

Reviewed Page 1 of 4
Julia J... 8/25/18

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

API 47-017-06543 County Doddridge District West Union
Quad West Union 7.5' Pad Name Yvonne Pad Field/Pool Name -----
Farm name Yvonne Foster, et al Well Number Yoho Unit 1H
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 4355511m Easting 519872m
Landing Point of Curve Northing 4355543.77m Easting 520402.95m
Bottom Hole Northing 4353576m Easting 521229m

Elevation (ft) 1229' 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

RECEIVED
Office of Oil and Gas
JUL 26 2018
WV Department of
Environmental Protection

Date permit issued 9/3/2014 Date drilling commenced 6/29/2016 Date drilling ceased 11/9/2016
Date completion activities began 1/14/2018 Date completion activities ceased 3/2/2018
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 225' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 1400' 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 - 06543 Farm name Yvonne Foster, et al Well number Yoho Unit 1H

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"	65'	New	94#, H-40	N/A	Y
Surface	17-1/2"	13-3/8"	590'	New	48#, H-40	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2542'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	14840'	New	23#, P-110	N/A	Y
Tubing		2-3/8"	7290'		4.7#, P-110		
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	102 sx	15.6	1.18	120	0'	8 Hrs.
Surface	Class A	700 sx	15.6	1.19	833	0'	8 Hrs.
Coal							
Intermediate 1	Class A	1000 sx	15.6	1.18	1180	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	800 sx (Lead) 1200 sx (Tail)	13.5 (Lead), 15.2 (Tail)	1.44 (Lead), 1.87 (Tail)	3396	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 14840' MD, 7046' TVD (BHL), 7046' (Deepest Point Drilled) Loggers TD (ft) 14840' MD RECEIVED
 Deepest formation penetrated Marcellus Plug back to (ft) N/A Office of Oil and Gas
 Plug back procedure N/A **JUL 26 2018**

Kick off depth (ft) 6644' WV Department of Environmental Protection

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 47-017-06543 Farm Name Yvonne Foster Well Number Yoho Unit 1H

EXHIBIT 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	1/14/2018	14548	14716	48	Marcellus
2	1/15/2018	14349	14517	48	Marcellus
3	1/16/2018	14150	14318	48	Marcellus
4	1/16/2018	13950	14118	48	Marcellus
5	1/17/2018	13751	13919	48	Marcellus
6	1/18/2018	13552	13720	48	Marcellus
7	1/19/2018	13353	13521	48	Marcellus
8	1/19/2018	13153	13321	48	Marcellus
9	1/19/2018	12954	13122	48	Marcellus
10	1/20/2018	12755	12923	48	Marcellus
11	1/20/2018	12556	12724	48	Marcellus
12	1/21/2018	12357	12525	48	Marcellus
13	1/21/2018	12157	12325	48	Marcellus
14	1/21/2018	11958	12126	48	Marcellus
15	1/22/2018	11759	11927	48	Marcellus
16	1/22/2018	11560	11728	48	Marcellus
17	1/22/2018	11360	11528	48	Marcellus
18	1/23/2018	11161	11329	48	Marcellus
19	1/23/2018	10962	11130	48	Marcellus
20	1/23/2018	10763	10931	48	Marcellus
21	1/24/2018	10564	10732	48	Marcellus
22	1/24/2018	10364	10532	48	Marcellus
23	1/24/2018	10165	10333	48	Marcellus
24	1/25/2018	9966	10134	48	Marcellus
25	1/25/2018	9767	9935	48	Marcellus
26	1/25/2018	9567	9735	48	Marcellus
27	1/26/2018	9368	9536	48	Marcellus
28	1/26/2018	9169	9337	48	Marcellus
29	1/26/2018	8970	9138	48	Marcellus
30	1/27/2018	8771	8939	48	Marcellus
31	1/27/2018	8571	8739	48	Marcellus
32	1/27/2018	8372	8540	48	Marcellus
33	1/28/2018	8173	8341	48	Marcellus
34	1/28/2018	7974	8142	48	Marcellus
35	1/29/2018	7774	7942	48	Marcellus
36	1/29/2018	7575	7743	48	Marcellus
37	1/29/2018	7376	7544	48	Marcellus

RECEIVED
 Office of Oil and Gas
 Jan 26 2018
 WV Department of
 Environmental Protection

