

Department of Environmental Protection
2018
Oil and Gas

WR-35
Rev. 8/23/13

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

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WV Department of Environmental Protection

API 47-095-02362 County Tyler District Centerville
Quad Shirley 7.5' Pad Name Edna Monroe Pad Field/Pool Name ---
Farm name Edna Monroe Well Number Bead Unit 2H
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 4363687m Easting 510917m
Landing Point of Curve Northing 4363049.029m Easting 511179.122m
Bottom Hole Northing 4360241m Easting 512173m

Elevation (ft) 1044' 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 07/22/2016 Date drilling commenced 09/13/2016 Date drilling ceased 02/21/2017
Date completion activities began 05/05/2017 Date completion activities ceased 09/19/2017
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 337' Open mine(s) (Y/N) depths No
Salt water depth(s) ft None Identified 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

Reviewed by: JAB

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API 47-095 - 02362 Farm name Edna Monroe Well number Bead Unit 2H

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade w/ft	Basket Depth(s)	Did cement circulate (Y/ N) * Provide details below*
Conductor	24"	20"	105'	New	94#, H-40	N/A	Y
Surface	17- 1/2"	13- 3/8"	532'	New	48#, H-40	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2530'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"	5-1/2"	18670'	New	23#, P-110	N/A	Y
Tubing		2-3/8"	6691'		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	204 sx	15.6	1.18	241	0	8 Hrs.
Surface	Class A	632 sx	15.6	1.19	752	0	8 Hrs.
Coal							
Intermediate 1	Class A	989 sx	15.6	1.18	1167	0	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	801 sx (Lead), 1710 sx (Tail)	13.4 (Lead), 15.2 (Tail)	1.44 (Lead), 1.87 (Tail)	4351	-500' into Intermediate casing	8 Hrs.
Tubing							

Drillers TD (ft) 18870' MD, 6563' TVD (BHL), 6568' TVD (Deepest point drilled)

Loggers TD (ft) 18655' MD

Deepest formation penetrated Marcellus

Plug back to (ft) N/A

Plug back procedure N/A

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Kick off depth (ft) 5950'

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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

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API 47- 095 - 02362 Farm name Edna Monroe Well number Bead Unit 2H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
Marcellus	6479' (Top) TVD	6729' (Top) MD

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 4100 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 9729 mcfpd Oil 175 bpd NGL -- bpd Water 19 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	
	0		0		
* PLEASE SEE ATTACHED EXHIBIT 3					

Please insert additional pages as applicable.

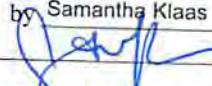
Drilling Contractor Patterson – UTI Drilling Company LLC
Address 207 Carlton Drive City Eighty Four State PA Zip 15330

Logging Company Pro Oilfield Services LLC
Address 3141 Pulaski Rd City New Castle State PA Zip 16105

Cementing Company Allied Oil & Gas Services, LLC
Address 1036 East Main Street City Bridgeport State WV Zip 26330

Stimulating Company Halliburton
Address 121 Champion Way Suite 200 City Cannonsburg State PA Zip 15317

Please insert additional pages as applicable.

Completed by Samantha Klaas Telephone 303-357-6759
Signature  Title Permitting Agent Date 01/19/2018

