

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

4709502369

API 47 - 085 - 02369 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 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 4359574m Easting 504200m
 Landing Point of Curve Northing 4359215m Easting 503650m
 Bottom Hole Northing 4355411m Easting 505142m

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 8/17/2016 Date drilling commenced 6/29/2017 Date drilling ceased 11/28/2017
 Date completion activities began 7/16/2018 Date completion activities ceased 11/30/2018
 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 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 - 02369 Farm name Jarret W. Shepherd et al Well number Alli 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"	95'	New	94#, H-40	N/A	Y
Surface	17-1/2"	13-3/8"	533'	New	54.5#, J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2643'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	21144'	New	23#, HCP-110	N/A	Y
Tubing		2-3/8"	6987'		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	440 sx	15.6	1.21	532	0'	8 Hrs.
Coal							
Intermediate 1	Class A	860 sx	15.6	1.22	1049	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	755 sx (Lead) 2065 sx (Tail)	13.5 (Lead), 15.2 (Tail)	1.45 (Lead), 1.94 (Tail)	5101	~500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 21144' MD, 6515' TVD (BHL), 6516' (Deepest Point Drilled) Loggers TD (ft) 21144' MD

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

Plug back procedure N/A

Kick off depth (ft) 6200'

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

API 47- 085 - 02369 Farm name Jarret W. Shepherd et al Well number Alli Unit 2H

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
*PLEASE SEE ATTACHED EXHIBIT 1					

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
*PLEASE SEE ATTACHED EXHIBIT 2								

Please insert additional pages as applicable.

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PRODUCING FORMATION(S)	DEPTHS	
Marcellus	6425' (TOP) TVD	7042' (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 10700 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 47-095-02369 Farm Name Jarret W. Shepherd et al Well Number Alli Unit 2H					
EXHIBIT 1					
Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	7/16/2018	20755	20922	60	Marcellus
2	7/16/2018	20557	20724	60	Marcellus
3	7/16/2018	20359	20526	60	Marcellus
4	7/17/2018	20161	20328	60	Marcellus
5	8/2/2018	19963	20130	60	Marcellus
6	8/2/2018	19765	19932	60	Marcellus
7	8/3/2018	19567	19734	60	Marcellus
8	8/3/2018	19369	19536	60	Marcellus
9	8/4/2018	19171	19338	60	Marcellus
10	8/4/2018	18973	19140	60	Marcellus
11	8/4/2018	18775	18942	60	Marcellus
12	8/5/2018	18577	18744	60	Marcellus
13	8/5/2018	18379	18546	60	Marcellus
14	8/5/2018	18181	18348	60	Marcellus
15	8/6/2018	17983	18150	60	Marcellus
16	8/6/2018	17785	17952	60	Marcellus
17	8/6/2018	17588	17754	60	Marcellus
18	8/7/2018	17390	17557	60	Marcellus
19	8/8/2018	17192	17359	60	Marcellus
20	8/8/2018	16994	17161	60	Marcellus
21	8/8/2018	16796	16963	60	Marcellus
22	8/8/2018	16598	16765	60	Marcellus
23	8/9/2018	16400	16567	60	Marcellus
24	8/9/2018	16202	16369	60	Marcellus
25	8/9/2018	16004	16171	60	Marcellus
26	8/10/2018	15806	15973	60	Marcellus
27	8/10/2018	15608	15775	60	Marcellus
28	8/10/2018	15410	15577	60	Marcellus
29	8/10/2018	15212	15379	60	Marcellus
30	8/11/2018	15014	15181	60	Marcellus
31	8/11/2018	14816	14983	60	Marcellus
32	8/11/2018	14618	14785	60	Marcellus
33	8/11/2018	14420	14587	60	Marcellus
34	8/12/2018	14222	14389	60	Marcellus
35	8/12/2018	14024	14191	60	Marcellus
36	8/12/2018	13826	13993	60	Marcellus
37	8/13/2018	13628	13795	60	Marcellus
38	8/13/2018	13430	13597	60	Marcellus
39	8/13/2018	13232	13399	60	Marcellus
40	8/13/2018	13034	13201	60	Marcellus
41	8/14/2018	12836	13003	60	Marcellus
42	8/14/2018	12638	12805	60	Marcellus
43	8/14/2018	12440	12607	60	Marcellus
44	8/15/2018	12242	12409	60	Marcellus
45	8/15/2018	12044	12211	60	Marcellus
46	8/15/2018	11846	12013	60	Marcellus
47	8/15/2018	11648	11815	60	Marcellus
48	8/16/2018	11450	11617	60	Marcellus
49	8/16/2018	11252	11419	60	Marcellus
50	8/17/2018	11055	11221	60	Marcellus
51	8/17/2018	10857	11024	60	Marcellus
52	8/17/2018	10659	10826	60	Marcellus
53	8/17/2018	10461	10628	60	Marcellus
54	8/17/2018	10263	10430	60	Marcellus
55	8/17/2018	10065	10232	60	Marcellus
56	8/17/2018	9867	10034	60	Marcellus
57	8/18/2018	9669	9836	60	Marcellus
58	8/18/2018	9471	9638	60	Marcellus
59	8/18/2018	9273	9440	60	Marcellus
60	8/18/2018	9075	9242	60	Marcellus
61	8/18/2018	8877	9044	60	Marcellus
62	8/18/2018	8679	8846	60	Marcellus
63	8/19/2018	8481	8648	60	Marcellus
64	8/19/2018	8283	8450	60	Marcellus
65	8/19/2018	8085	8252	60	Marcellus
66	8/19/2018	7887	8054	60	Marcellus
67	8/19/2018	7689	7856	60	Marcellus
68	8/20/2018	7491	7658	60	Marcellus
69	8/20/2018	7293	7460	60	Marcellus
70	8/20/2018	7095	7262	60	Marcellus