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	1/14/2018	60.2153	8059.783	0	5639	369710	11874.21	N/A
2	1/15/2018	66.2	8000	5660	4828	415550	10797.48	N/A
3	1/16/2018	66.2714	7933.917	5991	5710	416370	8826	N/A
4	1/16/2018	73.1808	7913.472	5582	4905	415050	8696.786	N/A
5	1/17/2018	70.3096	7827.587	5605	4449	361180	10477	N/A
6	1/18/2018	74.5881	8024.212	5486	4073	416810	8913.381	N/A
7	1/19/2018	74.8042	7795.273	5501	4151	416000	8552	N/A
8	1/19/2018	73.2199	7622.789	5428	5297	414950	8602.786	N/A
9	1/19/2018	74.1788	7888.945	5889	4684	416460	8444	N/A
10	1/20/2018	73.8425	7672.781	5519	4041	415250	8485.714	N/A
11	1/20/2018	69.0198	7592.85	5490	4219	415850	8419.048	N/A
12	1/21/2018	74.0296	8051.021	5674	5059	415670	8507	N/A
13	1/21/2018	73.0317	7571.273	5602	5896	414800	8492.595	N/A
14	1/21/2018	70.2363	7931.142	5599	4170	416670	11157.9	N/A
15	1/22/2018	69.2	7631	5796	4175	413860	9822	N/A
16	1/22/2018	71	7419	5966	5203	415200	8270.476	N/A
17	1/22/2018	74.2382	7713.768	5666	4226	415380	8184	N/A
18	1/23/2018	74.9181	7349.759	5608	5415	414800	8247	N/A
19	1/23/2018	73.6	7240	5485	5262	415100	8093	N/A
20	1/23/2018	74.4789	7599.252	5678	4689	415820	7876	N/A
21	1/24/2018	71.6188	7400.786	5464	4994	414090	7306	N/A
22	1/24/2018	71.6282	7251.585	5597	5201	414800	7423.714	N/A
23	1/24/2018	72.1645	7600.678	5706	4378	415640	7164	N/A
24	1/25/2018	71.543	7479.884	5900	4365	415200	7513	N/A
25	1/25/2018	72.118	7436.39	5810	5303	414800	7293.333	N/A
26	1/25/2018	71.7149	7066.556	5710	5579	413170	7259	N/A
27	1/26/2018	67.0127	7519.208	5600	3973	414180	8137	N/A
28	1/26/2018	69.9071	7193.077	6000	3855	413800	7307.548	N/A
29	1/26/2018	69.4316	7462.383	6033	4408	414890	7078	N/A
30	1/27/2018	68.4526	7775.722	6330	4999	405400	9518	N/A
31	1/27/2018	68.5913	7464.863	5952	5848	412900	7480.881	N/A
32	1/27/2018	70.8134	6885.616	6063	5929	414000	7301	N/A
33	1/28/2018	73.696	6935.337	6080	4038	412600	7065.952	N/A
34	1/28/2018	74.0026	7162.397	5952	3797	413880	7230	N/A
35	1/29/2018	70.6634	7159.944	6156	5152	413340	7024	N/A
36	1/29/2018	74.5107	7155.905	6102	5074	415800	7245.571	N/A
37	1/29/2018	71.4	6729.6	6684	4047	419675	6888.262	N/A
AVG=		71.3	7,528	5,631	4,785	15,248,645	306,974	TOTAL

RECEIVED
Oil and Gas

JUL 26 2018

Environmental Protection
Department

EXHIBIT 3

LITHOLOGY/ FORMATION	TOP DEPTH (TVD)	BOTTOM DEPTH (TVD)	TOP DEPTH (MD)	BOTTOM DEPTH (MD)
	From Surface	From Surface	From Surface	From Surface
Fresh Water	225'	N/A	225'	N/A
Siltstone/Sandstone	0	147	0	87
Silty shale	est. 147	205	est. 87	227
Sandstone/Siltstone/Shale	est. 205	327	est. 227	347
Silty shale	est. 327	447	est. 347	565
Siltstone	est. 447	547	est. 565	607
Silty shale	est. 547	607	est. 607	1,127
Shale	est. 607	687	est. 1127	1,387
Silty sandstone	est. 687	727	est. 1387	1,507
Silty shale	est. 727	767	est. 1507	1,727
Sandstone tr coal	est. 767	787	est. 1727	1,767
Sandy shale	est. 787	907	est. 1767	1,807
Silty shale	est. 907	1,147	est. 1807	1,847
Silty sandstone	est. 1147	2,185	est. 1847	2,228
Big Lime	2,185	2,833	2,228	2,905
Fifty Foot Sandstone	2,833	2,915	2,905	2,992
Gordon	2,915	3,197	2,992	3,290
Fifth Sandstone	3,197	3,221	3,290	3,315
Bayard	3,221	4,031	3,315	4,172
Speechley	4,031	4,308	4,172	4,461
Balltown	4,308	4,777	4,461	4,953
Bradford	4,777	5,230	4,953	5,429
Benson	5,230	5,478	5,429	5,693
Alexander	5,478	6,510	5,693	6,780
Sycamore	6,510	6,681	6,780	6,973
Middlesex	6,681	6,816	6,973	7,161
Burkett	6,816	6,847	7,161	7,216
Tully	6,847	6,898	7,216	7,331
Marcellus	6,898	NA	7,331	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.

