

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

API 47-085-02422 County Tyler District Meade
 Quad Middlebourne 7.5' (TH), Pennsboro 7.5' (BH) Pad Name McKim Pad Field/Pool Name -----
 Farm name Jarret W. Shepherd et al Well Number Alli Unit 3H
 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 4359571m Easting 504201m
 Landing Point of Curve Northing 4359350m Easting 503818m
 Bottom Hole Northing 4355722m Easting 505230m

Elevation (ft) 1172' 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 4/4/2017 Date drilling commenced 6/29/2017 Date drilling ceased 12/6/2017
 Date completion activities began 7/21/2018 Date completion activities ceased 12/5/2018
 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 None Identified 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 by:

WR-35
Rev. 8/23/13

API 47-085 - 02422 Farm name Jarret W. Shepherd et al Well number Alli Unit 3H

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"	95'	New	94#, H-40	N/A	Y
Surface	17-1/2"	13-3/8"	534'	New	54.5#, J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2642'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	20053'	New	23#, HCP-110	N/A	Y
Tubing		2-3/8"	6824'		4.7#, L-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	284 sx	15.6	1.21	344	0'	8 Hrs.
Surface	Class A	620 sx	15.6	1.21	750	0'	8 Hrs.
Coal							
Intermediate 1	Class A	870 sx	15.6	1.22	1061	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	700 sx (Lead) 1955 sx (Tail)	13.5 (Lead), 15.2 (Tail)	1.45 (Lead), 1.94 (Tail)	4808	~500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 20053' MD, 6516' TVD (BHL), 6516' (Deepest Point Drilled) Loggers TD (ft) 20053' MD

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

Plug back procedure N/A

Kick off depth (ft) 6050'

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- 085 - 02422 Farm name Jarret W. Shepherd et al Well number Alli Unit 3H

PRODUCING FORMATION(S)	DEPTHS	
Marcellus	6424' (TOP) TVD	6892' (TOP) MD

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 3000 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 10931 mcfpd Oil 176 bpd NGL --- bpd Water 1 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**

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 Jane Lew State WV Zip 26378

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

Please insert additional pages as applicable.

Completed by Karin Cox Telephone 303-357-7310
Signature  Title Permitting Agent Date 4/17/2019

API 47-095-02422 Farm Name Jarret W. Shepherd et al Well Number Alli Unit 3H

EXHIBIT 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	7/21/2018	19659.4	19824.4	60	Marcellus
2	7/21/2018	19463.8	19628.8	60	Marcellus
3	7/22/2018	19268.2	19433.2	60	Marcellus
4	7/22/2018	19072.6	19237.6	60	Marcellus
5	7/22/2018	18877.0	19042.0	60	Marcellus
6	7/23/2018	18681.4	18846.4	60	Marcellus
7	7/23/2018	18485.8	18650.8	60	Marcellus
8	7/23/2018	18290.2	18455.2	60	Marcellus
9	7/24/2018	18094.6	18259.6	60	Marcellus
10	7/24/2018	17899.0	18064.0	60	Marcellus
11	7/25/2018	17703.4	17868.4	60	Marcellus
12	7/25/2018	17507.8	17672.8	60	Marcellus
13	7/25/2018	17312.2	17477.2	60	Marcellus
14	7/26/2018	17116.6	17281.6	60	Marcellus
15	7/26/2018	16921.0	17086.0	60	Marcellus
16	7/26/2018	16725.4	16890.4	60	Marcellus
17	7/26/2018	16529.8	16694.8	60	Marcellus
18	7/27/2018	16334.2	16499.2	60	Marcellus
19	7/27/2018	16138.6	16303.6	60	Marcellus
20	7/27/2018	15943.0	16108.0	60	Marcellus
21	7/28/2018	15747.4	15912.4	60	Marcellus
22	7/28/2018	15551.8	15716.8	60	Marcellus
23	7/28/2018	15356.2	15521.2	60	Marcellus
24	7/28/2018	15160.6	15325.6	60	Marcellus
25	7/29/2018	14965.0	15130.0	60	Marcellus
26	7/29/2018	14769.4	14934.4	60	Marcellus
27	7/29/2018	14573.8	14738.8	60	Marcellus
28	7/29/2018	14378.2	14543.2	60	Marcellus
29	7/30/2018	14182.6	14347.6	60	Marcellus
30	8/3/2018	13987.0	14152.0	60	Marcellus
31	8/3/2018	13791.4	13956.4	60	Marcellus
32	8/4/2018	13595.8	13760.8	60	Marcellus
33	8/4/2018	13400.2	13565.2	60	Marcellus
34	8/5/2018	13204.6	13369.6	60	Marcellus
35	8/5/2018	13009.0	13174.0	60	Marcellus
36	8/5/2018	12813.4	12978.4	60	Marcellus
37	8/5/2018	12617.8	12782.8	60	Marcellus
38	8/6/2018	12422.2	12587.2	60	Marcellus
39	8/6/2018	12226.6	12391.6	60	Marcellus
40	8/7/2018	12031.0	12196.0	60	Marcellus
41	8/7/2018	11835.4	12000.4	60	Marcellus
42	8/8/2018	11639.8	11804.8	60	Marcellus
43	8/8/2018	11444.2	11609.2	60	Marcellus
44	8/8/2018	11248.6	11413.6	60	Marcellus
45	8/9/2018	11053.0	11218.0	60	Marcellus
46	8/9/2018	10857.4	11022.4	60	Marcellus
47	8/9/2018	10661.8	10826.8	60	Marcellus
48	8/9/2018	10466.2	10631.2	60	Marcellus
49	8/10/2018	10270.6	10435.6	60	Marcellus
50	8/10/2018	10075.0	10240.0	60	Marcellus
51	8/10/2018	9879.4	10044.4	60	Marcellus
52	8/11/2018	9683.8	9848.8	60	Marcellus
53	8/11/2018	9488.2	9653.2	60	Marcellus
54	8/11/2018	9292.6	9457.6	60	Marcellus
55	8/11/2018	9097.0	9262.0	60	Marcellus
56	8/12/2018	8901.4	9066.4	60	Marcellus
57	8/12/2018	8705.8	8870.8	60	Marcellus
58	8/12/2018	8510.2	8675.2	60	Marcellus
59	8/13/2018	8314.6	8479.6	60	Marcellus
60	8/13/2018	8119.0	8284.0	60	Marcellus
61	8/13/2018	7923.4	8088.4	60	Marcellus
62	8/13/2018	7727.8	7892.8	60	Marcellus
63	8/14/2018	7532.2	7697.2	60	Marcellus
64	8/14/2018	7336.6	7501.6	60	Marcellus
65	8/14/2018	7141.0	7306.0	60	Marcellus
66	8/14/2018	6945.4	7110.4	60	Marcellus