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

API 47-095-02362 Farm Name Edna Monroe Well Number Bead Unit 2H

EXHIBIT 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	5/5/2017	18401	18570	60	Marcellus
2	5/30/2017	18200	18369	60	Marcellus
3	5/31/2017	18000	18169	60	Marcellus
4	5/31/2017	17799	17968	60	Marcellus
5	6/1/2017	17599	17768	60	Marcellus
6	6/1/2017	17398	17568	60	Marcellus
7	6/2/2017	17198	17367	60	Marcellus
8	6/5/2017	16998	17167	60	Marcellus
9	6/6/2017	16797	16966	60	Marcellus
10	6/6/2017	16597	16766	60	Marcellus
11	6/6/2017	16396	16565	60	Marcellus
12	6/7/2017	16196	16365	60	Marcellus
13	6/8/2017	15995	16164	60	Marcellus
14	6/8/2017	15795	15964	60	Marcellus
15	6/8/2017	15594	15763	60	Marcellus
16	6/9/2017	15394	15563	60	Marcellus
17	6/10/2017	15193	15362	60	Marcellus
18	6/10/2017	14993	15162	60	Marcellus
19	6/11/2017	14792	14962	60	Marcellus
20	6/11/2017	14592	14761	60	Marcellus
21	6/11/2017	14392	14561	60	Marcellus
22	6/12/2017	14191	14360	60	Marcellus
23	6/13/2017	13991	14160	60	Marcellus
24	6/13/2017	13790	13959	60	Marcellus
25	6/13/2017	13590	13759	60	Marcellus
26	6/14/2017	13389	13558	60	Marcellus
27	6/14/2017	13189	13358	60	Marcellus
28	6/14/2017	12988	13157	60	Marcellus
29	6/15/2017	12788	12957	60	Marcellus
30	6/15/2017	12587	12756	60	Marcellus
31	6/15/2017	12387	12556	60	Marcellus
32	6/16/2017	12186	12356	60	Marcellus
33	6/16/2017	11986	12155	60	Marcellus
34	6/17/2017	11786	11955	60	Marcellus
35	6/17/2017	11585	11754	60	Marcellus
36	6/18/2017	11385	11554	60	Marcellus
37	6/18/2017	11184	11353	60	Marcellus
38	6/18/2017	10984	11153	60	Marcellus
39	6/19/2017	10783	10952	60	Marcellus
40	6/19/2017	10583	10752	60	Marcellus
41	6/20/2017	10382	10551	60	Marcellus
42	6/20/2017	10182	10351	60	Marcellus
43	6/20/2017	9981	10150	60	Marcellus
44	6/21/2017	9781	9950	60	Marcellus
45	6/21/2017	9581	9750	60	Marcellus
46	6/21/2017	9380	9549	60	Marcellus
47	6/22/2017	9180	9349	60	Marcellus
48	6/22/2017	8979	9148	60	Marcellus
49	6/22/2017	8779	8948	60	Marcellus
50	6/23/2017	8578	8747	60	Marcellus
51	6/24/2017	8378	8547	60	Marcellus
52	6/24/2017	8177	8346	60	Marcellus
53	6/25/2017	7977	8146	60	Marcellus
54	6/25/2017	7776	7945	60	Marcellus
55	6/25/2017	7576	7745	60	Marcellus
56	6/25/2017	7375	7545	60	Marcellus
57	6/26/2017	7175	7344	60	Marcellus
58	6/26/2017	6975	7144	60	Marcellus
59	6/26/2017	6774	6943	60	Marcellus