RECEIVED
Office of Oil and Gas
JUL 26 2018
WV Department of
Environmental Protection

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	1/14/2018
Job End Date:	1/29/2018
State:	West Virginia
County:	Doddridge
API Number:	47-017-05643-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Yoho 1H
Latitude:	39.34873056
Longitude:	-80.76953889
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	7,047
Total Base Water Volume (gal):	13,246,881
Total Base Non Water Volume:	0



Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	Antero Resources	Carrier/Base Fluid					
			Water	7732-18-5	100.00000	87.61187	
Sand	U.S. Well Services, LLC	Proppant					
			Crystalline Silica, quartz	14808-60-7	100.00000	12.09246	
HCL Acid (12.6%-17.5%)	U.S. Well Services, LLC	Bulk Acid					
			Water	7732-18-5	87.40000	0.12993	
			Hydrogen Chloride	7647-01-0	17.50000	0.03021	
LGC-15	U.S. Well Services, LLC	Gelling Agents					
			Guar Gum	9000-30-0	50.00000	0.03923	
			Petroleum Distillates	64742-47-8	60.00000	0.03715	
			Suspending agent (solid)	14808-60-7	3.00000	0.00600	
WFRA-405	U.S. Well Services, LLC	Friction Reducer					
			Surfactant	68439-51-0	3.00000	0.00235	
			2-Propenoic acid, polymer with 2-propenamide	9003-06-9	30.00000	0.01863	
			Hydrated light distillate (petroleum)	64742-47-8	30.00000	0.01500	

SI-1200	U.S. Well Services, LLC	Scale Inhibitor					
			Ethylene Glycol	107-21-1	40.00000	0.00725	
			Proprietary Scale Inhibitor	Proprietary	10.00000	0.00194	
Bioclear 2000	U.S. Well Services, LLC	Anti-Bacterial Agent					
			2,2-dibromo-3-nitrilopropionamide	10222-01-2	20.00000	0.00434	
			Deionized Water	7732-18-5	28.00000	0.00248	
AP One	U.S. Well Services, LLC	Gel Breakers					
			Ammonium Persulfate	7727-54-0	100.00000	0.00106	
AI-303	U.S. Well Services, LLC	Acid Corrosion Inhibitors					
			Ethylene glycol	107-21-1	40.00000	0.00005	
			Cinnamaldehyde	104-55-2	20.00000	0.00002	
			Formic acid	64-18-6	20.00000	0.00002	
			Butyl cellosolve	111-76-2	20.00000	0.00002	
			Polyether	60828-78-6	10.00000	0.00001	
			Acetophenone,thiourea,formaldehyde polymer	68527-49-1	5.00000	0.00000	

Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.

* Total Water Volume sources may include fresh water, produced water, and/or recycled water

** Information is based on the maximum potential for concentration and thus the total may be over 100%

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

RECEIVED
Office of Oil and Gas
JUL 26 2018
WV Department of
Environmental Protection

LATITUDE 39°22'30"

