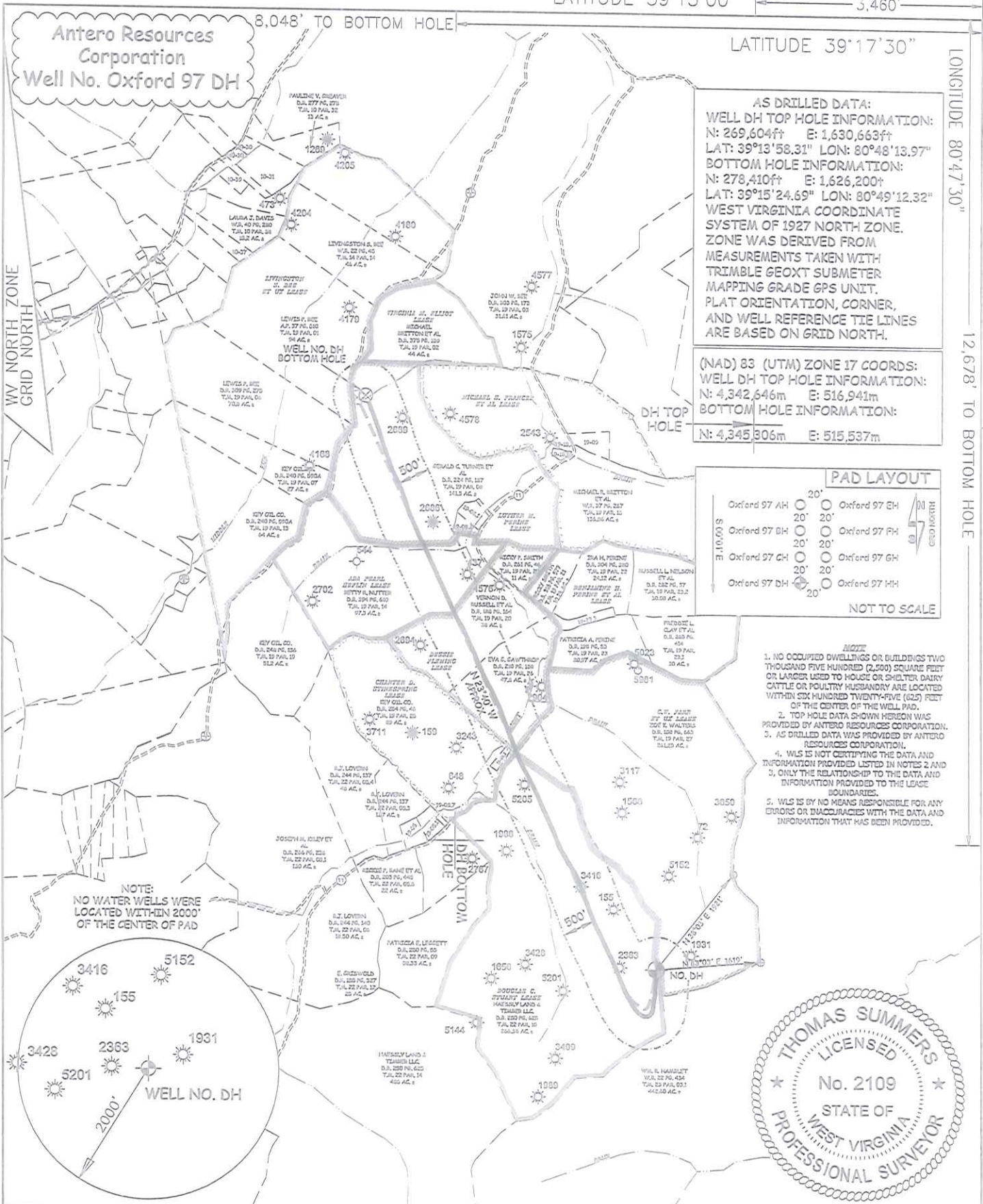
8,048' TO BOTTOM HOLE

AS DRILLED DATA:
WELL DH TOP HOLE INFORMATION:
 N: 269,604ft E: 1,630,663ft
 LAT: 39°13'58.31" LON: 80°48'13.97"
BOTTOM HOLE INFORMATION:
 N: 278,410ft E: 1,626,200ft
 LAT: 39°15'24.69" LON: 80°49'12.32"
 WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE.
 ZONE WAS DERIVED FROM MEASUREMENTS TAKEN WITH TRIMBLE GEOXT SUBMETER MAPPING GRADE GPS UNIT. PLAT ORIENTATION, CORNER, AND WELL REFERENCE TIE LINES ARE BASED ON GRID NORTH.

(NAD) 83 (UTM) ZONE 17 COORDS:
WELL DH TOP HOLE INFORMATION:
 N: 4,342,646m E: 516,941m
BOTTOM HOLE INFORMATION:
 N: 4,345,806m E: 515,537m



- NOTE**
1. NO OCCUPIED DWELLINGS OR BUILDINGS TWO THOUSAND FIVE HUNDRED (2,500) SQUARE FEET OR LARGER USED TO HOUSE OR SHELTER DAIRY CATTLE OR POULTRY HUSBANDRY ARE LOCATED WITHIN SIX HUNDRED TWENTY-FIVE (625) FEET OF THE CENTER OF THE WELL PAD.
 2. TOP HOLE DATA SHOWN HEREON WAS PROVIDED BY ANTERO RESOURCES CORPORATION.
 3. AS DRILLED DATA WAS PROVIDED BY ANTERO RESOURCES CORPORATION.
 4. WLS IS NOT CERTIFYING THE DATA AND INFORMATION PROVIDED LISTED IN NOTES 2 AND 3, ONLY THE RELATIONSHIP TO THE DATA AND INFORMATION PROVIDED TO THE LEASE BOUNDARIES.
 5. WLS IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS OR INACCURACIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.



JOB # 19-002WA
 DRAWING # OXFORD97DH
 SCALE 1" = 2000'
 MINIMUM DEGREE OF ACCURACY SUBMETER
 PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE RULES ISSUED AND PERSCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.



STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
 WILLOW LAND SURVEYING PLLC
 220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

LEGEND
 --- Surface Owner Boundary Lines +/-
 - - - Interior Surface Tracts +/-
 ⊙ Proposed Well Path
 ⊙ As Drilled Well Path

THOMAS SUMMERS P.S. 2109
 DATE 04/07/20
 OPERATOR'S WELL# OXFORD 97 DH

STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS
 WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X
 LOCATION: ELEVATION 1,333' AS BUILT WATERSHED HEADWATERS MIDDLE ISLAND CREEK
 QUADRANGLE OXFORD 7.5' (THL) - WEST UNION 7.5' (BHL) DISTRICT WEST UNION COUNTY DODDRIDGE
 SURFACE OWNER HAESSLY LAND & TIMBER LLC
 OIL & GAS ROYALTY OWNER DOUGLAS C. STUART; G. W. FARR ET UX;
 DESSIE FLEMMING; ADA PEARL HEFLIN; LUTHER M. PERINE

API WELL # 47 - 017 - 06484
 STATE COUNTY PERMIT
 ACREAGE 266.38 ACRES +/-
 LEASE ACREAGE 266 AC±; 262 AC±; 96.8 AC±; 97.3 AC±; 146.5 AC±

PROPOSED WORK: DRILL ___ CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE ___
 PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) AS DRILLED
 TARGET FORMATION MARCELLUS PLUG & ABANDON ___ CLEAN OUT & REPLUG ___
 WELL OPERATOR ANTERO RESOURCES CORP. ESTIMATED DEPTH 6,905' TVD 17,225' MD
 ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD
 DENVER, CO 80202 CHARLESTON, WV 25313

COUNTY NAME PERMIT