

Handwritten signature and date
12/21/18

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

API 47-017-06810 County Doddridge District West Union
Quad West Union 7.5' Pad Name Addie Pad Field/Pool Name ----
Farm name Antero Resources Corporation Well Number Cobra 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 4353811m Easting 516772m
Landing Point of Curve Northing 4354074m Easting 517539m
Bottom Hole Northing 4356469m Easting 516593m

Elevation (ft) 891' 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 Brine
Production hole Air Mud Fresh Water Brine
Mud Type(s) and Additive(s)
Air - Foam & 4% KCL
Mud - Polymer

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Date permit issued 5/11/2017 Date drilling commenced 7/6/2017 Date drilling ceased 12/17/2017
Date completion activities began 2/12/2018 Date completion activities ceased 6/30/2018
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 370' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 1495', 1535' 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: _____

WR-35
Rev. 8/23/13

API 47-017 - 06810 Farm name Antero Resources Corporation Well number Cobra 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"	95'	New	94#, H-40	N/A	Y
Surface	17-1/2"	13-3/8"	488'	New	54#, J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2644'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	16175'	New	23#, P-110	N/A	Y
Tubing		2-3/8"	7355'		4.7#, L-80		
Packer type and depth set		N/A					

Comment Details Cement Plug 12/6/2017 with 260 sacks @ 7616'

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	200 sx	15.6	1.18	236	0'	8 Hrs.
Surface	Class A	440 sx	15.6	1.19	524	0'	8 Hrs.
Coal							
Intermediate 1	Class A	960 sx	15.6	1.18	1133	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	757sx (Lead) 1438sx (Tail)	13.5(Lead), 15.2 (Tail)	1.53 (Lead), 1.83 (Tail)	3790	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 16175' MD, 6485' TVD (BHL), 6511' (Deepest Point Drilled) Loggers TD (ft) 16175' MD RECEIVED
 Deepest formation penetrated Marcellus Plug back to (ft) N/A Office of Oil and Gas
 Plug back procedure N/A NOV 14 2018

Kick off depth (ft) 6737 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

WR-35
Rev. 8/23/13

API 47- 017 - 06810 Farm name Antero Resources Corporation Well number Cobra Unit 2H

PRODUCING FORMATION(S)	DEPTHS			
Marcellus	6467' (TOP)	TVD	7396' (TOP)	MD

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 3600 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 13188 mcfpd Oil 94 bpd NGL --- bpd Water 73 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**

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Please insert additional pages as applicable.

Drilling Contractor Frontier Drilling LLC
Address 562 Spring Run Road City Pennsboro State WV Zip 26415

Logging Company Allied Horizontal
Address 381 Colonial Manor Rd City North Huntington State PA Zip 15642

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

Stimulating Company Keane Group
Address 5825 North Sam Houston Parkway West, Suite 600 City Houston State TX Zip 77086

Please insert additional pages as applicable.

Completed by Karin Cox Telephone 303-357-6820
Signature *[Signature]* Title Permitting Agent Date 11/9/2018

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

API 47-017-06810 Farm Name <u>Antero Resources Corp</u> Well Number <u>Cobra Unit 2H</u>					
EXHIBIT 1					
Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	2/11/2018	15906	16073	48	Marcellus
2	4/17/2018	15709	15875	48	Marcellus
3	4/17/2018	15511	15678	48	Marcellus
4	4/18/2018	15314	15480	48	Marcellus
5	4/18/2018	15116	15283	48	Marcellus
6	4/18/2018	14919	15085	48	Marcellus
7	4/19/2018	14721	14888	48	Marcellus
8	4/19/2018	14524	14690	48	Marcellus
9	4/20/2018	14326	14493	48	Marcellus
10	4/20/2018	14129	14296	48	Marcellus
11	4/21/2018	13932	14098	48	Marcellus
12	4/21/2018	13734	13901	48	Marcellus
13	4/21/2018	13537	13703	48	Marcellus
14	4/22/2018	13339	13506	48	Marcellus
15	4/22/2018	13142	13308	48	Marcellus
16	4/22/2018	12944	13111	48	Marcellus
17	4/23/2018	12747	12913	48	Marcellus
18	4/23/2018	12549	12716	48	Marcellus
19	4/24/2018	12352	12519	48	Marcellus
20	4/24/2018	12155	12321	48	Marcellus
21	4/24/2018	11957	12124	48	Marcellus
22	4/25/2018	11760	11926	48	Marcellus
23	4/25/2018	11562	11729	48	Marcellus
24	4/25/2018	11365	11531	48	Marcellus
25	4/26/2018	11167	11334	48	Marcellus
26	4/26/2018	10970	11136	48	Marcellus
27	4/26/2018	10772	10939	48	Marcellus
28	4/27/2018	10575	10742	48	Marcellus
29	4/27/2018	10378	10544	48	Marcellus
30	4/28/2018	10180	10347	48	Marcellus
31	4/28/2018	9983	10149	48	Marcellus
32	4/29/2018	9785	9952	48	Marcellus
33	4/29/2018	9588	9754	48	Marcellus
34	4/29/2018	9390	9557	48	Marcellus
35	4/30/2018	9193	9359	48	Marcellus
36	4/30/2018	8995	9162	48	Marcellus
37	5/1/2018	8798	8964	48	Marcellus
38	5/1/2018	8600	8767	48	Marcellus
39	5/1/2018	8403	8570	48	Marcellus
40	5/2/2018	8206	8372	48	Marcellus
41	5/2/2018	8008	8175	48	Marcellus
42	5/2/2018	7811	7977	48	Marcellus
43	5/3/2018	7613	7780	48	Marcellus
44	5/3/2018	7416	7582	48	Marcellus

