

APPROVED

WR-35
Rev. 8/23/13

NAME: Julia Page of

DATE 1/3/18 RECEIVED
Office of Oil and Gas

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

NOV 30 2017

WV Department of
Environmental Protection

API 47-017-06700 County Doddridge District Central
Quad Oxford 7.5' Pad Name James Webb Pad Field/Pool Name ----
Farm name James E. Webb Well Number Mary Jane 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 4343272m Easting 510951m
Landing Point of Curve Northing 4343901.777m Easting 510880.976m
Bottom Hole Northing 4346456m Easting 509683m

Elevation (ft) 991' 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 03/25/2015 Date drilling commenced 07/31/2015 Date drilling ceased 07/17/2016
Date completion activities began 04/08/2017 Date completion activities ceased 09/04/2017
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 62', 173' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 1145' Void(s) encountered (Y/N) depths No
Coal depth(s) ft 1552', 1632' Cavern(s) encountered (Y/N) depths No
Is coal being mined in area (Y/N) No

Reviewed by: _____

01/05/2018

API 47-017 - 06700

Farm name James E. Webb

Well number Mary Jane Unit 2H

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"	53'	New	106.5#, K-55	N/A	Y
Surface	17-1/2"	13-3/8"	458'	New	48#, H-40	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2580'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	18063'	New	23#, HCP-110	N/A	Y
Tubing		2-3/8"	6733'		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	60 sx	15.6	1.18	71	0'	8 Hrs.
Surface	Class A	523 sx	15.6	1.18	617	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	819 sx (Lead) 1806 sx (Tail)	13.5 (Lead), 15.2 (Tail)	1.44 (Lead), 1.84 (Tail)	4502	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 18063' MD, 6409' TVD (BHL) & 6532' TVD (Deepest Point Drilled)

Loggers TD (ft) 18050' MD

Deepest formation penetrated Marcellus

Plug back to (ft) N/A

Plug back procedure N/A

Kick off depth (ft) 5809'

** This is a subsequent well. Antero only runs wireline logs on one well on a multi-well pad (Mahogany Unit 2H API #47-017-06702). Please reference the wireline logs submitted with Form WR-35 for Mahogany Unit 2H. A Cement Bond Log has been included with this submittal.

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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EXHIBIT 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	4/8/2017	17792	17961	60	Marcellus
2	4/8/2017	17592	17761	60	Marcellus
3	4/9/2017	17392	17561	60	Marcellus
4	5/31/2017	17191	17360	60	Marcellus
5	5/31/2017	16991	17160	60	Marcellus
6	6/1/2017	16791	16960	60	Marcellus
7	6/1/2017	16591	16760	60	Marcellus
8	6/2/2017	16390	16559	60	Marcellus
9	6/2/2017	16190	16359	60	Marcellus
10	6/2/2017	15990	16159	60	Marcellus
11	6/2/2017	15790	15959	60	Marcellus
12	6/3/2017	15589	15758	60	Marcellus
13	6/3/2017	15389	15558	60	Marcellus
14	6/3/2017	15189	15358	60	Marcellus
15	6/3/2017	14989	15158	60	Marcellus
16	6/4/2017	14788	14957	60	Marcellus
17	6/4/2017	14588	14757	60	Marcellus
18	6/4/2017	14388	14557	60	Marcellus
19	6/4/2017	14188	14357	60	Marcellus
20	6/5/2017	13987	14156	60	Marcellus
21	6/5/2017	13787	13956	60	Marcellus
22	6/5/2017	13587	13756	60	Marcellus
23	6/5/2017	13387	13556	60	Marcellus
24	6/6/2017	13187	13355	60	Marcellus
25	6/6/2017	12986	13155	60	Marcellus
26	6/6/2017	12786	12955	60	Marcellus
27	6/7/2017	12586	12755	60	Marcellus
28	6/7/2017	12386	12554	60	Marcellus
29	6/7/2017	12185	12354	60	Marcellus
30	6/7/2017	11985	12154	60	Marcellus
31	6/7/2017	11785	11954	60	Marcellus
32	6/8/2017	11585	11753	60	Marcellus
33	6/8/2017	11384	11553	60	Marcellus
34	6/8/2017	11184	11353	60	Marcellus
35	6/8/2017	10984	11153	60	Marcellus
36	6/9/2017	10784	10952	60	Marcellus
37	6/9/2017	10583	10752	60	Marcellus
38	6/9/2017	10383	10552	60	Marcellus
39	6/9/2017	10183	10352	60	Marcellus
40	6/9/2017	9983	10151	60	Marcellus
41	6/10/2017	9782	9951	60	Marcellus
42	6/10/2017	9582	9751	60	Marcellus
43	6/10/2017	9382	9551	60	Marcellus
44	6/11/2017	9182	9351	60	Marcellus
45	6/11/2017	8981	9150	60	Marcellus
46	6/11/2017	8781	8950	60	Marcellus
47	6/11/2017	8581	8750	60	Marcellus
48	6/12/2017	8381	8550	60	Marcellus
49	6/12/2017	8180	8349	60	Marcellus
50	6/12/2017	7980	8149	60	Marcellus
51	6/12/2017	7780	7949	60	Marcellus
52	6/12/2017	7580	7749	60	Marcellus
53	6/13/2017	7379	7548	60	Marcellus
54	6/13/2017	7179	7348	60	Marcellus
55	6/13/2017	6979	7148	60	Marcellus