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EXHIBIT 2								
Stage No.	Stimulations Date	Avg Pump Rate	Avg Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	(SIP) (PSI)	Amount of Proppant (lbs)	Amount of Water (bbbls)	Amount of Nitrogen/ other (units)
1	7/16/2018	64.87	7840	5074	3074	359880	8266	N/A
2	7/16/2018	72.5	7845	5588	3484	368880	10136	N/A
3	7/16/2018	72.2	7894	5425	3759	362560	8358	N/A
4	7/17/2018	66.6	8270	5793	3485	364060	10367	N/A
5	8/2/2018	71.2	8509	7671	3334	354300	8061	N/A
6	8/2/2018	73.7	8528	5473	3497	350300	7363	N/A
7	8/3/2018	72.8	8320	5404	3553	360700	7896	N/A
8	8/3/2018	70.86	8175	5827	3993	359240	7756	N/A
9	8/4/2018	71.55	8287	5449	4014	359260	7515	N/A
10	8/4/2018	74	8308	5289	3757	361860	7303	N/A
11	8/4/2018	72.72	8169	5279	3807	358980	7579	N/A
12	8/5/2018	71.9	8096	5624	3925	356940	7331	N/A
13	8/5/2018	72.3	8243	5580	4204	363964	7454	N/A
14	8/5/2018	73.24	8107	5494	3859	356510	7725	N/A
15	8/6/2018	73.2	8292	5626	3787	361520	7205	N/A
16	8/6/2018	71.7	8389	5389	4017	364880	9719	N/A
17	8/6/2018	70.61	8279	5703	3598	362620	7421	N/A
18	8/7/2018	73.4	8195	5840	3827	358400	7203	N/A
19	8/8/2018	71.35	8362	5782	3836	357840	7658	N/A
20	8/8/2018	73	8438	5786	4035	358560	7279	N/A
21	8/8/2018	70.4	8444	5914	4068	361365	7175	N/A
22	8/8/2018	70.33	8156	5656	3798	360660	7321	N/A
23	8/9/2018	70.3	8381	5623	4004	353240	7298	N/A
24	8/9/2018	69.7	8319	5414	3997	350940	7165	N/A
25	8/9/2018	71.23	8276	5759	3807	355460	7694	N/A
26	8/10/2018	72.27	8217	5859	3861	359840	7414	N/A
27	8/10/2018	74.9	8246	4797	4081	367740	7180	N/A
28	8/10/2018	72.6	8092	5522	4057	350560	7248	N/A
29	8/10/2018	74.4	8128	6109	3807	355020	7149	N/A
30	8/11/2018	74.17	8063	5530	3617	360980	7184	N/A
31	8/11/2018	74.8	8364	5181	4062	357940	7043	N/A
32	8/11/2018	72.9	8000	6693	3942	361920	7061	N/A
33	8/11/2018	73.75	7814	5903	3813	359800	7379	N/A
34	8/12/2018	72.76	7955	6221	3948	362540	7085	N/A
35	8/12/2018	75.7	8402	5715	3779	365240	7090	N/A
36	8/12/2018	75.36	8053	6629	3777	355180	7023	N/A
37	8/13/2018	73.75	7985	6706	3748	363120	7083	N/A
38	8/13/2018	75	7990	6350	3660	359100	6991	N/A
39	8/13/2018	72.4	8083	6692	3758	360100	7034	N/A
40	8/13/2018	71.6	7872	6741	3758	359200	7111	N/A
41	8/14/2018	73.3	7925	6673	3919	362440	7136	N/A
42	8/14/2018	75.97	8300	6717	3654	356360	7164	N/A
43	8/14/2018	73.51	7931	5919	3685	363300	7125	N/A
44	8/15/2018	70.37	7560	5547	3713	360500	6950	N/A
45	8/15/2018	72.09	7662	6324	3684	358880	7440	N/A
46	8/15/2018	72.18	7637	5529	3714	356760	7879	N/A
47	8/15/2018	71.77	7491	5343	3682	360280	7733	N/A
48	8/16/2018	74.82	7547	5528	3592	360900	7883	N/A
49	8/16/2018	73.72	7491	6802	3599	360220	7044	N/A
50	8/17/2018	77.17	8004	6518	3613	359740	7085	N/A
51	8/17/2018	76.12	7578	4986	3500	355780	7152	N/A
52	8/17/2018	74.94	7499	6340	3470	363920	7518	N/A
53	8/17/2018	73.05	7365	6479	3620	358280	7484	N/A
54	8/17/2018	76.25	7210	6515	3680	352580	7919	N/A
55	8/17/2018	77.31	6978	4047	3742	352020	7584	N/A
56	8/17/2018	76.98	7095	6338	3642	358620	7690	N/A
57	8/18/2018	77.45	7488	5304	3443	357260	6916	N/A
58	8/18/2018	77.07	7370	5772	3637	354740	6889	N/A
59	8/18/2018	77.8	7442	4465	3676	356600	7526	N/A
60	8/18/2018	79.31	7451	5422	3593	356940	6964	N/A
61	8/18/2018	79.8	7451	5352	3570	362280	6941	N/A
62	8/18/2018	80.77	7407	5256	3634	359200	6837	N/A
63	8/19/2018	78.78	7159	5333	3700	358740	6848	N/A
64	8/19/2018	78.74	7167	5263	3566	361080	6770	N/A
65	8/19/2018	77.67	7018	5218	3809	362000	6781	N/A
66	8/19/2018	77.65	6820	5528	3706	362360	6871	N/A
67	8/19/2018	78.87	6716	5607	3810	358880	6844	N/A
68	8/20/2018	76.97	6584	5640	3702	358960	7668	N/A
69	8/20/2018	78	6372	5680	4033	356040	6763	N/A
70	8/20/2018	78.36	6698	3954	4499	366260	6846	N/A
	AVG=	74	7,826	5,736	3,758	25,153,119	519,573	TOTAL