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API 47-017-06810 Farm Name Antero Resources Corp Well Number Cobra Unit 2H

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	2/11/2018	74.8	7720	5483	3299	499610	10381	N/A
2	4/17/2018	74.2	8160	5886	3061	499560	10746	N/A
3	4/17/2018	73.1	8082	5738	4078	502925	12147	N/A
4	4/18/2018	74.8	7704	5729	3553	499000	10525	N/A
5	4/18/2018	76.3	7687	5769	3389	498900	10261	N/A
6	4/18/2018	75.9	7995	5975	3485	499000	10266	N/A
7	4/19/2018	75.7	7897	5667	3656	501000	10271	N/A
8	4/19/2018	79	7750	2	3785	509782	10218	N/A
9	4/20/2018	75.4	7752	5544	3651	499000	10285	N/A
10	4/20/2018	76.2	7905	5634	4845	500000	10203	N/A
11	4/21/2018	78.7	7827	5662	3728	502000	10252	N/A
12	4/21/2018	77.4	7789	5382	4606	499084	10216	N/A
13	4/21/2018	76.7	7743	5747	4025	500047	10178	N/A
14	4/22/2018	74.9	7447	5623	4582	499000	10201	N/A
15	4/22/2018	79.3	7685	5903	4612	502006	10229	N/A
16	4/22/2018	67.3	7821	5550	4121	498000	12156	N/A
17	4/23/2018	78.4	7771	5407	3830	498900	10163	N/A
18	4/23/2018	75.1	7428	5687	3718	501097	10193	N/A
19	4/24/2018	73.2	7246	5448	4035	499000	10175	N/A
20	4/24/2018	78.6	7507	5898	3764	501099	10077	N/A
21	4/24/2018	77.5	7524	5493	4179	498000	10419	N/A
22	4/25/2018	78.7	7241	5643	3660	499000	10130	N/A
23	4/25/2018	75.8	7499	5232	4160	499430	12300	N/A
24	4/25/2018	77.4	7247	5542	4474	498006	10137	N/A
25	4/26/2018	77.7	7242	5566	3527	499700	10179	N/A
26	4/26/2018	79.2	7205	6175	3684	499250	10234	N/A
27	4/26/2018	78.8	7070	5528	3567	501000	10100	N/A
28	4/27/2018	78.3	7172	5508	3593	499420	10101	N/A
29	4/27/2018	78.4	7104	5978	3496	498970	10693	N/A
30	4/28/2018	76.8	7192	6515	3509	501000	10092	N/A
31	4/28/2018	79.2	7157	5694	3508	499040	10214	N/A
32	4/29/2018	78.6	6976	6027	4094	501000	10077	N/A
33	4/29/2018	79.3	7032	5994	3456	499100	10116	N/A
34	4/29/2018	77.5	7017	6035	3504	499300	10120	N/A
35	4/30/2018	78.4	7064	5945	3392	502000	9986	N/A
36	4/30/2018	79.7	7017	6565	3477	499170	10018	N/A
37	5/1/2018	79.3	6932	6331	4561	499000	11456	N/A
38	5/1/2018	79.1	6985	5724	4264	500000	9919	N/A
39	5/1/2018	79.1	7181	6754	4712	499380	10037	N/A
40	5/2/2018	79	6950	6417	3447	500856	10459	N/A
41	5/2/2018	80.2	7019	6225	3555	499300	10028	N/A
42	5/2/2018	78.9	6800	6455	3268	499000	9851	N/A
43	5/3/2018	79.3	6902	6300	4594	498644	9742	N/A
44	5/3/2018	79.7	6541	6815	3542	502866	9853	N/A
	AVG=	77	7,386	5,732	3,842	22,001,442	455,400	N/A