API 47-095-02422 Farm Name Jarret W. Shepherd et al Well Number Alii Unit 3H

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	7/21/2018	60.90	7544	7886	3325	220280	7767.190	N/A
2	7/21/2018	63.60	7520	5757	4039	357520	10974.024	N/A
3	7/22/2018	62.59	7634	5626	3289	355320	9198.571	N/A
4	7/22/2018	73.86	7896	5625	3422	364240	7870.786	N/A
5	7/22/2018	72.30	7747	5545	3503	356440	7988.857	N/A
6	7/23/2018	69.20	7629	5564	3410	353000	9644.071	N/A
7	7/23/2018	66.80	7316	5634	3426	361060	8589.810	N/A
8	7/23/2018	67.70	7243	5943	3419	351530	8387.881	N/A
9	7/24/2018	74.70	7611	5802	3569	345980	7481.857	N/A
10	7/24/2018	71.28	7724	5939	3553	358960	7715.214	N/A
11	7/25/2018	70.10	7749	6318	3631	350940	8085.714	N/A
12	7/25/2018	73.40	7866	5497	3415	357980	8508.881	N/A
13	7/25/2018	69.57	7385	5942	3559	358860	8101.905	N/A
14	7/26/2018	70.18	7749	6206	3217	361040	7890.571	N/A
15	7/26/2018	74.10	7918	6530	3514	352500	7415.119	N/A
16	7/26/2018	72.70	7694	5646	3356	359660	7542.833	N/A
17	7/26/2018	73.25	7723	5870	3201	360460	7601.810	N/A
18	7/27/2018	73.30	7681	5815	3504	361340	8180.976	N/A
19	7/27/2018	74.90	7577	6046	3318	361660	8332.929	N/A
20	7/27/2018	71.15	7567	5957	3432	359700	7889.333	N/A
21	7/28/2018	71.09	7657	5883	3229	359400	7915.643	N/A
22	7/28/2018	77.70	7992	6160	3428	358520	7721.071	N/A
23	7/28/2018	74.10	8111	5881	3012	356640	7571.762	N/A
24	7/28/2018	71.39	7801	5863	3005	350560	7404.476	N/A
25	7/29/2018	72.10	7770	6044	3242	352220	7604.262	N/A
26	7/29/2018	73.08	7612	6148	3449	356380	8483.762	N/A
27	7/29/2018	75.02	7541	6020	3442	357980	8385.476	N/A
28	7/29/2018	71.77	7800	6261	3154	356260	8658.095	N/A
29	7/30/2018	77.41	8063	5775	3439	353920	7373.810	N/A
30	8/3/2018	73.24	7751	6126	3283	359880	7339.452	N/A
31	8/3/2018	74.39	7733	5961	3323	350700	7358.238	N/A
32	8/4/2018	75.00	7663	6415	3692	364360	7666.000	N/A
33	8/4/2018	76.40	7870	6222	3466	356980	7500.238	N/A
34	8/5/2018	75.34	7741	6220	3568	361020	7722.024	N/A
35	8/5/2018	75.10	7986	6111	3375	357620	7483.429	N/A
36	8/5/2018	75.30	7787	6249	3772	357640	7468.476	N/A
37	8/5/2018	75.00	7602	5523	3299	360140	7753.548	N/A
38	8/6/2018	77.70	7797	5549	4012	364120	7535.262	N/A
39	8/6/2018	74.65	7448	6347	4763	357000	7684.905	N/A
40	8/7/2018	75.50	7743	6221	3335	361400	7606.952	N/A
41	8/7/2018	61.50	8200	6435	4995	27000	8238.881	N/A
42	8/8/2018	75.49	7969	6356	3775	362800	7586.714	N/A
43	8/8/2018	75.20	7392	6125	3444	365500	8609.738	N/A
44	8/8/2018	76.31	7791	6270	2926	356800	7486.571	N/A
45	8/9/2018	74.81	7908	5288	4520	354560	8932.714	N/A
46	8/9/2018	73.60	7737	5815	4959	351500	7346.524	N/A
47	8/9/2018	74.10	7756	5638	3545	364020	7510.786	N/A
48	8/9/2018	75.00	7285	5484	3352	359660	7508.452	N/A
49	8/10/2018	80.20	7661	5742	3448	356880	7223.381	N/A