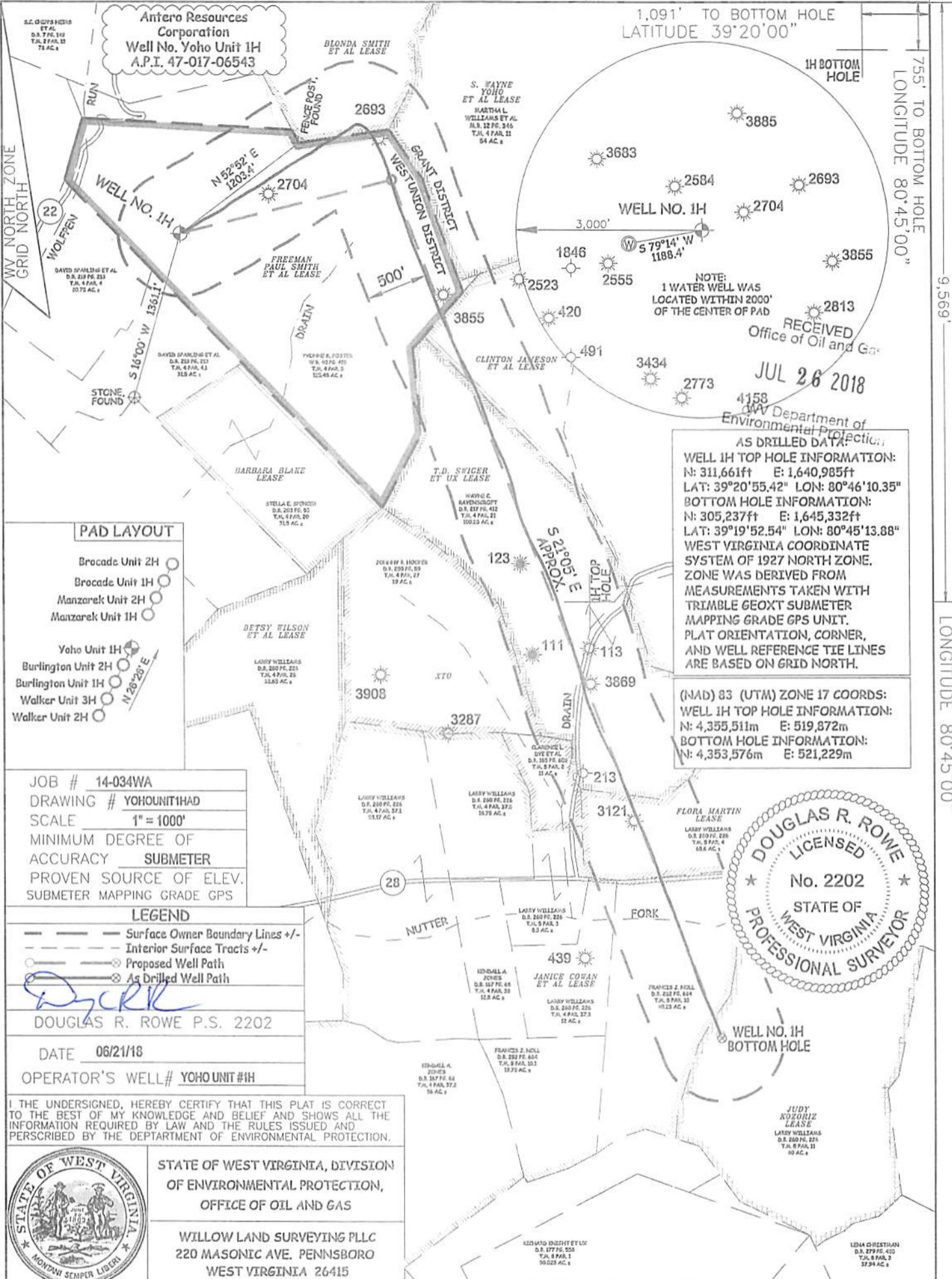
5,526'

1,091' TO BOTTOM HOLE
LATITUDE 39°20'00"

755' TO BOTTOM HOLE
LONGITUDE 80°45'00"

9,569'

LONGITUDE 80°45'00"



AS DRILLED DATA:
WELL 1H TOP HOLE INFORMATION:
 N: 311,661ft E: 1,640,985ft
 LAT: 39°20'55.42" LON: 80°46'10.35"
BOTTOM HOLE INFORMATION:
 N: 305,237ft E: 1,645,332ft
 LAT: 39°19'52.54" LON: 80°45'13.88"
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 1H TOP HOLE INFORMATION:
 N: 4,355,511m E: 519,872m
BOTTOM HOLE INFORMATION:
 N: 4,353,576m E: 521,229m



PAD LAYOUT

- Brocade Unit 2H
- Brocade Unit 1H
- Manzarek Unit 2H
- Manzarek Unit 1H
- Yoho Unit 1H
- Burlington Unit 2H
- Burlington Unit 1H
- Walker Unit 3H
- Walker Unit 2H

JOB # 14-034WA
 DRAWING # YOHOUNIT1HAD
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY SUBMETER
 PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