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API 47-017-06810 Farm Name <u>Antero Resources Corp Well Number Cobra Unit 2H</u>				
EXHIBIT 3				
LITHOLOGY/ FORMATION	TOP DEPTH (TVD) From Surface	BOTTOM DEPTH (TVD) From Surface	TOP DEPTH (MD) From Surface	BOTTOM DEPTH (MD) From Surface
Shale	0	197	0	197
Sandy shale	197	357	197	357
Sandstone	357	417	357	417
Sandstone tr coal	417	437	417	437
Sandy shale	437	537	437	537
Shale	537	737	537	737
Silty sandstone	737	817	737	817
Silty shale	817	997	817	997
Sandstone	997	1,017	997	1,017
Silty shale	1,017	1,277	1,017	1,277
Sandstone	1,277	1,417	1,277	1,417
Sandy shale	1,417	1,677	1,417	1,677
Silty shale	1,677	1,762	1,677	1,800
Big Lime	1,762	2,303	1,800	2,370
Fifty Foot Sandstone	2,303	2,516	2,370	2,590
Gordon	2,516	2,714	2,590	2,794
Fifth Sandstone	2,714	2,780	2,794	2,863
Bayard	2,780	3,567	2,863	3,749
Speechley	3,567	3,754	3,749	3,970
Balltown	3,754	4,377	3,970	4,706
Bradford	4,377	4,807	4,706	5,219
Benson	4,807	5,098	5,219	5,564
Alexander	5,098	6,062	5,564	6,719
Sycamore	6,062	6,236	6,719	6,947
Middlesex	6,236	6,369	6,947	7,186
Burkett	6,369	6,398	7,186	7,254
Tully	6,398	6,442	7,254	7,371
Marcellus	6,442	NA	7,371	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:	4/16/2018
Job End Date:	5/3/2018
State:	West Virginia
County:	Doddridge
API Number:	47-017-06811-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Cobra 2H
Latitude:	39.20005200
Longitude:	-80.48200400
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,510
Total Base Water Volume (gal):	19,568,514
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	Ascent	Carrier/Base Fluid	Water	7732-18-5	100.00000	87.90915	None
Sand (Proppant)	Keane	Proppant	Crystalline silica: Quartz (SiO2)	14808-60-7	100.00000	11.84407	None
KFR-16FW	Keane	Friction Reducer	Water	7732-18-5	60.00000	0.04199	None
			Distillates (petroleum), hydrotreated light	64742-47-8	20.00000	0.01400	None
			oleic acid diethanolamide	93-83-4	1.50000	0.00105	None
			ammonium chloride	12125-02-9	1.50000	0.00105	None
			alcohols, C12-16, ethoxylated	68551-12-2	1.00000	0.00070	None
KWG-111LS	Keane	Gel	Distillates (petroleum), hydrotreated light	64742-47-8	55.00000	0.01475	None
			Guar gum	9000-30-0	55.00000	0.01475	None
Hydrochloric Acid (15%)	Keane	Acidizing	Hydrochloric Acid	7647-01-0	15.00000	0.01893	None
MBC-516W	Keane	Biocide					

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			Water	7732-18-5	56.70000	0.00496	None
			Glutaral	111-30-8	26.70000	0.00233	None
			didecyldimethylammonium chloride	7173-51-5	8.00000	0.00070	None
			quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	68424-85-1	5.30000	0.00046	None
			ethonal	64-17-5	2.80000	0.00024	None
KSI-19	Keane	Scale Inhibitor					
			Methanol	67-56-1	30.00000	0.00402	None
KWBO-2	Keane	Breaker					
			Sodium persulfate	7775-27-1	99.00000	0.00059	None
KAI-12	Keane	Acid Inhibitor					
			Ethylene glycol	107-21-1	40.00000	0.00011	None
			dipropylene glycol, monomethyl ether	34590-94-8	20.00000	0.00006	None
			Cinnamaldehyde	104-55-2	10.00000	0.00003	None
			formic acid	64-18-6	10.00000	0.00003	None
			Ethoxylated alcohol	68131-39-5	10.00000	0.00003	None
			Tar bases, quinoline derivs., benzyl chloride-quaternized	72480-70-7	10.00000	0.00003	None
			isoproyl alcohol	67-63-0	5.00000	0.00001	None
KFEAC-30	Keane	Iron Control					
			Citric acid	77-92-9	30.00000	0.00023	None
			Acetic acid	64-19-7	5.00000	0.00004	None
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.							
Other Chemical(s)	Listed Above	See Trade Name(s) List					
			Distillates (petroleum), hydrotreated light	64742-47-8	55.00000	0.01475	
			Distillates (petroleum), hydrotreated light	64742-47-8	20.00000	0.01400	
			Glutaral	111-30-8	26.70000	0.00233	
			ammonium chloride	12125-02-9	1.50000	0.00105	
			oleic acid diethanolamide	93-83-4	1.50000	0.00105	
			alcohols, C12-16, ethoxylated	68551-12-2	1.00000	0.00070	
			didecyldimethylammonium chloride	7173-51-5	8.00000	0.00070	
			quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	68424-85-1	5.30000	0.00046	
			ethonal	64-17-5	2.80000	0.00024	
			Citric acid	77-92-9	30.00000	0.00023	
			dipropylene glycol, monomethyl ether	34590-94-8	20.00000	0.00006	
			Ethoxylated alcohol	68131-39-5	10.00000	0.00003	
			Tar bases, quinoline derivs., benzyl chloride-quaternized	72480-70-7	10.00000	0.00003	
			Cinnamaldehyde	104-55-2	10.00000	0.00003	
			formic acid	64-18-6	10.00000	0.00003	

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					isopropyl alcohol	67-63-0		5.00000	0.00001
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* Total Water Volume sources may include fresh water, produced water, and/or recycled water