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API 47-017-06700 Farm Name James E. Webb Well Number Mary Jane Unit 2H							
EXHIBIT 2							
Stage No.	Simulations Date	Avg Pump Rate	Avg Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Nitrogen/other (units)
1	4/8/2017	70.3	7900	6018	5480	409600	9238
2	4/8/2017	73.5	7814	6125	4817	409800	9218
3	4/9/2017	68.9	7897	6535	5517	408650	10895
4	5/31/2017	74.1	7950	6151	4013	408500	9150
5	5/31/2017	73.5	7627	6144	3830	407700	9194
6	6/1/2017	75.4	7571	5345	4066	408100	9094
7	6/1/2017	78.0	7766	6044	4470	406200	9366
8	6/2/2017	75.5	7998	5919	4320	408000	9154
9	6/2/2017	77.1	7917	5640	4410	408300	9168
10	6/2/2017	73.5	7915	5568	4270	407500	9228
11	6/2/2017	71.1	8118	5769	4553	391200	12216
12	6/3/2017	74.7	7916	5525	4317	410300	9110
13	6/3/2017	74.5	8061	5819	4538	410200	9100
14	6/3/2017	72.5	8001	5972	4113	410200	9220
15	6/3/2017	73.4	7967	6140	4170	408600	9200
16	6/4/2017	75.6	7848	6126	4410	409400	9085
17	6/4/2017	77.2	7984	6080	4621	408600	9145
18	6/4/2017	77.1	8180	5880	4460	408500	10865
19	6/4/2017	75.4	8030	5479	4349	408700	9152
20	6/5/2017	75.6	7945	5525	4663	409300	9144
21	6/5/2017	75.4	7996	5758	4642	411900	9034
22	6/5/2017	73.3	8086	6945	4374	410600	9124
23	6/5/2017	67.7	7773	6384	4402	410900	9700
24	6/6/2017	73.7	8022	6351	4545	411300	9010
25	6/6/2017	76.9	7941	6220	5082	411900	10299
26	6/6/2017	74.5	7812	6094	5400	411100	9099
27	6/7/2017	75.7	7816	5815	4699	409700	9082
28	6/7/2017	74.1	8110	5926	5318	412000	8976
29	6/7/2017	75.6	8269	5729	5397	409900	11265
30	6/7/2017	74.2	7852	5805	3988	409000	9130
31	6/7/2017	75.3	7931	5801	4174	409300	9181
32	6/8/2017	77.0	7856	5239	5797	409000	9187
33	6/8/2017	73.5	7782	5315	5111	410000	9052
34	6/8/2017	73.6	7496	5579	4134	407200	8924
35	6/8/2017	75.7	7671	5797	5203	408700	10090
36	6/9/2017	76.6	7616	5196	5243	408300	12127
37	6/9/2017	75.0	7539	5270	4177	407400	8900
38	6/9/2017	74.4	7593	5865	4746	406700	9751
39	6/9/2017	72.9	7474	5585	5057	408200	10557
40	6/9/2017	75.1	7439	5811	4174	408300	12452
41	6/10/2017	72.7	7289	6144	4227	408200	8904
42	6/10/2017	73.2	7521	6480	4131	407900	8858
43	6/10/2017	72.3	7640	5622	3898	386200	8348
44	6/11/2017	46.3	8379	5690	5368	213800	13616
45	6/11/2017	74.3	7749	5883	5375	410700	8987
46	6/11/2017	68.8	7620	5860	4009	411100	8846
47	6/11/2017	77.2	7769	5515	4424	410800	11660
48	6/12/2017	74.9	7744	6309	4810	411300	13540
49	6/12/2017	68.9	7655	5533	5057	409600	8830
50	6/12/2017	72.6	7336	5575	5229	409400	9050
51	6/12/2017	76.2	7224	5475	4764	409200	8955
52	6/12/2017	74.6	7024	6094	5414	409200	8899
53	6/13/2017	74.2	7054	5708	5372	409300	8900
54	6/13/2017	71.4	7021	6505	4939	409000	8852
55	6/13/2017	73.4	6712	5718	3691	409600	8855
AVG=		73.6	7,749	5,863	4,650	22,274,050	529,982
TOTAL							N/A