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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 (bbbls)	Amount of Nitrogen/ other (units)
1	5/30/2017	73.1	6816	5084	3237	176380	8533	N/A
2	5/30/2017	76.3	7339	4982	3770	190293	8978	N/A
3	5/31/2017	69.6	7689	5156	4929	189735	12996	N/A
4	5/31/2017	71.4	7601	5152	3699	190240	10406	N/A
5	6/1/2017	75.9	7210	5411	3143	188680	9050	N/A
6	6/1/2017	77.9	7233	5413	3136	188548	8776	N/A
7	6/2/2017	76.8	7127	5617	3349	190448	8821	N/A
8	6/5/2017	77.7	7457	5644	3595	187308	10330	N/A
9	6/6/2017	76.8	7106	5573	4159	189828	8731	N/A
10	6/6/2017	79.3	6906	5200	4077	182500	8848	N/A
11	6/6/2017	74.3	6972	5420	3071	193684	10404	N/A
12	6/7/2017	76.1	6931	5639	3244	210800	9110	N/A
13	6/8/2017	72.9	6993	5483	3161	196805	9156	N/A
14	6/8/2017	71.7	6846	5418	3251	187780	8985	N/A
15	6/8/2017	75.5	6752	5669	3392	192500	8912	N/A
16	6/9/2017	73.4	6475	5513	3648	175900	9007	N/A
17	6/10/2017	72.4	6581	5762	3339	224990	10549	N/A
18	6/10/2017	75.7	6678	5926	4313	190400	8929	N/A
19	6/11/2017	67.3	7337	5292	5292	191500	14512	N/A
20	6/11/2017	80.7	7582	5490	3952	203600	10840	N/A
21	6/11/2017	68.9	7295	5560	3665	188630	9183	N/A
22	6/12/2017	68.9	7122	5183	3877	186400	11550	N/A
23	6/13/2017	64.1	7082	5137	3173	186830	11275	N/A
24	6/13/2017	65.5	7663	5473	5085	129900	11937	N/A
25	6/13/2017	71.2	6795	4943	4477	177825	9668	N/A
26	6/14/2017	74.9	6800	5221	3394	183800	8862	N/A
27	6/14/2017	72.4	6584	5224	3506	170670	8489	N/A
28	6/14/2017	68.9	7127	5403	3741	173447	10375	N/A
29	6/15/2017	76.3	6728	5584	3349	166140	8116	N/A
30	6/15/2017	75.6	6428	5392	3038	165950	8565	N/A
31	6/15/2017	72.9	6459	5234	4129	165414	10152	N/A
32	6/16/2017	69.9	7295	5193	4221	170730	12686	N/A
33	6/16/2017	71.8	7317	5177	3491	171000	10624	N/A
34	6/17/2017	69.3	7491	5368	4073	173720	11622	N/A
35	6/17/2017	73.0	6905	5113	3849	168837	10769	N/A
36	6/18/2017	75.0	6704	5304	3331	164640	8600	N/A
37	6/18/2017	76.2	6729	5659	6117	170530	8657	N/A
38	6/18/2017	71.4	6727	5240	4009	164649	8363	N/A
39	6/19/2017	78.2	6609	5198	3318	166680	8204	N/A
40	6/19/2017	73.7	6757	5088	5215	165140	8865	N/A
41	6/20/2017	74.0	6626	5153	3512	165770	9333	N/A
42	6/20/2017	71.7	7118	5087	3130	166116	10914	N/A
43	6/20/2017	77.1	6654	5196	3289	172220	9214	N/A
44	6/21/2017	76.2	6438	5052	4325	173432	8907	N/A
45	6/21/2017	75.5	6623	5135	3448	170474	8486	N/A
46	6/21/2017	77.2	6501	5579	3709	168062	8733	N/A
47	6/22/2017	53.3	7923	5416	5172	168422	13988	N/A
48	6/22/2017	79.0	7017	5125	3986	169195	9416	N/A
49	6/22/2017	75.5	6959	5184	4729	172338	8679	N/A
50	6/23/2017	74.1	7189	5122	5923	166014	10232	N/A
51	6/24/2017	79.0	6715	5094	3060	179622	9042	N/A
52	6/24/2017	78.1	6500	5071	3606	166168	9787	N/A
53	6/25/2017	77.6	6347	5294	3434	163549	8455	N/A
54	6/25/2017	76.5	6098	5361	3454	170724	8499	N/A
55	6/25/2017	77.6	6182	5237	3531	188156	8540	N/A
56	6/25/2017	76.9	6148	5398	3781	171612	8495	N/A
57	6/26/2017	76.6	6009	5045	3456	169913	8617	N/A
58	6/26/2017	77.7	6156	5682	3276	171368	8146	N/A
59	6/26/2017	77.9	6197	6623	3402	164951	8466	N/A
	AVG=	74.0	6,875	5,346	3,814	10,490,957	568,383	TOTAL