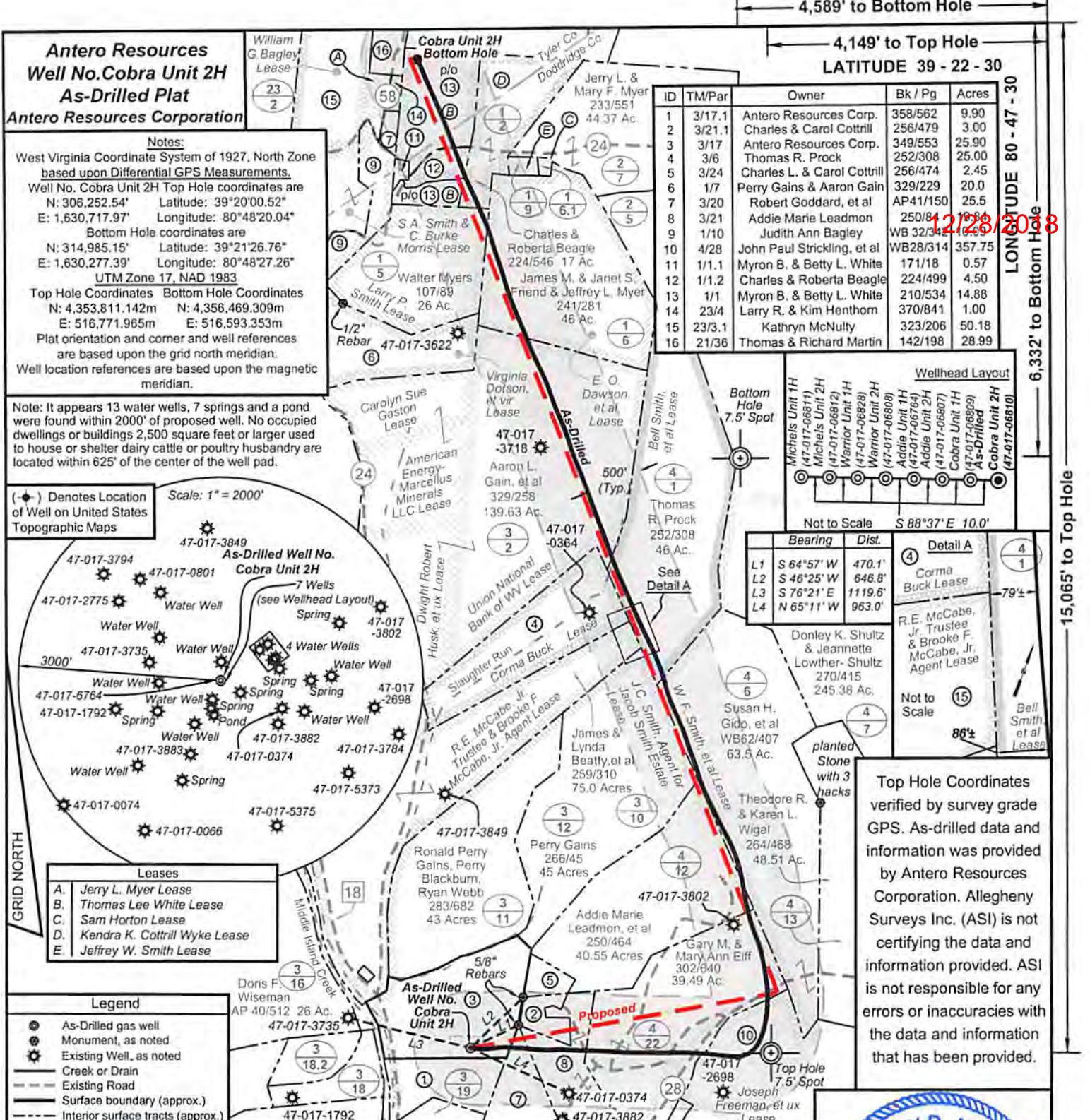
** Information is based on the maximum potential for concentration and thus the total may be over 100%

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)

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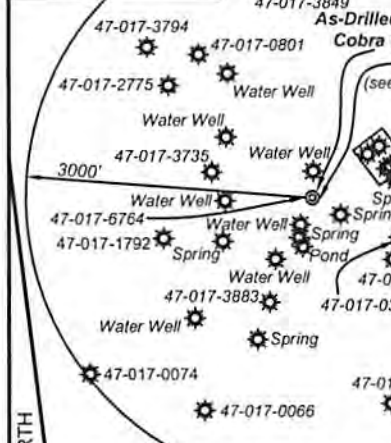


Antero Resources
Well No. Cobra Unit 2H
As-Drilled Plat
Antero Resources Corporation

Notes:
 West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.
 Well No. Cobra Unit 2H Top Hole coordinates are
 N: 306,252.54' Longitude: 80°48'20.04"
 E: 1,630,717.97' Longitude: 80°48'20.04"
 Bottom Hole coordinates are
 N: 314,985.15' Longitude: 80°48'27.26"
 E: 1,630,277.39' Longitude: 80°48'27.26"
 UTM Zone 17, NAD 1983
 Top Hole Coordinates Bottom Hole Coordinates
 N: 4,353,811.142m N: 4,356,469.309m
 E: 516,771.965m E: 516,593.353m
 Plat orientation and corner and well references are based upon the grid north meridian.
 Well location references are based upon the magnetic meridian.

Note: It appears 13 water wells, 7 springs and a pond were found within 2000' of proposed well. No occupied dwellings or buildings 2,500 square feet or larger used to house or shelter dairy cattle or poultry husbandry are located within 625' of the center of the well pad.