50	8/10/2018	80.50	7779	5413	3344	356580	7186.095	N/A
51	8/10/2018	76.47	6887	5289	3081	361460	7448.214	N/A
52	8/11/2018	77.33	7297	5184	3254	362700	7206.762	N/A
53	8/11/2018	78.70	7733	5825	3422	360660	7323.905	N/A
54	8/11/2018	79.30	7683	5830	3199	362000	7284.929	N/A
55	8/11/2018	73.76	7275	5887	4856	319040	7021.762	N/A
56	8/12/2018	74.89	7222	4951	3276	359100	8904.452	N/A
57	8/12/2018	78.60	7622	5247	3356	353780	7169.024	N/A
58	8/12/2018	77.97	7301	4997	3151	358240	7279.333	N/A
59	8/13/2018	72.60	7872	5443	4080	351920	9783.667	N/A
60	8/13/2018	79.20	7654	5517	3098	355060	7340.571	N/A
61	8/13/2018	78.60	7532	4943	3036	353460	7147.405	N/A
62	8/13/2018	75.40	7407	5409	3217	358220	8965.143	N/A
63	8/14/2018	74.60	7039	5768	2974	360440	7704.405	N/A
64	8/14/2018	79.41	7249	5756	2850	350640	7146.095	N/A
65	8/14/2018	79.96	7377	5645	2935	357260	7251.286	N/A
66	8/14/2018	76.77	3953	4643	2947	359020	7893.762	N/A
	AVG=	74	7,588	5,834	3,476	23,099,510	519,906	TOTAL

API 47-095-02422 Farm Name Jarret W. Shepherd et al Well Number Alli Unit 3H

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	0	227	0	227
Sandy siltstone	est 227	667	est 227	667
Sandstone	est 667	887	est 667	887
Silty Sandstone	est 887	997	est 887	997
limey siltstone	est 997	1,147	est 997	1,147
silty sandstone, tr. coal	est 1147	1,287	est 1147	1,287
silty sandstone	est 1287	1,367	est 1287	1,367
silty shale	est 1367	1,587	est 1367	1,587
sandstone, tr coal	est 1587	1,647	est 1587	1,647
silty sandstone	est 1647	1,667	est 1647	1,667
sandstone	est 1667	1,807	est 1667	1,807
sandy shale	est 1807	1,887	est 1807	1,887
shaly sand	est 1887	2,064	est 1887	2,096
Big Lime	2,064	2,315	2,096	2,361
Big Injun	2,315	2,646	2,361	2,704
Gantz Sand	2,646	2,816	2,704	2,879
Fifty Foot Sandstone	2,816	2,976	2,879	3,045
Gordon	2,976	3,083	3,045	3,158
Fifth Sandstone	3,083	3,497	3,158	3,596
Bayard	3,497	3,644	3,596	3,750
Warren	3,644	4,046	3,750	4,168
Speechley	4,046	4,337	4,168	4,471
Balltown	4,337	4,747	4,471	4,900
Bradford	4,747	5,128	4,900	5,303
Benson	5,128	5,344	5,303	5,528
Alexander	5,344	5,867	5,528	6,074
Rhinestreet	5,867	6,199	6,074	6,456
Sycamore	6,199	6,298	6,456	6,601
Middlesex	6,298	6,393	6,601	6,801
Burkett	6,393	6,415	6,801	6,864
Tully	6,415	6,424	6,864	6,892
Marcellus	6,424	NA	6,892	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:	7/21/2018
Job End Date:	8/15/2018
State:	West Virginia
County:	Tyler
API Number:	47-095-02422-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Alli Unit 3H
Latitude:	39.37962000
Longitude:	-80.95950300
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,516
Total Base Water Volume (gal):	22,857,938
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	88.93097	Density = 8.330
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.23011	