API 47-095-02369 Farm Name Jarret W. Shepherd et al Well Number Alli Unit 2H

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	2,068	est 1887	2,102
Big Lime	2,068	2,304	2,102	2,353
Big Injun	2,304	2,657	2,353	2,723
Gantz Sand	2,657	2,818	2,723	2,895
Fifty Foot Sandstone	2,818	2,988	2,895	3,082
Gordon	2,988	3,088	3,082	3,192
Fifth Sandstone	3,088	3,478	3,192	3,621
Bayard	3,478	3,629	3,621	3,786
Warren	3,629	4,034	3,786	4,233
Speechley	4,034	4,298	4,233	4,524
Balltown	4,298	4,744	4,524	5,023
Bradford	4,744	5,132	5,023	5,453
Benson	5,132	5,360	5,453	5,709
Alexander	5,360	5,863	5,709	6,269
Rhinestreet	5,863	6,205	6,269	6,668
Sycamore	6,205	6,301	6,668	6,793
Middlesex	6,301	6,392	6,793	6,945
Burkett	6,392	6,418	6,945	7,013
Tully	6,418	6,425	7,013	7,042
Marcellus	6,425	NA	7,042	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:	7/16/2018
Job End Date:	8/20/2018
State:	West Virginia
County:	Tyler
API Number:	47-095-02369-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	ALLI UNIT 2H
Latitude:	39.38560000
Longitude:	-80.95120000
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,517
Total Base Water Volume (gal):	22,956,645
Total Base Non Water Volume:	93,942