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EXHIBIT 3

LITHOLOGY/ FORMATION	TOP DEPTH (TVD) From Surface	BOTTOM DEPTH (TVD) From Surface	TOP DEPTH (MD) From Surface	BOTTOM DEPTH (MD) From Surface
Fresh Water	337'	N/A	337'	N/A
Sandy Siltstone	est. 0	225	est. 0	225
Sandstone	est. 225	325	est. 225	325
Shale/Siltstone	est. 325	605	est. 325	605
Silty Limestone	est. 605	805	est. 605	805
Sandy Siltstone	est. 805	1025	est. 805	1025
Silty Shale	est. 1025	1065	est. 1025	1065
Sandstone	est. 1065	1445	est. 1065	1445
Sandy Shale	est. 1445	1545	est. 1445	1545
Shale/Sandstone	est. 1545	1705	est. 1545	1705
Sandstone/Siltstone	est. 1705	1745	est. 1705	1745
Sandstone	est. 1745	1810	est. 1745	1810
Sandy Shale	est. 1810	1848	est. 1810	1849
Big Lime	1863	1993	1864	1993
Big Injun	1993	2538	1993	2539
Gantz Sand	2538	2652	2539	2653
Fifty Foot Sandstone	2652	2773	2653	2774
Gordon	2773	3084	2774	3086
Fifth Sandstone	3084	3148	3086	3149
Bayard	3148	3503	3149	3504
Warren	3503	3900	3504	4208
Speechley	3900	4202	4208	4208
Baltown	4202	4576	4208	4590
Bradford	4576	5023	4590	5045
Benson	5023	5281	5045	5308
Alexander	5281	5426	5308	5456
Elk	5426	5835	5456	5871
Rhinestreet	5835	6166	5871	6217
Sycamore	6141	6312	6192	6408
Middlesex	6312	6416	6408	6584
Burkett	6416	6447	6584	6646
Tully	6447	6479	6646	6729
Marcellus	6479	NA	6729	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.

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	6/26/2017
Job End Date:	6/26/2017
State:	West Virginia
County:	Tyler
API Number:	47-095-02362-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Bead Unit 2H
Latitude:	39.42256389
Longitude:	-80.87333333
Datum:	NAD27
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,552
Total Base Water Volume (gal):	25,197,646
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
Fresh Water	Operator	Base Fluid					
			Water	7732-18-5	100.00000	89.56096	Density = 8.340
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.31379	

SP BREAKER	Halliburton	Breaker					
				Listed Below			
SAND-PREMIUM WHITE-40/70, BULK	Halliburton	Proppant					
				Listed Below			
HAI-OS ACID INHIBITOR	Halliburton	Corrosion Inhibitor					
				Listed Below			
WG-36 GELLING AGENT	Halliburton	Gelling Agent					
				Listed Below			
MC S-2510T	Halliburton	Scale Inhibitor					
				Listed Below			
MC B-8614	Halliburton	Biocide					
				Listed Below			
SAND-COMMON WHITE-100 MESH, SSA-2, BULK (100003676)	Halliburton	Proppant					
				Listed Below			
FR-76	Halliburton	Friction Reducer					
				Listed Below			

HYDROCHLORIC ACID	Halliburton	Solvent					
				Listed Below			
Items above are Trade Names with the exception of Base Water . Items below are the individual ingredients.							
			Crystalline silica, quartz	14808-60-7	100.00000	10.06477	
			Hydrochloric acid	7647-01-0	60.00000	0.15317	
			Guar gum	9000-30-0	100.00000	0.02417	
			Inorganic salt	Proprietary	30.00000	0.02155	
			Acrylamide acrylate copolymer	Proprietary	30.00000	0.02155	Denise Tuck, Halliburton, 3000 N. Sam Houston Pkwy E., Houston, TX 77032, 281-871-6226
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.02155	
			Ethylene Glycol	107-21-1	60.00000	0.00824	
			Glutaraldehyde	111-30-8	30.00000	0.00259	
			Neutralized Polyacrylic Emulsion	Proprietary	10.00000	0.00137	
			Sodium persulfate	7775-27-1	100.00000	0.00043	
			Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl chlorides	68424-85-1	5.00000	0.00043	
			Methanol	67-56-1	60.00000	0.00013	
			Ethanol	64-17-5	1.00000	0.00009	
			Ethoxylated alcohols	Proprietary	30.00000	0.00006	
			Fatty acids, tall oil	Proprietary	30.00000	0.00006	
			Reaction product of acetophenone, formaldehyde, thiourea and oleic acid in dimethyl formamide	68527-49-1	30.00000	0.00006	
			Olefins	Proprietary	5.00000	0.00002	
			Propargyl alcohol	107-19-7	10.00000	0.00002	
			Phosphoric acid	7664-38-2	0.10000	0.00001	

