

WR-35  
Rev. 8/23/13

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

API 47 - 095 - 02479 County Tyler District Meade  
 Quad Middlebourne 7.5' Pad Name Rush Fork Pad Field/Pool Name -----  
 Farm name Joseph R. Rymer Jr. Well Number Robert Lee 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 4363035m Easting 502626m  
 Landing Point of Curve Northing 4363129.75m Easting 502368.40m  
 Bottom Hole Northing 4366378m Easting 501205m

Elevation (ft) 983' 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 &amp; 4% KCL

Mud - Polymer

Date permit issued 12/07/2017 Date drilling commenced 3/23/2018 Date drilling ceased 5/8/2018  
 Date completion activities began 5/18/2018 Date completion activities ceased 6/16/2018  
 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 30' Open mine(s) (Y/N) depths No  
 Salt water depth(s) ft 1510' 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  
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API 47-095-02479 Farm name Joseph R. Rymer Jr. Well number Robert Lee 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"	112'	New	94#, H-40	N/A	Y
Surface	17-1/2"	13-3/8"	382'	New	54#, J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	3618'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	18223'	New	23#, P-110	N/A	Y
Tubing		2-3/8"	6256'		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 <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor	Class A	204 sx	15.6	1.18	241	0'	8 Hrs.
Surface	Class A	450 sx	15.6	1.20	540	0'	8 Hrs.
Coal							
Intermediate 1	Class A	1538sx	15.6	1.18	1815	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	645sx (Lead) 1841sx (Tail)	14(Lead), 15.2 (Tail)	1.45 (Lead), 1.83 (Tail)	4304	~500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 18223' MD, 6203' TVD (BHL) 6252' (Deepest Point Drilled) Loggers TD (ft) 18223' MD

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

Plug back procedure N/A

Kick off depth (ft) 5617

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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<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>			
Marcellus	6139' (TOP)	TVD	6337' (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 7239.70 mcfpd Oil 195.11 bpd NGL --- bpd Water 562.56 bpd GAS MEASURED BY  Estimated  Orifice  Pilot

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

**\*PLEASE SEE ATTACHED EXHIBIT 3**


Please insert additional pages as applicable.

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

Logging Company Weatherford  
Address 410 17th Street STES 250 & 400 City Denver State CO Zip 82020

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 \_\_\_\_\_ Title Permitting Agent Date \_\_\_\_\_