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	Halliburton	Base Fluid					
			Water	7732-18-5	100.00000	98.39558	Density = 8.34
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.26272	

SCALECHEK LP-70	Halliburton	Scale Inhibitor											
					Listed Below								
HYDROCHLORIC ACID	Halliburton	Solvent											
					Listed Below								
Exceletrate PS-2	Halliburton	Friction Reducer											
					Listed Below								
WG-36 GELLING AGENT	Halliburton	Gelling Agent											
					Listed Below								
MC B-8614	Halliburton	Biocide											
					Listed Below								
HAI-OS ACID INHIBITOR	Halliburton	Corrosion Inhibitor											
					Listed Below								
Sand-Common White-100 Mesh, SSA-2	Halliburton	Proppant											
					Listed Below								
SP BREAKER	Halliburton	Breaker											
					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	1.29270

			Hydrochloric acid	7647-01-0	60.00000	0.11985	
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.02252	
			Acrylamide acrylate polymer	Proprietary	30.00000	0.02252	
			Inorganic salt	Proprietary	30.00000	0.02252	
			Guar gum	9000-30-0	100.00000	0.01266	
			Ethylene glycol	107-21-1	60.00000	0.00881	
			Glutaraldehyde	111-30-8	30.00000	0.00273	
			Telomer	Proprietary	10.00000	0.00147	
			Quaternary ammonium compounds, benzyl-C12-16-alkylidimethyl chlorides	68424-85-1	5.00000	0.00046	
			Sodium persulfate	7775-27-1	100.00000	0.00029	
			Methanol	67-56-1	60.00000	0.00018	
			Sodium polyacrylate	9003-04-7	1.00000	0.00015	
			Ethanol	64-17-5	1.00000	0.00009	
			Modified thiourea polymer	Proprietary	30.00000	0.00005	
			Fatty acids, tall oil	Proprietary	30.00000	0.00005	
			Ethoxylated alcohols	Proprietary	30.00000	0.00005	
			Propargyl alcohol	107-19-7	10.00000	0.00002	
			Phosphoric acid	7664-38-2	0.10000	0.00001	
			Olefins	Proprietary	1.00000	0.00000	
			Acrylic acid	79-10-7	0.01000	0.00000	
			Sodium sulfate	7757-82-6	0.10000	0.00000	

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

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.
Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

LATITUDE 39°25'00"

9,818'

LATITUDE 39°22'30"

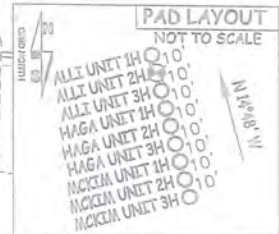
6,739' TO BOTTOM HOLE

Antero Resources Corporation Well No. Alli Unit 2H

AS DRILLED DATA:
WELL 2H TOP HOLE INFORMATION:
 N: 325,853ft E: 1,589,778ft
 LAT: 39°23'08.02" LON: 80°57'05.04"
BOTTOM HOLE INFORMATION:
 N: 312,140ft E: 1,592,641ft
 LAT: 39°20'52.95" LON: 80°56'25.79"
 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 2H TOP HOLE INFORMATION:
 N: 4,359,574m E: 504,200m
BOTTOM HOLE INFORMATION:
 N: 4,355,411m E: 505,142m



- NOTE:**
- 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.
 - TOP HOLE DATA SHOWN HEREIN WAS PROVIDED BY ALLEGHENY SURVEYS, INC.
 - AS DRILLED DATA WAS PROVIDED BY ANTERO RESOURCES CORPORATION.
 - 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.
 - WLS IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS OR INCONGRUENCES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.

LEGEND

- Surface Owner Boundary Lines +/-
- Interior Surface Tracts +/-
- Proposed Well Path
- As Drilled Well Path

JOB # 16-032WA
 DRAWING # ALLI2HAD
 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



DOUGLAS R. ROWE P.S. 2202
 DATE 02/13/19
 OPERATOR'S WELL# ALLI UNIT 2H

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS") PRODUCTION ___ 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 JOELYN FAMILY TRUST; RONALD P. HAMILTON; RONALD P. HAMILTON; RALPH D. HACKER; LEASE ACREAGE 431.53 AC±; 62.58 AC±; 73.08 AC±; 84.61 AC±; HUNTERS INC.; EVERETT MCCULLOUGH ET UX; EUGENE R. HILL TRUST; ALLIANCE PETROLEUM CORPORATION; BLANCHE STEWART; 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 6,515' TVD 21,144' 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