			Sodium sulfate	7757-82-6	0.10000	0.00000
--	--	--	----------------	-----------	---------	---------

- * Total Water Volume sources may include various types of water including fresh water, produced water, and recycled water
- ** Information is based on the maximum potential for concentration and thus the total may be over 100%
- *** If you are calculating a percentage of total ingredients do not add the water volume below the green line to the water volume above the green line

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 1910.1206(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS") PRODUCTION X STORAGE DEEP SHALLOW X
 LOCATION: ELEVATION 1,044' - AS DRILLED QUADRANGLE SHIRLEY 7.5
 SURFACE OWNER EDNA MONROE DISTRICT CENTERVILLE COUNTY TYLER
 OIL & GAS ROYALTY OWNER CARL BAKER CARL W. NOLAN, RONALD ASH ET UX; FRANK GRASS ET AL.
 RUTH MEREDITH, RICHARD E DEVLLEY ET UX; HARRY ASH & JESSIE D. ASH ET AL.; DAVID E BOWYER, DAVID E BOWYER
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL
 PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL
 (SPECIFY) AS DRILLED PLUG & ABANDON CLEAN OUT & REPLUG
 WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER - CI CORPORATION SYSTEM
 ADDRESS 1615 WYNKOOP ST. DENVER, CO 80202
 PERMIT NAME COUNTY NAME PERMIT

JOB # 15-013WA DRAWING # BEADHAD
 SCALE 1" = 2000'
 MINIMUM DEGREE OF ACCURACY SUBMETER
 PROVEN SOURCE OF ELEV. SUBMETER
 STATE OF WEST VIRGINIA THOMAS SUMMERS P.S. 2109
 DEPARTMENT OF ENERGY DATE 12/13/17
 DIVISION OF OIL AND GAS OPERATOR'S WELL # BEAD UNIT #2H