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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	62'	N/A	62'	N/A
Fresh Water	173'	N/A	173'	N/A
Siltstone	est. 0	177	est. 0	177
Sandstone	est. 177	237	est. 177	237
Siltstone	est. 237	567	est. 237	567
Sandstone	est. 567	1552	est. 567	1552
Coal	est. 1552	1557	est. 1552	1557
Shale	est. 1557	1587	est. 1557	1587
Sandstone	est. 1587	1632	est. 1587	1632
Coal	est. 1632	1634	est. 1632	1634
Sandstone	est. 1634	2045	est. 1634	2046
Big Lime	2045	2131	2046	2132
Big Injun	2131	2440	2132	2441
Gantz Sand	2440	2686	2441	2687
Fifty Foot Sandstone	2686	2763	2687	2764
Gordon	2763	3080	2764	3081
Fifth Sandstone	3080	3105	3081	3107
Bayard	3105	3433	3107	3434
Warren	3433	3797	3434	3798
Speechley	3797	4541	3798	4542
Bradford	4541	4933	4542	4935
Benson	4933	5199	4935	5200
Alexander	5199	5354	5200	5356
Elk	5354	5804	5356	5806
Rhinestreet	5804	6133	5806	6182
Sycamore	6127	6293	6182	6482
Middlesex	6293	6411	6482	6746
Burkett	6411	6440	6746	6830
Tully	6440	6467	6830	6934
Marcellus	6467	NA	6934	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:	5/31/2017
Job End Date:	6/13/2017
State:	West Virginia
County:	Doddridge
API Number:	47-017-06700-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Mary Jane 2H
Latitude:	39.23851111
Longitude:	-80.87373611
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,532
Total Base Water Volume (gal):	21,709,680
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	89.36985	
Sand	U.S. Well Services, LLC	Proppant	Crystalline Silica, quartz	14808-60-7	100.00000	10.38822	
HCL Acid (12.6%-17.5%)	U.S. Well Services, LLC	Bulk Acid	Water	7732-18-5	87.40000	0.09705	
			Hydrogen Chloride	7647-01-0	17.50000	0.02256	
LGC-15	U.S. Well Services, LLC	Gelling Agents	Guar Gum	9000-30-0	50.00000	0.03513	
			Petroleum Distillates	64742-47-8	60.00000	0.03327	
			Suspending agent (solid)	14808-60-7	3.00000	0.00537	
			Surfactant	68439-51-0	3.00000	0.00211	
WFRA-405	U.S. Well Services, LLC	Friction Reducer	2-Propenoic acid, polymer with 2-propanamide	9003-06-9	30.00000	0.02120	
			Hydrated light distillate (petroleum)	64742-47-8	30.00000	0.01706	