API 47-095-02479 Farm Name Joseph R. Rymer Jr Well Number Robert Lee Unit 2H					
EXHIBIT 1					
Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	5/18/2018	18024	0	48	Marcellus
2	5/18/2018	17823	17993	48	Marcellus
3	5/18/2018	17623	17792	48	Marcellus
4	5/19/2018	17422	17591	48	Marcellus
5	5/19/2018	17221	17391	48	Marcellus
6	5/19/2018	17021	17190	48	Marcellus
7	5/20/2018	16820	16989	48	Marcellus
8	5/20/2018	16620	16789	48	Marcellus
9	5/20/2018	16419	16588	48	Marcellus
10	5/20/2018	16218	16387	48	Marcellus
11	5/21/2018	16018	16187	48	Marcellus
12	5/21/2018	15817	15986	48	Marcellus
13	5/21/2018	15616	15786	48	Marcellus
14	5/22/2018	15416	15585	48	Marcellus
15	5/22/2018	15215	15384	48	Marcellus
16	5/22/2018	15014	15184	48	Marcellus
17	5/23/2018	14814	14983	48	Marcellus
18	5/23/2018	14613	14782	48	Marcellus
19	5/23/2018	14412	14582	48	Marcellus
20	5/23/2018	14212	14381	48	Marcellus
21	5/24/2018	14011	14180	48	Marcellus
22	5/24/2018	13811	13980	48	Marcellus
23	5/24/2018	13610	13779	48	Marcellus
24	5/25/2018	13409	13578	48	Marcellus
25	5/25/2018	13209	13378	48	Marcellus
26	5/25/2018	13008	13177	48	Marcellus
27	5/25/2018	12807	12977	48	Marcellus
28	5/26/2018	12607	12776	48	Marcellus
29	5/26/2018	12406	12575	48	Marcellus
30	5/26/2018	12205	12375	48	Marcellus
31	5/26/2018	12005	12174	48	Marcellus
32	5/27/2018	11804	11973	48	Marcellus
33	5/27/2018	11604	11773	48	Marcellus
34	5/27/2018	11403	11572	48	Marcellus
35	5/27/2018	11202	11371	48	Marcellus
36	5/27/2018	11002	11171	48	Marcellus
37	5/27/2018	10801	10970	48	Marcellus
38	5/28/2018	10600	10770	48	Marcellus
39	5/28/2018	10400	10569	48	Marcellus
40	5/28/2018	10199	10368	48	Marcellus
41	5/29/2018	9998	10168	48	Marcellus
42	5/29/2018	9798	9967	48	Marcellus
43	5/30/2018	9597	9766	48	Marcellus
44	5/30/2018	9396	9566	48	Marcellus
45	5/30/2018	9196	9365	48	Marcellus
46	5/31/2018	8995	9164	48	Marcellus
47	5/31/2018	8795	8964	48	Marcellus
48	5/31/2018	8594	8763	48	Marcellus
49	5/31/2018	8393	8562	48	Marcellus
50	6/1/2018	8193	8362	48	Marcellus
51	6/1/2018	7992	8161	48	Marcellus
52	6/1/2018	7791	7961	48	Marcellus
53	6/1/2018	7591	7760	48	Marcellus
54	6/2/2018	7390	7559	48	Marcellus
55	6/2/2018	7189	7359	48	Marcellus
56	6/2/2018	6989	7158	48	Marcellus
57	6/2/2018	6788	6957	48	Marcellus
58	6/3/2018	6588	6757	48	Marcellus
59	6/3/2018	6387	6556	48	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 (bbls)	Amount of Nitrogen/ other (units)
1	5/18/2018	66.1	7889	5862	4959	323700	9148	N/A
2	5/18/2018	63.1	7910	5699	2985	509060	12668	N/A
3	5/18/2018	65.9	7840	5936	3143	507760	10962	N/A
4	5/19/2018	73.5	8054	5966	3397	505140	10678	N/A
5	5/19/2018	71.7	7873	6452	3218	507740	10516	N/A
6	5/19/2018	73	7975	5996	3410	504220	12743	N/A
7	5/20/2018	69.8	7781	0	3181	510940	10353	N/A
8	5/20/2018	69.4	7773	5796	3125	507800	10582	N/A
9	5/20/2018	68.9	7787	6097	3248	511680	10321	N/A
10	5/20/2018	75.6	7775	6664	3311	508220	10126	N/A
11	5/21/2018	75.9	7819	6604	3156	508040	10308	N/A
12	5/21/2018	70.8	7658	6260	3364	510360	10324	N/A
13	5/21/2018	72.9	7984	6183	3310	508040	10176	N/A
14	5/22/2018	75.3	7813	6717	3248	510750	10397	N/A
15	5/22/2018	70.9	7693	5660	3353	513750	10158	N/A
16	5/22/2018	75.4	8157	6660	3708	506520	14859	N/A
17	5/23/2018	71	7781	6708	3160	512580	10623	N/A
18	5/23/2018	70.3	7741	5835	3633	507600	10339	N/A
19	5/23/2018	71.1	7721	5991	3728	513775	10361	N/A
20	5/23/2018	71.5	7805	7183	3320	507220	10270	N/A
21	5/24/2018	72.6	7966	6793	3130	507545	10315	N/A
22	5/24/2018	70.4	7618	5993	3567	510820	10128	N/A
23	5/24/2018	72.2	7608	6763	3438	508060	10143	N/A
24	5/25/2018	71.7	7703	6776	3235	508160	10072	N/A
25	5/25/2018	73.9	7527	5733	3633	508120	10097	N/A
26	5/25/2018	72.6	7505	6845	3767	508040	10235	N/A
27	5/25/2018	70.2	7473	7167	3203	508380	10296	N/A
28	5/26/2018	72.7	7581	6491	3376	507150	10311	N/A
29	5/26/2018	73	7584	6079	3467	517130	11697	N/A
30	5/26/2018	75.5	7372	5993	3833	521380	10129	N/A
31	5/26/2018	73.2	7528	5911	3337	513980	11183	N/A
32	5/27/2018	74.3	7502	5960	3499	507260	10087	N/A
33	5/27/2018	75	7361	5652	3353	505900	10103	N/A
34	5/27/2018	66	7736	5971	3528	512895	10961	N/A
35	5/27/2018	75.8	7568	5421	3270	507385	10130	N/A
36	5/27/2018	75.3	7649	5629	3376	508330	10222	N/A
37	5/27/2018	78.5	7390	3599	3265	507850	10042	N/A
38	5/28/2018	75.9	7376	5224	3673	510720	10265	N/A
39	5/28/2018	75.4	7472	4536	3557	522060	10091	N/A
40	5/28/2018	76.6	6825	5544	3549	507960	10003	N/A
41	5/29/2018	75.6	7101	5463	3556	508400	10212	N/A
42	5/29/2018	78.4	7110	5012	3107	506900	10171	N/A
43	5/30/2018	75.9	7362	6549	3224	509020	10172	N/A
44	5/30/2018	75.8	6847	6252	3265	515180	10122	N/A
45	5/30/2018	75	6830	6790	3192	508600	10410	N/A
46	5/31/2018	77	6979	6622	3601	515160	11899	N/A
47	5/31/2018	75.9	7036	6777	3505	507520	10074	N/A
48	5/31/2018	75.5	7049	6796	3408	519680	10049	N/A
49	5/31/2018	72.7	7385	6386	3048	508080	11183	N/A
50	6/1/2018	77.8	7070	7597	3617	509140	12457	N/A
51	6/1/2018	75.2	7215	7649	3537	507260	10525	N/A
52	6/1/2018	73.6	7055	6567	3312	505460	10671	N/A
53	6/1/2018	71.8	7338	6653	3416	511160	12215	N/A
54	6/2/2018	75.4	6631	6540	3280	514760	10123	N/A
55	6/2/2018	76.6	6684	6170	3537	507100	9782	N/A
56	6/2/2018	74.6	6589	6594	3212	509480	10269	N/A
57	6/2/2018	76.9	6455	6467	3483	513980	9867	N/A
58	6/3/2018	76.8	6369	6942	3673	506160	9820	N/A
59	6/3/2018	78.5	6051	5481	3537	508020	10612	N/A
	AVG=	73	7,429	6,096	3,416	29,895,080	623,055	TOTAL