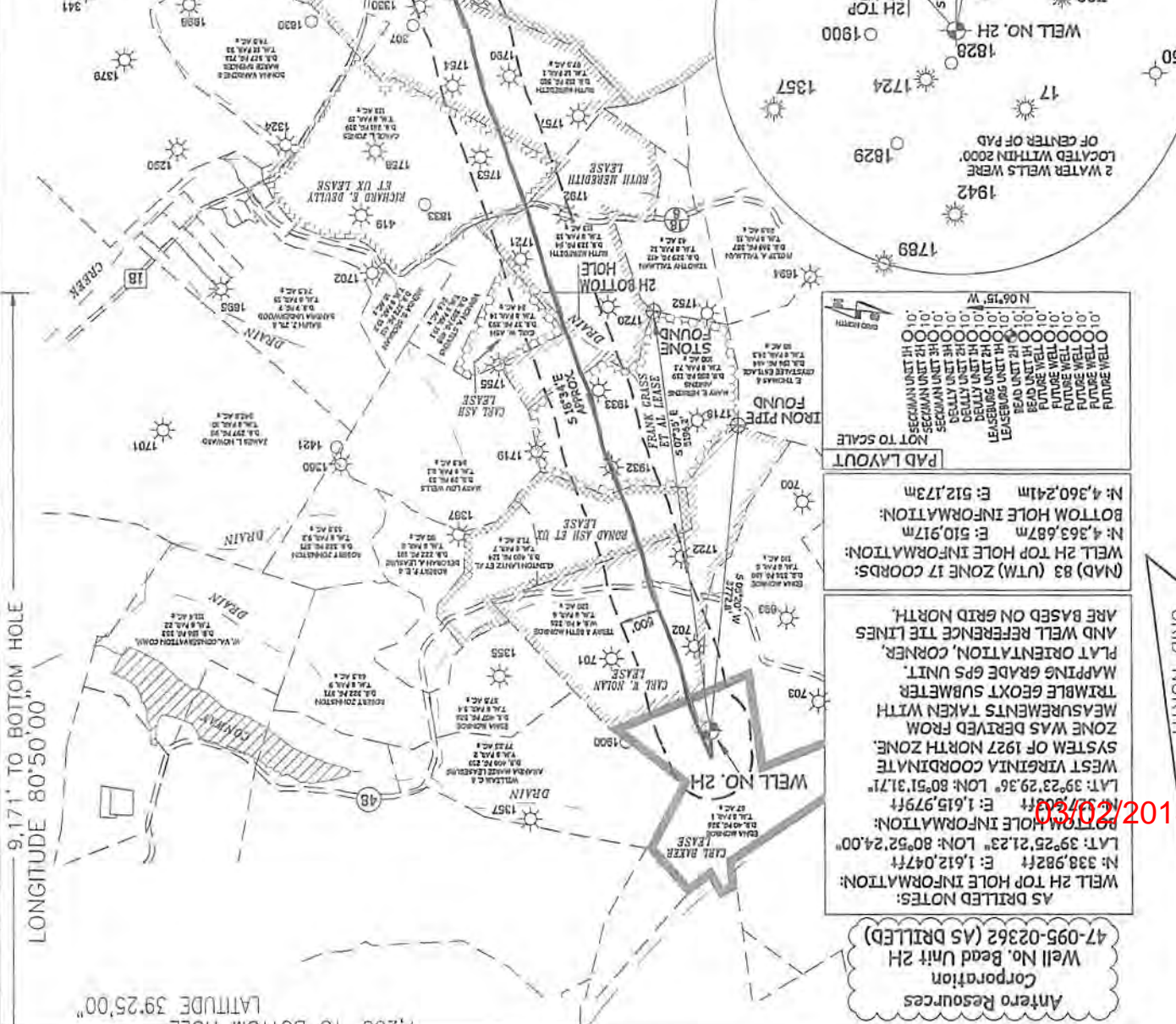
LEGEND
 Surface Owner Boundary Lines +/-
 Interior Surface Tracts +/-
 Found monument, as noted
 Proposed Well Path
 As Drilled Well Path

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

STATE OF WEST VIRGINIA
 OFFICE OF ENVIRONMENTAL PROTECTION,
 DIVISION OF OIL AND GAS

WILLOW LAND SURVEYING P.L.C.
 220 MASONIC AVE. PENNSBORO
 WEST VIRGINIA 26415

STATE OF WEST VIRGINIA
 THOMAS SUMMERS
 LICENSED PROFESSIONAL SURVEYOR
 No. 2109
 STATE OF WEST VIRGINIA



AS DRILLED NOTES:
 WELL 2H TOP HOLE INFORMATION: N: 338.982ft E: 1.612.047ft LAT: 39°25'21.23" LON: 80°52'24.00"
 BEAD HOLE INFORMATION: N: 4363.687m E: 510.917m LAT: 39°23'29.36" LON: 80°51'31.71"
 BOTTOM HOLE INFORMATION: N: 4.360,241m E: 512.173m

ANTERO RESOURCES CORPORATION
 Well No. Bead Unit 2H
 47-095-02362 (AS DRILLED)

LATITUDE 39°27'30"

11,300'

7,200' TO BOTTOM HOLE

LATITUDE 39°25'00"