Bioclear 2000	U.S. Well Services, LLC	Anti-Bacterial Agent				
			2,2-dibromo-3-nitrilopropionamide	10222-01-2	20.00000	0.00405
			Deionized Water	7732-18-5	28.00000	0.00232
AP One	U.S. Well Services, LLC	Gel Breakers				
			Ammonium Persulfate	7727-54-0	100.00000	0.00099
SI-1200s	U.S. Well Services, LLC	Scale Inhibitor				
			Alkyl Phosphonic Acid	Proprietary	5.00000	0.00065
			Ammonia	7664-41-7	0.50000	0.00010
AI-303	U.S. Well Services, LLC	Acid Corrosion Inhibitors				
			Ethylene glycol	107-21-1	40.00000	0.00003
			Cinnamaldehyde	104-55-2	20.00000	0.00001
			Formic acid	64-18-6	20.00000	0.00001
			Butyl cellosolve	111-76-2	20.00000	0.00001
			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)

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LATITUDE 39°15'00"

11,315'

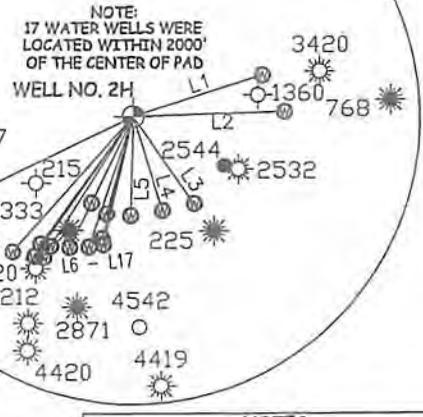
3,659' TO BOTTOM HOLE
LATITUDE 39°17'30"

LONGITUDE 80°52'30"

4,151'

8,872' TO BOTTOM HOLE
LONGITUDE 80°50'00"

Antero Resources Corporation
Well No. Mary Jane Unit 2H
47-017-06700 (AS DRILLED)



NOTE:
17 WATER WELLS WERE LOCATED WITHIN 2000' OF THE CENTER OF PAD
WELL NO. 2H

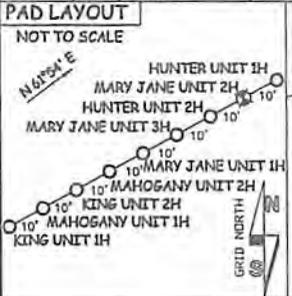
NOTES:
WELL 2H TOP HOLE INFORMATION:
N: 271,988ft E: 1,611,038ft
LAT: 39°14'18.97" LON: 80°52'23.81"
BOTTOM HOLE INFORMATION:
N: 282,505ft E: 1,607,052ft
LAT: 39°16'02.32" LON: 80°53'16.53"
WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE.

(NAD) 83 (UTM) ZONE 17 COORDS:
WELL 2H TOP HOLE INFORMATION:
N: 4,343,272m E: 510,951m
BOTTOM HOLE INFORMATION:
N: 4,346,456m E: 509,683m



GRID NORTH

LINE	BEARING	DISTANCE
L1	N 72°15' E	1424.3'
L2	N 88°07' E	1686.6'
L3	S 35°12' E	1107.5'
L4	S 17°19' E	1023.9'
L5	S 01°48' W	1030.8'
L6	S 13°28' W	1388.1'
L7	S 14°41' W	1308.9'
L8	S 15°48' W	1051.0'
L9	S 19°07' W	1434.9'
L10	S 24°11' W	1332.7'
L11	S 20°13' W	1000.5'
L12	S 28°19' W	1517.4'
L13	S 32°47' W	1748.1'
L14	S 32°53' W	1605.3'
L15	S 35°35' W	1788.2'
L16	S 38°23' W	1644.9'
L17	S 42°09' W	1068.8'



- 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 HEREIN 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.

API WELL #
47 - 017 - 06700
STATE COUNTY PERMIT

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 # 14-082WA
DRAWING # MARYJANE2HAD
SCALE 1" = 1000'
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 +/-
○ Proposed Well Path
⊙ As Drilled Well Path
DOUGLAS R. ROWE P.S. 2202
DATE 11/07/17
OPERATOR'S WELL # MARY JANE UNIT #2H