API 47-095-02479 Farm Name <u>Joseph R. Rymer Jr</u> Well Number <u>Robert Lee Unit 2H</u>				
EXHIBIT 3				
LITHOLOGY/ FORMATION	TOP DEPTH (TVD)	BOTTOM DEPTH (TVD)	TOP DEPTH (MD)	BOTTOM DEPTH (MD)
	From Surface	From Surface	From Surface	From Surface
Silty sandstone	70	350	70	350
Silty shale	350	730	350	730
Sandy siltstone	730	830	730	830
Silty shale	830	1,090	830	1,090
Calcareous shale	1,090	1,190	1,090	1,190
Shaly siltstone	1,190	1,330	1,190	1,330
Sandstone	1,330	1,470	1,330	1,470
Silty sandstone	1,470	1,530	1,470	1,530
Sandstone	1,530	1,550	1,530	1,550
Coal	1,550	1,630	1,550	1,630
Sandstone	1,630	1,750	1,630	1,750
Silty sandstone	1,750	1,770	1,750	1,770
Sandstone	1,770	1,777	1,770	1,783
Big Lime	1,777	1,931	1,783	1,939
Big Injun	1,931	2,586	1,939	2,598
Gantz Sand	2,586	2,618	2,598	2,630
Fifty Foot Sandstone	2,618	2,701	2,630	2,713
Gordon	2,701	3,083	2,713	3,097
Fifth Sandstone	3,083	3,140	3,097	3,155
Bayard	3,140	3,443	3,155	3,459
Warren	3,443	3,975	3,459	3,994
Speechley	3,975	4,421	3,994	4,443
Balltown	4,242	4,689	4,263	4,713
Bradford	4,421	4,689	4,443	4,713
Benson	4,689	4,829	4,713	4,854
Alexander	4,829	5,883	4,854	5,935
Rhinestreet	5,883	5,934	5,935	5,996
Sycamore	5,934	6,029	5,996	6,125
Middlesex	6,029	6,118	6,125	6,284
Burkett	6,118	6,138	6,284	3,636
Tully	6,138	6,139	3,636	6,337
Marcellus	6,139	NA	6,337	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.

## Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	5/18/2018
Job End Date:	6/3/2018
State:	West Virginia
County:	Tyler
API Number:	47-095-02479-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Robert H Lee 2H
Latitude:	39.41678000
Longitude:	-80.98402000
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,252
Total Base Water Volume (gal):	27,006,798
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	88.0671	None
Sand (Proppant)	Keane	Proppant	Crystalline silica: Quartz (SiO2)	14808-60-7	100.00000	11.68192	None
KFR-16FW	Keane	Friction Reducer	Water	7732-18-5	60.00000	0.04267	None
			Distillates (petroleum), hydrotreated light	64742-47-8	20.00000	0.01422	None
			ammonium chloride	12125-02-9	1.50000	0.00107	None
			oleic acid diethanolamide	93-83-4	1.50000	0.00107	None
			alcohols, C12-16, ethoxylated	68551-12-2	1.00000	0.00071	None
KWG-111LS	Keane	Gel	Distillates (petroleum), hydrotreated light	64742-47-8	55.00000	0.01610	None
			Guar gum	9000-30-0	55.00000	0.01610	None
Hydrochloric Acid (15%)	Keane	Acidizing	Hydrochloric Acid	7647-01-0	15.00000	0.01909	None
MBC-516W	Keane	Biocide					