(*) Denotes Location of Well on United States Topographic Maps



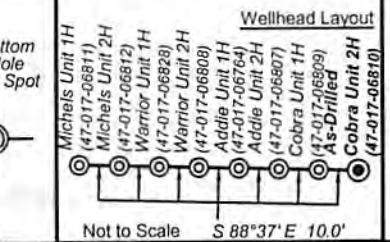
Leases

A.	Jerry L. Myer Lease
B.	Thomas Lee White Lease
C.	Sam Horton Lease
D.	Kendra K. Cottrill Wyke Lease
E.	Jeffrey W. Smith Lease

Legend

- As-Drilled gas well
- ⊙ Monument, as noted
- ⊙ Existing Well, as noted
- Creek or Drain
- Existing Road
- Surface boundary (approx.)
- Interior surface tracts (approx.)

ID	TM/Par	Owner	Bk / Pg	Acres
1	3/17.1	Antero Resources Corp.	358/562	9.90
2	3/21.1	Charles & Carol Cottrill	256/479	3.00
3	3/17	Antero Resources Corp.	349/553	25.90
4	3/6	Thomas R. Prock	252/308	25.00
5	3/24	Charles L. & Carol Cottrill	256/474	2.45
6	1/7	Perry Gains & Aaron Gain	329/229	20.0
7	3/20	Robert Goddard, et al	AP41/150	25.5
8	3/21	Addie Marie Leadmon	250/314	12.28
9	1/10	Judith Ann Bagley	WB 32/34	20.8
10	4/28	John Paul Strickling, et al	WB28/314	357.75
11	1/1.1	Myron B. & Betty L. White	171/18	0.57
12	1/1.2	Charles & Roberta Beagle	224/499	4.50
13	1/1	Myron B. & Betty L. White	210/534	14.88
14	23/4	Larry R. & Kim Henthorn	370/841	1.00
15	23/3.1	Kathryn McNulty	323/206	50.18
16	21/36	Thomas & Richard Martin	142/198	28.99



Bearing Dist.

L1	S 64°57' W	470.1'
L2	S 46°25' W	646.8'
L3	S 76°21' E	1119.6'
L4	N 65°11' W	963.0'

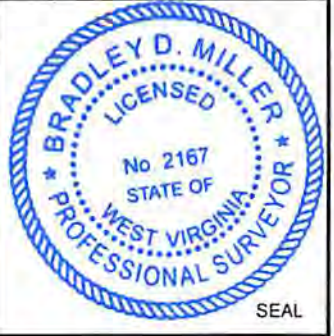


Top Hole Coordinates verified by survey grade GPS. As-drilled data and information was provided by Antero Resources Corporation. Allegheny Surveys Inc. (ASI) is not certifying the data and information provided. ASI is not responsible for any errors or inaccuracies with the data and information that has been provided.



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 prescribed by the Department of Environmental Protection.

Bradley D. Miller
 Bradley D. Miller, P.S. 2167



FILE NO: 45-30-WU-14
 DRAWING NO: Cobra 2H As-Drilled Well Plat
 SCALE: 1" = 1200'
 MINIMUM DEGREE OF ACCURACY: Submeter
 PROVEN SOURCE OF ELEVATION: WVDOT, Harrisville, WV