SAND- PREMIUM WHITE-40/70	Halliburton	Proppant				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	10.78885	
			Hydrochloric acid		7647-01-0		15.00000	0.02649	
			Hydrotreated light petroleum distillate		64742-47-8		30.00000	0.01944	
			Inorganic salt		Proprietary		30.00000	0.01944	
			Acrylamide acrylate polymer		Proprietary		30.00000	0.01944	Denise Tuck, Halliburton, 3000 N. Sam Houston Pkwy E., Houston, TX 77032, 281-871-6226
			Guar gum		9000-30-0		100.00000	0.01695	
			Ethylene glycol		107-21-1		60.00000	0.00782	
			Glutaraldehyde		111-30-8		30.00000	0.00247	
			Teimer		Proprietary		10.00000	0.00130	
			Sodium persulfate		7775-27-1		100.00000	0.00044	
			Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl chlorides		68424-85-1		5.00000	0.00041	
			Sodium polyacrylate		9003-04-7		1.00000	0.00013	
			Methanol		67-56-1		60.00000	0.00009	
			Ethanol		64-17-5		1.00000	0.00008	
			Modified thiourea polymer		Proprietary		30.00000	0.00004	
			Ethoxylated alcohols		Proprietary		30.00000	0.00004	
			Fatty acids, tall oil		Proprietary		30.00000	0.00004	
			Olefins		Proprietary		5.00000	0.00002	
			Propargyl alcohol		107-19-7		10.00000	0.00001	

LATITUDE 39°25'00"

9,815'

LATITUDE 39°22'30"

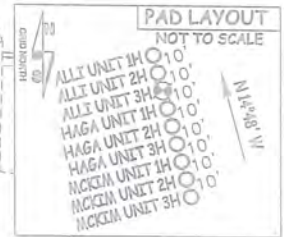
6,450' TO BOTTOM HOLE

Antero Resources Corporation Well No. Alli Unit 3H

AS DRILLED DATA:
WELL 3H TOP HOLE INFORMATION:
 N: 325,843ft E: 1,589,781ft
 LAT: 39°23'07.92" LON: 80°57'05.00"
BOTTOM HOLE INFORMATION:
 N: 313,157ft E: 1,592,946ft
 LAT: 39°21'03.05" LON: 80°56'22.11"
 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.

05/03/2019

(NAD) 83 (UTM) ZONE 17 COORDS:
WELL 3H TOP HOLE INFORMATION:
 N: 4,359,571m E: 504,201m
BOTTOM HOLE INFORMATION:
 N: 4,355,722m E: 505,230m



- 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 LEASEE BOUNDARIES.
 5. WLS IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS OR INACCURACIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.

JOB # 16-032WA
 DRAWING # ALLI3HAD
 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

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

LEGEND
 - - - - - Surface Owner Boundary Lines +/-
 - - - - - Interior Surface Tracts +/-
 - - - - - Proposed Well Path
 (O) (X) As Drilled Well Path

DOUGLAS R. ROWE P.S. 2202
 DATE 02/13/19
 OPERATOR'S WELL# ALLI UNIT 3H

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X
 LOCATION: ELEVATION 1,172' - AS BUILT WATERSHED OUTLET MIDDLE ISLAND CREEK
 QUADRANGLE MIDDLEBOURNE 7.5' (TH) PENNSBORO 7.5' (BH) DISTRICT MEADE COUNTY TYLER
 SURFACE OWNER JARRET W. SHEPHERD ET AL ACREAGE 83.14 ACRES +/-
 OIL & GAS ROYALTY OWNER JOELYNN FAMILY TRUST; RALPH D. HACKER; HUNTERS INC.;
 EVERETT MCCULLOUGH ET UX; EUGENE R. HILL TRUST; ALLIANCE PETROLEUM CORPORATION; BLANCHE STEWART; LEASE ACREAGE 431.53 AC±; 84.61 AC±; 471.20 AC±;
 188.72 AC±; 104.3 AC±; 87.15 AC±; 195 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 6,516' TVD 20,053' 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

8,798' TO BOTTOM HOLE

1,340'

LONGITUDE 80°55'00"

LONGITUDE 80°55'00"

COUNTY NAME

PERMIT