Ingredient(s)	Listed Above	See Trade Name(s) List	Water	Glutaral	didecyltrimethylammonium chloride	quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl chlorides	alifonol	Methanol	Sodium persulfate	Ethylene glycol	dipropylene glycol, monomethyl ether	Ethoxylated alcohol	Cinnamaldehyde	formic acid	Tar bases, quinoline derivs., benzyl chloride-quaternized	soproyl alcohol	Citric acid	Acetic acid		
			7732-18-5	111-30-8	7173-51-5	68424-85-1	64-17-5	67-56-1	7775-27-1	107-21-1	34590-94-8	68131-39-5	104-55-2	64-18-6	72480-70-7	67-63-0	77-92-9	64-19-7		
			56.70000	26.70000	8.00000	5.30000	2.80000	30.00000	99.00000	40.00000	20.00000	10.00000	10.00000	10.00000	10.00000	5.00000	30.00000	5.00000		
			0.00496None	0.00233None	0.00070None	0.00046None	0.00024None	0.00389None	0.00045None	0.00011None	0.00006None	0.00003None	0.00003None	0.00003None	0.00003None	0.00001None	0.00024None	0.00004None		
<p>Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Not MSDS.</p>																				
Other Chemical(s)	Listed Above	See Trade Name(s) List																		
			64742-47-8	64742-47-8	64742-47-8	111-30-8	93-83-4	12125-02-9	88551-12-2	7173-51-5	68424-85-1	64-17-5	77-92-9	34590-94-8	64-18-6	72480-70-7	68131-39-5	104-55-2		
			55.00000	20.00000	26.70000	1.50000	1.50000	1.00000	8.00000	5.30000	2.80000	30.00000	20.00000	10.00000	10.00000	10.00000	10.00000	10.00000		
			0.01610	0.01422	0.00233	0.00107	0.00107	0.00071	0.00070	0.00046	0.00024	0.00024	0.00024	0.00006	0.00003	0.00003	0.00003	0.00003		

			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)

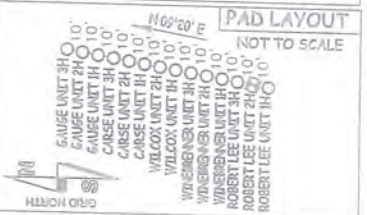
LATITUDE 39°27'30"

3,202'

Antero Resources Corporation  
Well No. Robert Lee Unit 2H

NOTES:  
WELL 2H TOP HOLE INFORMATION:  
N: 337,297ft E: 1,584,802ft  
LAT: 39°25'00.32" LON: 80°58'10.80"  
BOTTOM HOLE INFORMATION:  
N: 348,345ft E: 1,580,322ft  
LAT: 39°26'48.77" LON: 80°59'10.20"  
WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH 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: 4,363,035m E: 502,626m  
BOTTOM HOLE INFORMATION:  
N: 4,366,378m E: 501,205m



TM-PAR	SURFACE OWNER	DB/PG	ACREAGE
4-01	WSD Properties LLC	463/481	44.24 AC
4-11	Nancy Flesher	334/284	44.25 AC
4-12	WSD Properties LLC	463/481	39 AC
4-06	Coastal Forest Resources Co.	301/131	36 AC
4-17	Sharon McGrew	170/197	40 AC
4-18	Trevor Tallman	405/388	106 AC
4-24	Marilyn Spilker	WB60/430	49.24 AC
4-24.1	Terrell Starkey	WB60/430	10 AC
4-25	Terrell Starkey	372/322	42.21 AC
4-28	Terri Gload	332/346	42.21 AC
4-31	Howard Flesher	279/286	42.21 AC
5-02	Steven Anderson	AM5/342	79.467 AC
5-35	Nancy Bradford	323/251	59.05 AC
5-39	James Stinson	376/001	80.11 AC
7-06	Joseph Turbish	390/22	72.92 AC
7-10	Michael Fitzsimmons	336/764	161.63 AC
8-02	Charles Mossor	330/138	103.99 AC
8-2.1	Allen Moore	498/217	1.272 AC
8-2.2	Andrew Westbrook	324/313	1.88 AC
8-2.3	Wesley Smith	398/27	1.81 AC
8-2.4	Donald Robinson	330/471	98.07 AC
8-2.5	Nancy McEee	347/255	22.29 AC
8-33	Richard Brightwell	383/659	84.25 AC
8-34	Joseph Rymer	338/238	44.33 AC
8-35	Charles Mossor	365/562	0.25 AC
8-36	Theresa Wells	291/234	18.10 AC
8-51	Charles Mossor	343/505	39.85 AC