LEGEND

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

DOUGLAS R. ROWE P.S. 2202
 DATE 06/21/18
 OPERATOR'S WELL# YOHO UNIT #1H

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

STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS
 WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS") PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: ELEVATION 1,229' AS DRILLED WATERSHED HEADWATERS MIDDLE ISLAND CREEK
 QUADRANGLE WEST UNION 7.5' DISTRICT WEST UNION COUNTY DODDRIDGE
 SURFACE OWNER YVONNE R. FOSTER ACREAGE 125.48 ACRES +/-
 OIL & GAS ROYALTY OWNER FREEMAN PAUL SMITH ET AL; BLONDA SMITH ET AL; CLINTON JAMESON ET AL; T.D. SWIGER ET UX; FLORA MARTIN; JANICE COWAN ET AL; JUDY KOZORIZ

- NOTE**
- 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.
 - TOP HOLE DATA SHOWN HEREON WAS PROVIDED BY ALLEGHENY SURVEYS, INC.
 - AS DRILLED DATA WAS PROVIDED BY ANTERO RESOURCES CORPORATION.
 - 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.
 - WLS IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS OR INACCURACIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.

LEASE ACREAGE 125 AC±; 114 AC±; 99 AC±; 100 AC±; 72.25 AC±; 428.5 AC±; 80 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 PLUG & ABANDON CLEAN OUT & REPLUG
 TARGET FORMATION MARCELLUS ESTIMATED DEPTH 7,046' TVD 14,840' MD
 WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT CT CORPORATION SYSTEM-DIANNA STAMPER
 ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD
 DENVER, CO 80202 CHARLESTON, WV 25313

COUNTY NAME PERMIT

LATITUDE 39°22'30"

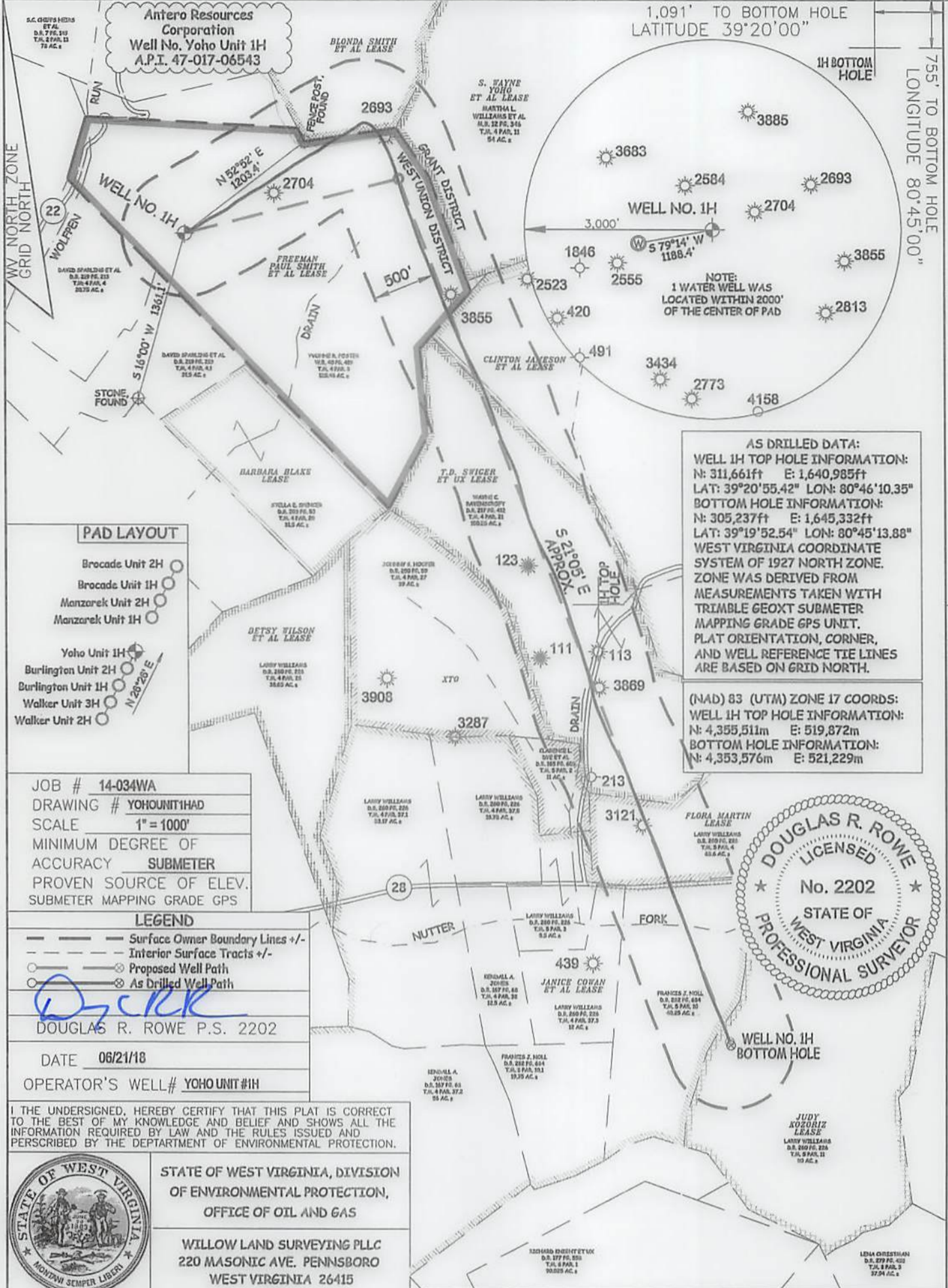
5,526'