LONGITUDE 80°50'00"

13,028'

LONGITUDE 80°50'00"

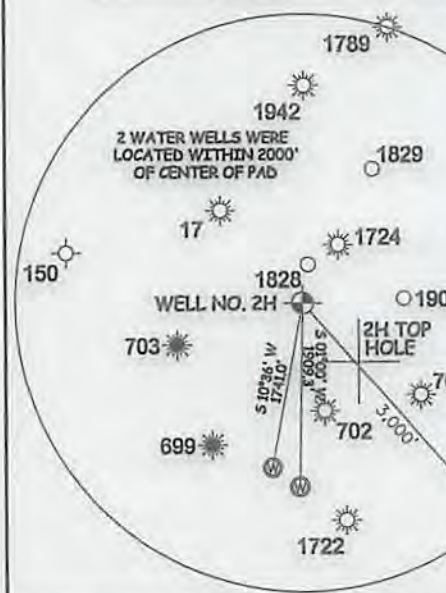
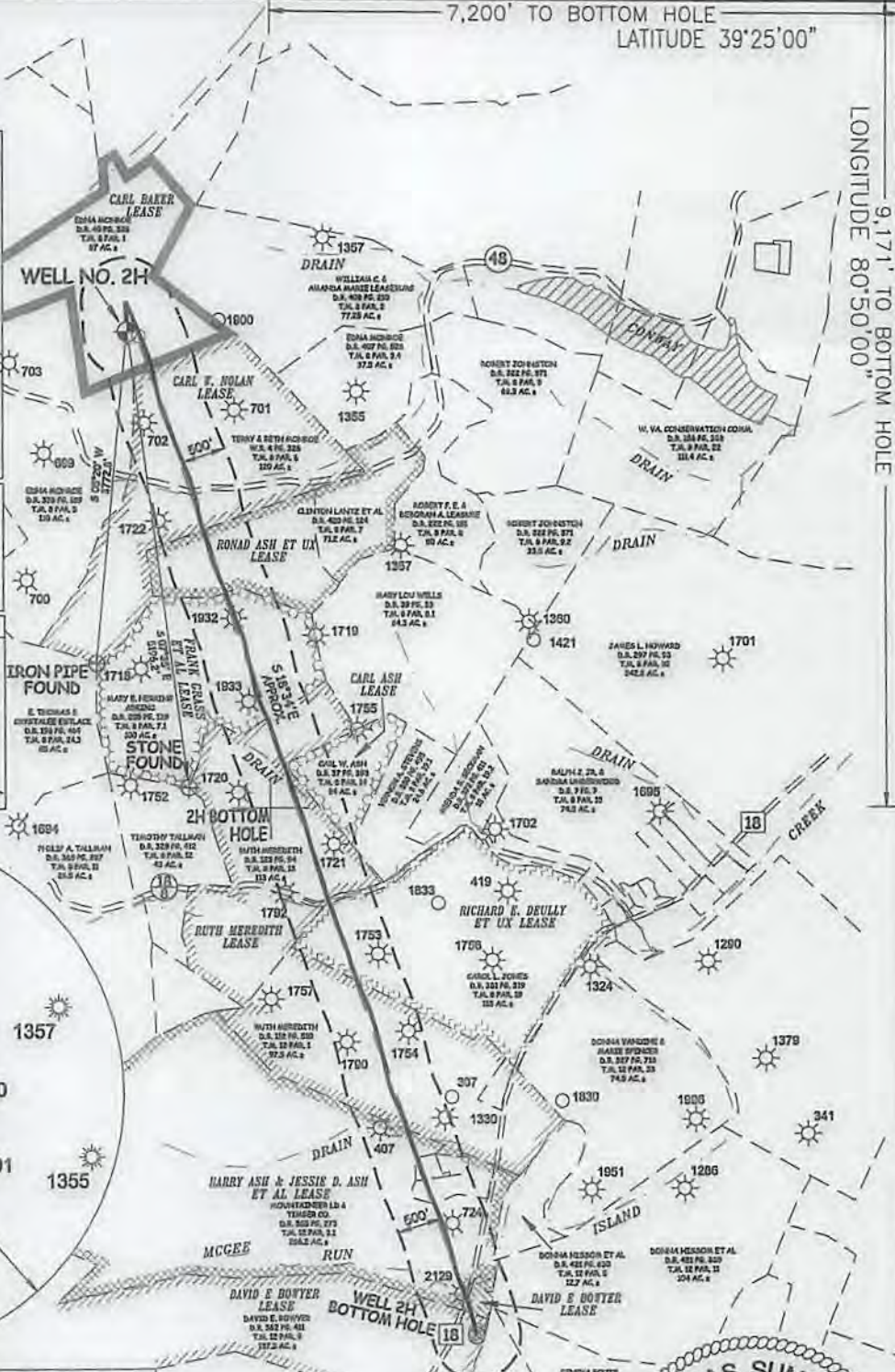
Antero Resources Corporation
Well No. Bead Unit 2H
47-095-02362 (AS DRILLED)