02/08/2019

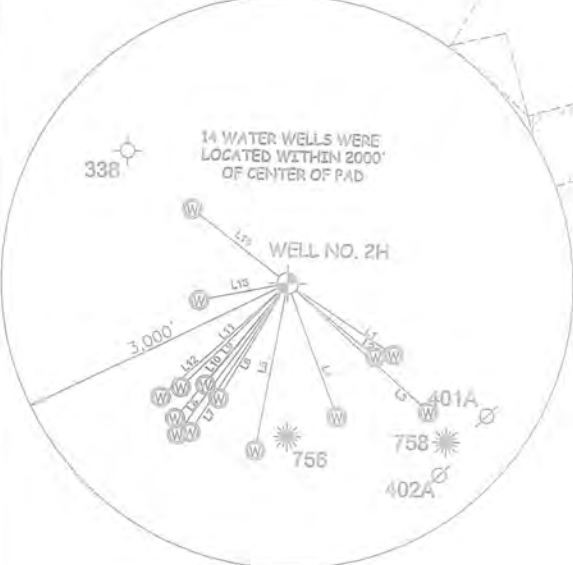
WV NORTH ZONE GRID NORTH

LONGITUDE 80°57'30"

4,172' TO BOTTOM HOLE

151.44'

LONGITUDE 80°57'30"



LINE	BEARING	DISTANCE
L1	S 89°59' E	1337.0'
L2	S 89°49' E	1188.5'
L3	S 89°14' E	1008.3'
L4	S 83°45' E	7459.8'
L5	S 80°14' W	1759.2'
L6	S 23°27' W	1421.0'
L7	S 22°14' W	1873.5'
L8	S 25°00' W	1873.5'
L9	S 37°50' W	1351.3'
L10	S 39°42' W	1858.1'
L11	S 44°57' W	1674.0'
L12	S 40°52' W	1601.2'
L13	S 70°10' W	846.7'
L14	N 63°07' W	1253.7'

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 # 13-111WA  
DRAWING # ROBERTLEE2HAD  
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 +/-  
Proposed Well Path  
As Drilled Well Path  
DOUGLAS R. ROWE P.S. 2202  
DATE 09/28/18  
OPERATOR'S WELL# ROBERT LEE UNIT #2H

NOTES  
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.

WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL 47 095 02479  
(IF "GAS") PRODUCTION X STORAGE DEEP SHALLOW X  
LOCATION: ELEVATION 983' AS BUILT WATERSHED OUTLET MIDDLE ISLAND CREEK STATE COUNTY PERMIT  
QUADRANGLE MIDDLEBOURNE 7.5' DISTRICT MEADE COUNTY TYLER  
SURFACE OWNER JOSEPH R. RYMER JR. ACREAGE 44.33 ACRES +/-  
OIL & GAS ROYALTY OWNER HOWARD H. HARCHA III; JAMES DOUGLAS WHITE; KERR-MCGEE OIL & GAS LEASE ACREAGE 44.33 AC +/-; 134.53 AC +/-; 201.8 AC +/-  
ONSHORE LP; JAMES T. STINSON ET UX; RITA G. JARVIS; TERRI A. GLOAD; NANCY LEE BRADFORD ET VIR; TERRELL LEE STARKEY; 80.11 AC +/-; 72.92 AC +/-; 84.3 AC +/-; 59.05 AC +/-; 42.21 AC +/-  
THE DALE E. WISE TRUST LTD; NORMA JEAN SWARTZ ET VIR; THE THELMA E. HADLEY TESTAMENTARY TRUST; JAMIE DENOON TRUST 106 AC +/-; 52 AC +/-; 84.04 AC +/-; 620.45 AC +/-  
PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE  
PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL PLUG & ABANDON CLEAN OUT & REPLUG  
(SPECIFY) AS DRILLED  
TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,203' TVD 18,223' MD  
WELL OPERATOR ANTERO RESOURCES CORP. ADDRESS 5400 D BIG TYLER ROAD CHARLESTON, WV 25313  
ADDRESS 1615 WYNKOOP ST. DENVER, CO 80202