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS") PRODUCTION ___ STORAGE ___ DEEP ___ SHALLOW X
LOCATION: ELEVATION 991.4' - AS DRILLED WATERSHED CABIN RUN
QUADRANGLE OXFORD 7.5 (TOP HOLE) PENNSBORO 7.5 (BOTTOM HOLE) DISTRICT CENTRAL COUNTY DODDRIDGE
SURFACE OWNER JAMES E. WEBB ACREAGE 84.89 ACRES +/-
OIL & GAS ROYALTY OWNER CHARLEY WILSON ET UX; H.B. WILLIAMS ET UX; DONNA HELMICK ET AL;
RITAL TAGANI; WM HUFFORD ET UX; GERALDINE WILLARD; ETTA ORDER ET VIR; E.M. SMITH ET UX; GAIL MASON; MARY JANE DAVIS
LEASE ACREAGE 91 ACRES+; 307 ACRES+; 67.25 ACRES+; 13.5 ACRES+; 141 ACRES+; 131.5 ACRES+; 201 ACRES+; 108 ACRES+; 148.783 ACRES+; 47 ACRES+
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 6,410' TVD 18,063' MD
WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER
ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD
FORM WW-6 DENVER, CO 80202 CHARLESTON, WV 25313

WELL NO. 2H
CHARLEY WILSON ET UX LEASE
JAMES E. WEBB D.R. 221 PG. 17 T.A. 12 PAR. 3 84.89 AC. ±
01/05/2018

LATITUDE 39°15'00"

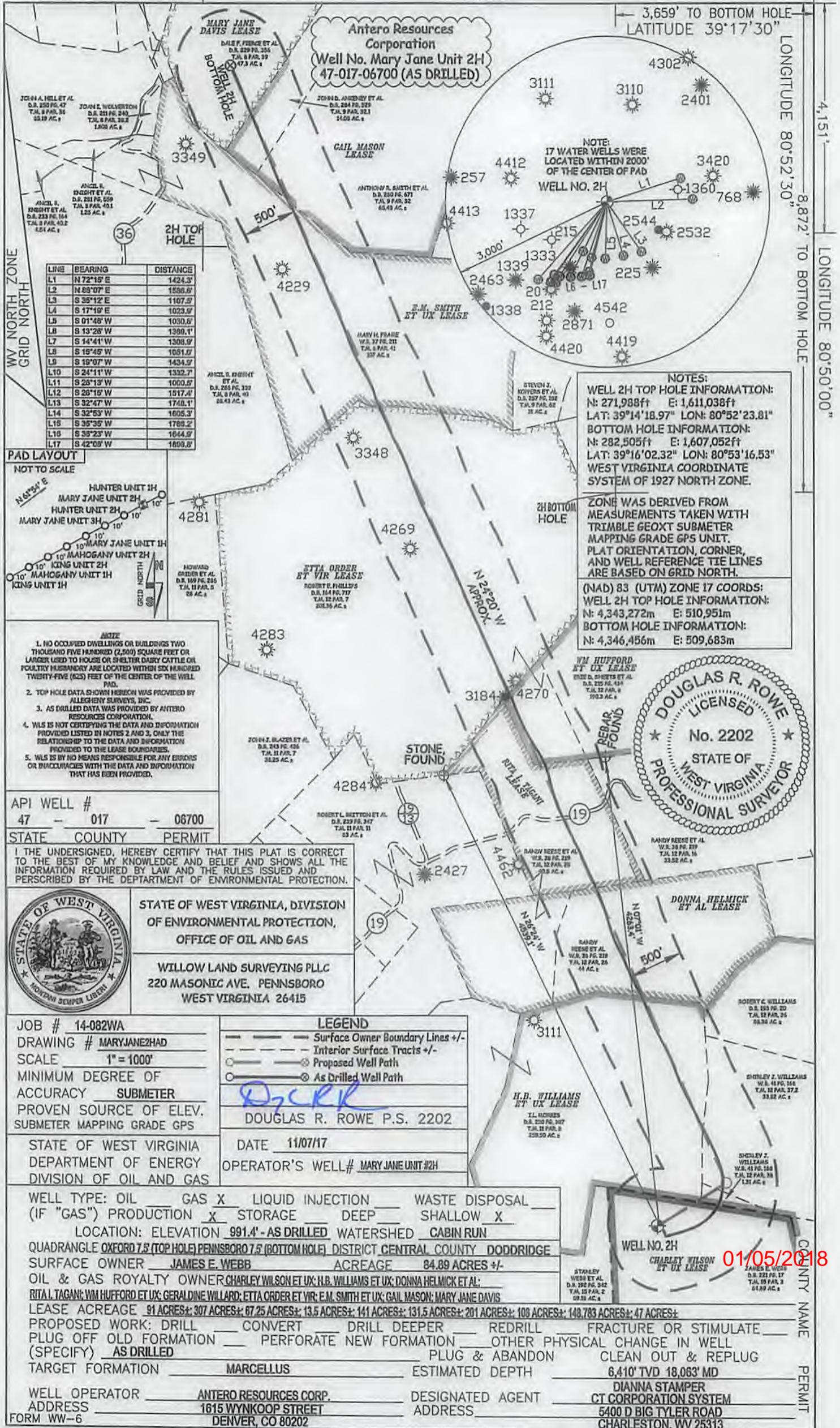
11,315'