STATE OF WEST VIRGINIA
 DEPARTMENT OF ENVIRONMENTAL PROTECTION
OIL AND GAS DIVISION

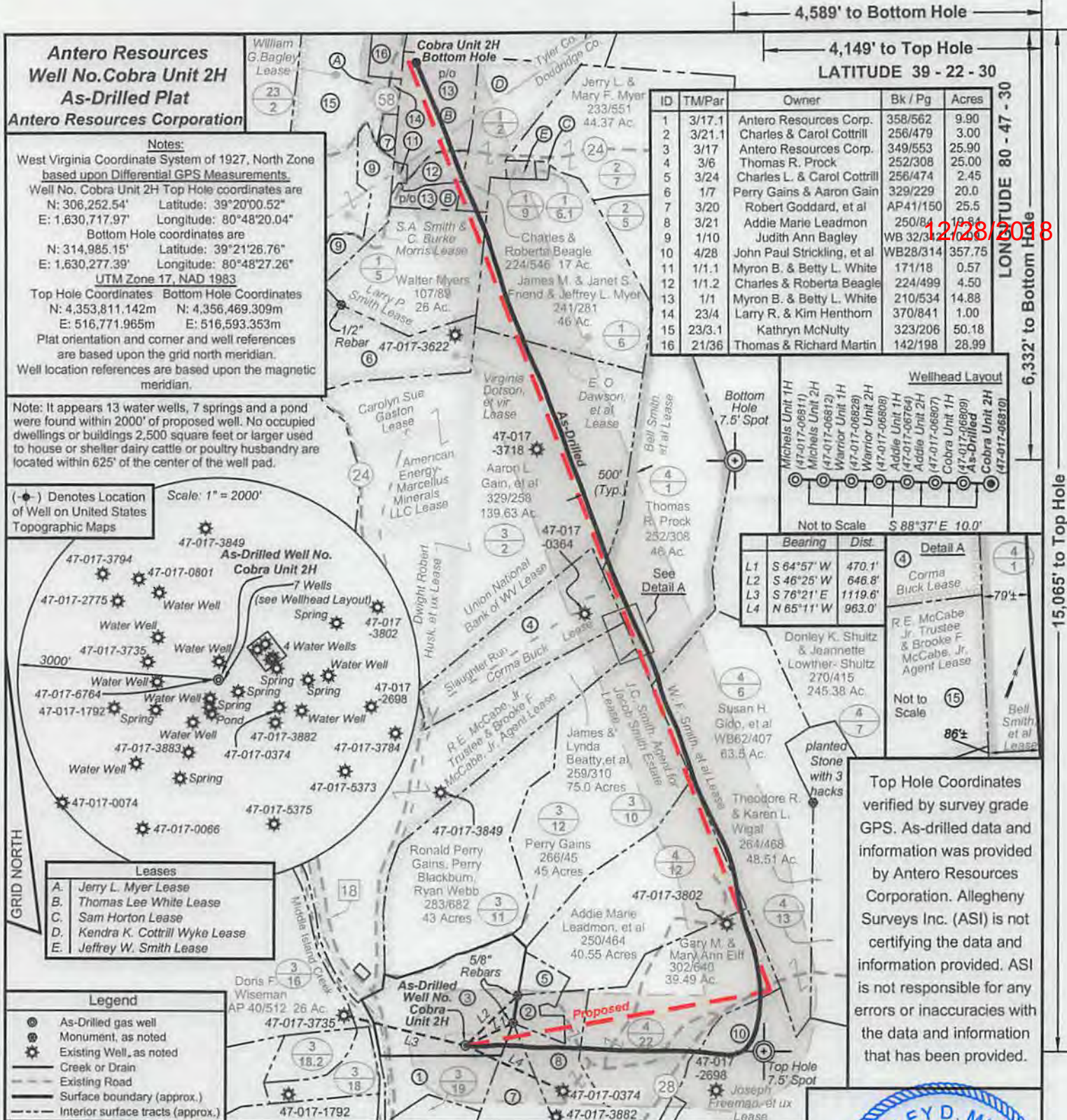
DATE: June 7 20 18
 OPERATOR'S WELL NO. Cobra Unit 2H
 API WELL NO
 47 - 017 - 06810
 STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
 LOCATION: ELEVATION: 891' As-Drilled WATERSHED: Headwaters Middle Island Creek QUADRANGLE: West Union
 DISTRICT: West Union E.O. Dawson, et al; Kendra K. Cottrill Wyke COUNTY: Doddridge 600;
 SURFACE OWNER: Antero Resources Corp. W.F. Smith, et al; Thomas Lee White; Larry P. Smith ACREAGE: 25.9 22.5; 50
 ROYALTY OWNER: J.C. Smith, Agent for Jacob Smith Estate; Bell Smith, et al LEASE NO: ACREAGE: 28.1; 45; 290; 79
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As-Drilled
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 6,484.5' TVD
 16,175' MD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Dianna Stamper - CT Corporation System
 ADDRESS: 1615 Wynkoop Street ADDRESS: 5400 D Big Tyler Road
 Denver, CO 80202 Charleston, WV 25313

12/28/2018



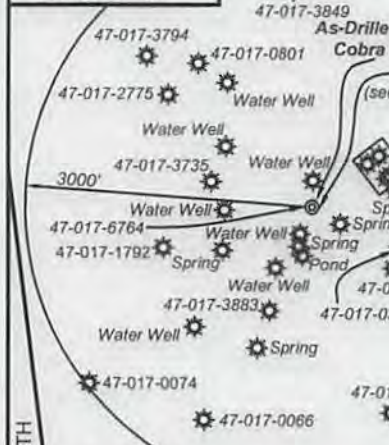


**Antero Resources
Well No. Cobra Unit 2H
As-Drilled Plat
Antero Resources Corporation**

Notes:
West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.
Well No. Cobra Unit 2H Top Hole coordinates are
N: 306,252.54' Latitude: 39°20'00.52"
E: 1,630,717.97' Longitude: 80°48'20.04"
Bottom Hole coordinates are
N: 314,985.15' Latitude: 39°21'26.76"
E: 1,630,277.39' Longitude: 80°48'27.26"
UTM Zone 17, NAD 1983
Top Hole Coordinates Bottom Hole Coordinates
N: 4,353,811.142m N: 4,356,469.309m
E: 516,771.965m E: 516,593.353m
Plat orientation and corner and well references are based upon the grid north meridian.
Well location references are based upon the magnetic meridian.

Note: It appears 13 water wells, 7 springs and a pond were found within 2000' of proposed well. No occupied dwellings or buildings 2,500 square feet or larger used to house or shelter dairy cattle or poultry husbandry are located within 625' of the center of the well pad.

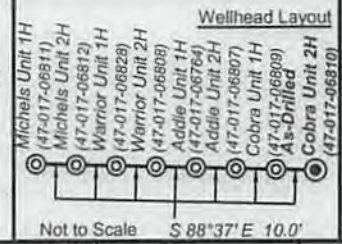
(*) Denotes Location of Well on United States Topographic Maps



- Leases**
- A. Jerry L. Myer Lease
 - B. Thomas Lee White Lease
 - C. Sam Horton Lease
 - D. Kendra K. Cottrill Wyke Lease
 - E. Jeffrey W. Smith Lease

- Legend**
- As-Drilled gas well
 - Monument, as noted
 - Existing Well, as noted
 - Creek or Drain
 - Existing Road
 - Surface boundary (approx.)
 - Interior surface tracts (approx.)