AS DRILLED NOTES:
WELL 2H TOP HOLE INFORMATION:
N: 338,982ft E: 1,612,047ft
LAT: 39°25'21.23" LON: 80°52'24.00"
BOTTOM HOLE INFORMATION:
N: 327,603ft E: 1,615,979ft
LAT: 39°23'29.36" LON: 80°51'31.71"
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 2H TOP HOLE INFORMATION:
N: 4,363,687m E: 510,917m
BOTTOM HOLE INFORMATION:
N: 4,360,241m E: 512,173m



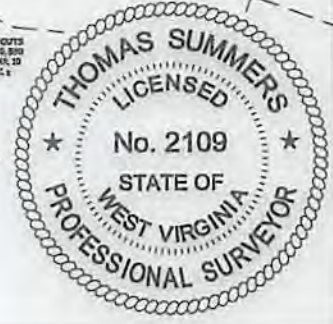
WV NORTH ZONE GRID NORTH



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



JOB # 15-013WA
DRAWING # BEAD2HAD
SCALE 1" = 2000'
MINIMUM DEGREE OF ACCURACY SUBMETER
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS
STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS

LEGEND
--- Surface Owner Boundary Lines +/-
--- Interior Surface Tracts +/-
⊕ Found monument, as noted
○ Proposed Well Path
○ As Drilled Well Path
THOMAS SUMMERS P.S. 2109
DATE 12/13/17
OPERATOR'S WELL# BEAD UNIT #2H

- 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 DISCREPANCIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.

WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL 47 095 02362
(IF "GAS") PRODUCTION X STORAGE DEEP SHALLOW X STATE COUNTY PERMIT
LOCATION: ELEVATION 1,044' - AS DRILLED WATERSHED HEADWATERS MIDDLE ISLAND CREEK
QUADRANGLE SHIRLEY 7.5' DISTRICT CENTERVILLE COUNTY TYLER
SURFACE OWNER EDNA MONROE ACREAGE 87 ACRES +/-
OIL & GAS ROYALTY OWNER CARL BAKER; CARL W. NOLAN; RONALD ASH ET UX; FRANK GRASS ET AL; LEASE ACREAGE 87 AC +/-; 120 AC +/-; 72 AC +/-; 100 AC +/-
RUTH MEREDITH; RICHARD E. DEULLY ET UX; HARRY ASH & JESSIE D. ASH ET AL; DAVID E. BOWYER; 210 AC +/-; 113 AC +/-; 291 AC +/-; 2.9 AC +/-; 138 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 6,565' TVD 18,670' MD
WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER - CT CORPORATION SYSTEM
ADDRESS 1615 WYNKOOP ST. ADDRESS 5400 D BIG TYLER ROAD
DENVER, CO 80202 CHARLESTON, WV 25313

03/02/2018