3,659' TO BOTTOM HOLE
LATITUDE 39°17'30"

LONGITUDE 80°52'30"

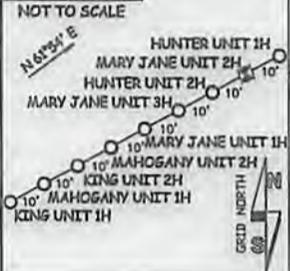
4,151'
LONGITUDE 80°50'00"

8,872' TO BOTTOM HOLE



LINE	BEARING	DISTANCE
L1	N 72°15' E	1424.3'
L2	N 85°07' E	1536.6'
L3	S 35°12' E	1107.5'
L4	S 17°10' E	1023.9'
L5	S 01°48' W	1030.5'
L6	S 13°28' W	1388.1'
L7	S 14°41' W	1308.9'
L8	S 15°45' W	1051.0'
L9	S 19°07' W	1434.9'
L10	S 24°11' W	1332.7'
L11	S 28°13' W	1000.5'
L12	S 28°15' W	1517.4'
L13	S 32°47' W	1748.1'
L14	S 32°53' W	1605.3'
L15	S 35°35' W	1789.2'
L16	S 39°23' W	1644.9'
L17	S 42°08' W	1899.8'

PAD LAYOUT



NOTES:
 WELL 2H TOP HOLE INFORMATION:
 N: 271,988ft E: 1,611,038ft
 LAT: 39°14'18.97" LON: 80°52'23.81"
 BOTTOM HOLE INFORMATION:
 N: 282,505ft E: 1,607,052ft
 LAT: 39°16'02.32" LON: 80°53'16.53"
 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: 4,343,272m E: 510,951m
 BOTTOM HOLE INFORMATION:
 N: 4,346,456m E: 509,683m

- 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.

API WELL #
 47 - 017 - 06700

STATE COUNTY PERMIT

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 # 14-082WA
 DRAWING # MARYJANE2HAD
 SCALE 1" = 1000'
 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 +/-
- Proposed Well Path
- As Drilled Well Path

DATE 11/07/17
 OPERATOR'S WELL# MARYJANE UNIT #2H

WELL TYPE: OIL ___ GAS LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS") PRODUCTION STORAGE ___ DEEP ___ SHALLOW
 LOCATION: ELEVATION 991.4' - AS DRILLED WATERSHED CABIN RUN
 QUADRANGLE OXFORD 7.5 (TOP HOLE) PENNSBORO 7.5 (BOTTOM HOLE) DISTRICT CENTRAL COUNTY DODDRIDGE
 SURFACE OWNER JAMES E. WEBB ACREAGE 84.89 ACRES +/-
 OIL & GAS ROYALTY OWNER CHARLEY WILSON ET UX; H.B. WILLIAMS ET UX; DONNA HELMICK ET AL;
 RITA I. TAGANI; WM HUFFORD ET UX; GERALD DINE WILARD; ETTA ORDER ET VIR; E.M. SMITH ET UX; GAIL MASON; MARY JANE DAVIS
 LEASE ACREAGE 91 ACRES+; 307 ACRES+; 67.25 ACRES+; 13.5 ACRES+; 141 ACRES+; 131.5 ACRES+; 201 ACRES+; 106 ACRES+; 148,783 ACRES+; 47 ACRES+
 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 6,410' TVD 18,063' MD

WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER
 ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD
 FORM WW-6 DENVER, CO 80202 CHARLESTON, WV 25313



01/05/2018

COUNTY NAME PERMIT