1,091' TO BOTTOM HOLE
LATITUDE 39°20'00"

755' TO BOTTOM HOLE
LONGITUDE 80°45'00"

9,569'

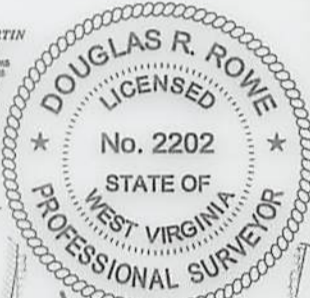
LONGITUDE 80°45'00"



Antero Resources Corporation
Well No. Yoho Unit 1H
A.P.I. 47-017-06543

AS DRILLED DATA:
WELL 1H TOP HOLE INFORMATION:
N: 311,661ft E: 1,640,985ft
LAT: 39°20'55.42" LON: 80°46'10.35"
BOTTOM HOLE INFORMATION:
N: 305,237ft E: 1,645,332ft
LAT: 39°19'52.54" LON: 80°45'13.88"
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 1H TOP HOLE INFORMATION:
N: 4,355,511m E: 519,872m
BOTTOM HOLE INFORMATION:
N: 4,353,576m E: 521,229m



PAD LAYOUT

- Brocade Unit 2H
- Brocade Unit 1H
- Manzarek Unit 2H
- Manzarek Unit 1H
- Yoho Unit 1H
- Burlington Unit 2H
- Burlington Unit 1H
- Walker Unit 3H
- Walker Unit 2H

JOB # 14-034WA
DRAWING # YOHOUNITHAD
SCALE 1" = 1000'
MINIMUM DEGREE OF ACCURACY SUBMETER
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

LEGEND

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

DOUGLAS R. ROWE P.S. 2202

DATE 06/21/18

OPERATOR'S WELL # YOHO UNIT #1H

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

STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY
DIVISION OF OIL AND GAS
WELL TYPE: OIL _____ GAS LIQUID INJECTION _____ WASTE DISPOSAL _____
(IF "GAS") PRODUCTION STORAGE _____ DEEP _____ SHALLOW
LOCATION: ELEVATION 1,229' AS DRILLED WATERSHED HEADWATERS MIDDLE ISLAND CREEK
QUADRANGLE WEST UNION 7.5 DISTRICT WEST UNION COUNTY DODDRIDGE
SURFACE OWNER YVONNE R. FOSTER ACREAGE 125.48 ACRES +/-
OIL & GAS ROYALTY OWNER FREEMAN PAUL SMITH ET AL; BLONDA SMITH ET AL; CLINTON JAMESON ET AL; T.D. SWIGER ET UX; FLORA MARTIN; JANICE COWAN ET AL; JUDY KOZORIZ

- 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 ALLEGHENY SURVEYS, INC.
 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.

LEASE ACREAGE 125 AC±; 114 AC±; 99 AC±; 100 AC±; 72.25 AC±; 428.5 AC±; 80 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 _____ PLUG & ABANDON _____ CLEAN OUT & REPLUG _____
TARGET FORMATION MARCELLUS ESTIMATED DEPTH 7,046' TVD 14,840' MD
WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT CT CORPORATION SYSTEM-DIANNA STAMPER
ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD
FORM WW-6 DENVER, CO 80202 CHARLESTON, WV 25313

COUNTY NAME

PERMIT