ID	TMP/Par	Owner	Bk / Pg	Acres
1	3/17.1	Antero Resources Corp.	358/562	9.90
2	3/21.1	Charles & Carol Cottrill	256/479	3.00
3	3/17	Antero Resources Corp.	349/553	25.90
4	3/6	Thomas R. Prock	252/308	25.00
5	3/24	Charles L. & Carol Cottrill	256/474	2.45
6	1/7	Perry Gains & Aaron Gain	329/229	20.0
7	3/20	Robert Goddard, et al	AP41/150	25.5
8	3/21	Addie Marie Leadmon	250/84	19.84
9	1/10	Judith Ann Bagley	WB 32/3	12.728/20.8
10	4/28	John Paul Strickling, et al	WB28/314	357.75
11	1/1.1	Myron B. & Betty L. White	171/18	0.57
12	1/1.2	Charles & Roberta Beagle	224/499	4.50
13	1/1	Myron B. & Betty L. White	210/534	14.88
14	23/4	Larry R. & Kim Henthorn	370/841	1.00
15	23/3.1	Kathryn McNulty	323/206	50.18
16	21/36	Thomas & Richard Martin	142/198	28.99



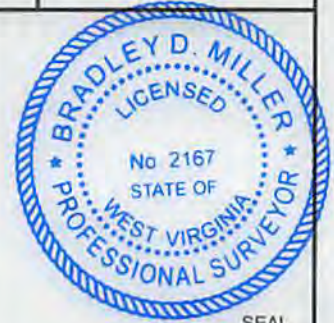
Bearing	Dist.	Detail
L1 S 64°57' W	470.1'	Detail A
L2 S 46°25' W	646.8'	Detail A
L3 S 76°21' E	1119.6'	Detail A
L4 N 65°11' W	963.0'	Detail A

Top Hole Coordinates verified by survey grade GPS. As-drilled data and information was provided by Antero Resources Corporation. Allegheny Surveys Inc. (ASI) is not certifying the data and information provided. ASI is not responsible for any errors or inaccuracies with the data and information that has been provided.



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 prescribed by the Department of Environmental Protection.

Bradley D. Miller
Bradley D. Miller, P.S. 2167



FILE NO: 45-30-WU-14
DRAWING NO: Cobra 2H As-Drilled Well Plat
SCALE: 1" = 1200'
MINIMUM DEGREE OF ACCURACY: Submeter
PROVEN SOURCE OF ELEVATION: WVDOT, Harrisville, WV

**STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OIL AND GAS DIVISION**

DATE: June 7 20 18
OPERATOR'S WELL NO. Cobra Unit 2H
API WELL NO. 47 - 017 - 06810
STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
LOCATION: ELEVATION: 891' As-Drilled WATERSHED: Headwaters Middle Island Creek QUADRANGLE: West Union
DISTRICT: West Union E.O. Dawson, et al; Kendra K. Cottrill Wyke COUNTY: Doddridge 600;
SURFACE OWNER: Antero Resources Corp. W.F. Smith, et al; Thomas Lee White; Larry P. Smith ACREAGE: 25.9 22.5; 50
ROYALTY OWNER: J.C. Smith, Agent for Jacob Smith Estate; Bell Smith, et al LEASE NO: ACREAGE: 28.1; 45; 290; 79
PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As-Drilled
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 6,484.5' TVD
16,175' MD

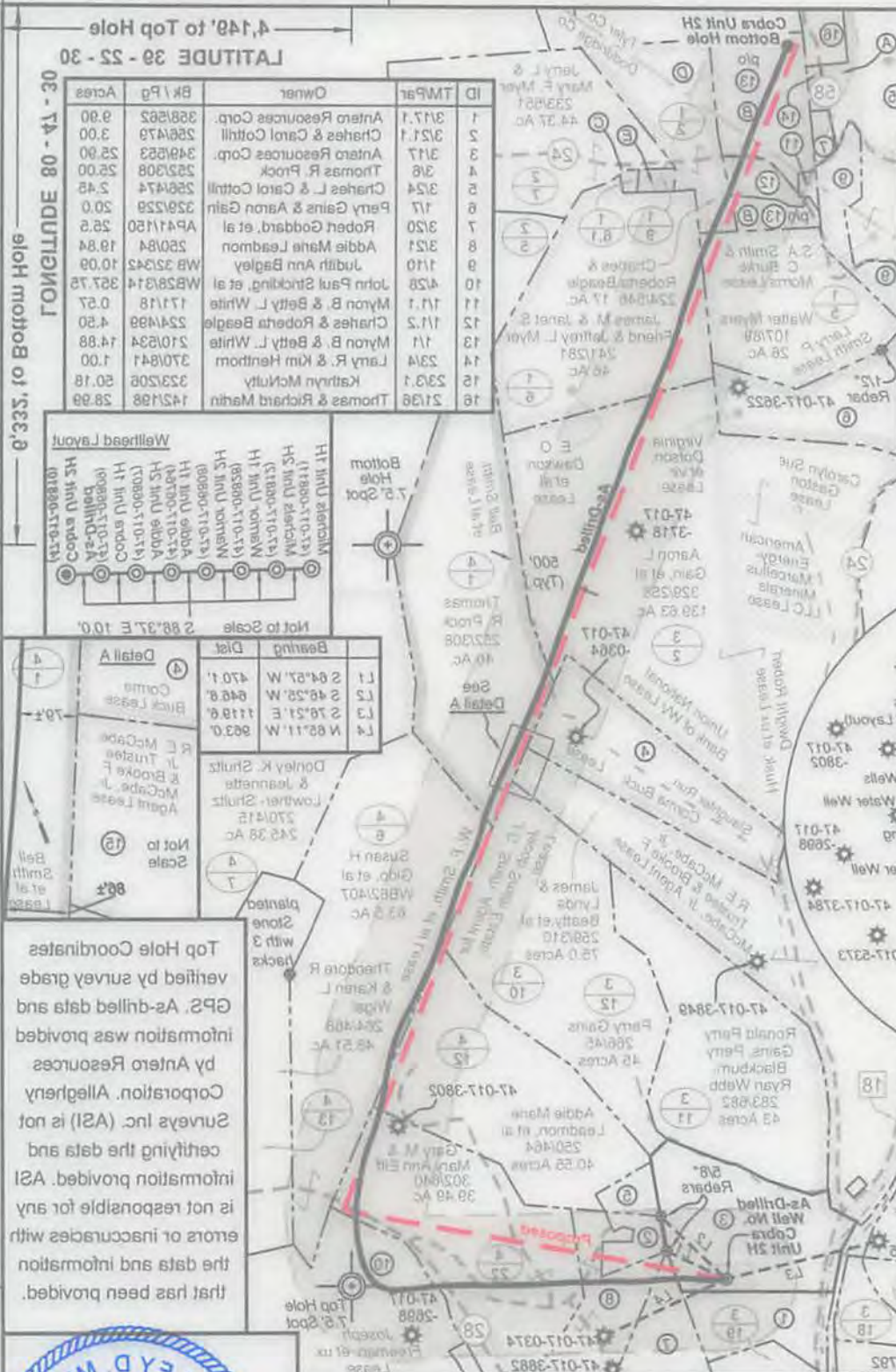
WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Dianna Stamper - CT Corporation System
ADDRESS: 1615 Wynkoop Street ADDRESS: 5400 D Big Tyler Road
Denver, CO 80202 Charleston, WV 25313

Antero Resources
Well No. Copra Unit 2H
As-Drilled Plat

Antero Resources Corporation

Notes:
West Virginia Coordinate System of 1927, North Zone
based upon Differential GPS Measurements
Well No. Copra Unit 2H Top Hole coordinates are
N: 308,252.84; Longitude: 39,50,00.52;
E: 1,630,277.39; Longitude: 80,48,20.04;
Well No. Copra Unit 2H Bottom Hole coordinates are
N: 314,985.18; Longitude: 39,51,28.78;
E: 1,630,277.39; Longitude: 80,48,27.28;
UTM Zone 17, NAD 1983
Top Hole Coordinates Bottom Hole Coordinates
N: 4,352,811.142m; E: 5,185,893.523m
N: 4,352,811.142m; E: 5,185,893.523m
Plat orientation and corner and well references
are based upon the grid north meridian.
Well location references are based upon the magnetic
meridian.

12/28/2018



Top Hole Coordinates
verified by survey grade
GPS. As-drilled data and
information was provided
by Antero Resources
Corporation. Allegheny
Surveys Inc. (ASI) is not
certifying the data and
information provided. ASI
is not responsible for any
errors or inaccuracies with
the data and information
that has been provided.

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 prescribed by the
Department of Environmental Protection.

Bradley D. Miller, P.S. 2167

ALLEGHENY SURVEYS, INC.

Professional Surveyor
West Virginia
No. 2167
Licensed

STATE COUNTY PERMIT 47 - 017 - 08810 API WELL NO OPERATORS WELL NO. Copra Unit 2H DATE: June 7 20 18

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OIL AND GAS DIVISION

FILE NO: 45-30-WU-14 DRAWING NO: Copra 2H As-Drilled Well Plat SCALE: 1" = 1200' MINIMUM DEGREE OF ACCURACY: 2m Submeter PROVEN SOURCE OF ELEVATION: WVDOT, Hamsville, WV

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL (IF GAS) PRODUCTION: STORAGE DEEP SHALLOW

LOCATION: ELEVATION: 881' As-Drilled WATERSHED: Headwaters Middle Island Creek QUADRANGLE: West Union DISTRICT: West Union SURFACE OWNER: Antero Resources Corp. ROYALTY OWNER: J.C. Smith, Agent for Jacob Smith Estate; Bell Smith, et al LEASE NO: 388; 14.88 ACREAGE: 25.9 ACREAGE: 25.9 COUNTY: Doddridge COUNTY: Doddridge E.O. Dawson, et al; Kendra K. Cottrell Wyke W.F. Smith, et al; Thomas Lee White; Larry R. Smith Union National Bank of WV; Joseph Freeman, et al; PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As-Drilled PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 1617.5 MD

DESIGNATED AGENT: Dianne Stampler - CT Corporation System ADDRESS: 1815 Wynykoop Street DENVER, CO 80202 ADDRESS: 2400 D Big Tyler Road CHARLESTON, WV 25313