

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

4709502419

API 47-085-02419 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 McKim 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 4359556m Easting 504205m
 Landing Point of Curve Northing 4359592m Easting 504804m
 Bottom Hole Northing 4356152m Easting 506148m

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 1/21/2018
 Date completion activities began 10/8/2018 Date completion activities ceased 12/2/2018
 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 - 02419 Farm name Jarret W. Shepherd et al Well number McKim 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"	551'	New	54.5#, J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2665'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	19680'	New	23#, HCP-110	N/A	Y
Tubing		2-3/8"	7018'		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	490 sx	15.6	1.21	593	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	748 sx (Lead) 1863 sx (Tail)	13.5 (Lead), 15.2 (Tail)	1.45 (Lead), 1.94 (Tail)	4699	~500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 19680' MD, 6534' TVD (BHL), 6539' (Deepest Point Drilled) Loggers TD (ft) 19680' MD

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

Plug back procedure N/A

Kick off depth (ft) 6250'

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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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	6447' (TOP)	TVD	7077' (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 10290 mcfpd Oil 223 bpd NGL --- bpd Water 0 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.

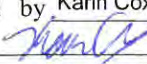
Drilling Contractor Frontier Drilling LLC
Address 562 Spring Run Road City Pennsboro State WV Zip 26415

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

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

API 47-095-02419 Farm Name Jarret W. Shepherd et al Well Number McKim Unit 2H

EXHIBIT 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	10/8/2018	19481.0	19579.00	60	Marcellus
2	10/8/2018	19278.5	19449.25	60	Marcellus
3	10/8/2018	19076.0	19246.75	60	Marcellus
4	10/9/2018	18873.5	19044.25	60	Marcellus
5	10/9/2018	18671.0	18841.75	60	Marcellus
6	10/10/2018	18468.5	18639.25	60	Marcellus
7	10/10/2018	18266.0	18436.75	60	Marcellus
8	10/11/2018	18063.5	18234.25	60	Marcellus
9	10/11/2018	17861.0	18031.75	60	Marcellus
10	10/12/2018	17658.5	17829.25	60	Marcellus
11	10/12/2018	17456.0	17626.75	60	Marcellus
12	10/13/2018	17253.5	17424.25	60	Marcellus
13	10/13/2018	17051.0	17221.75	60	Marcellus
14	10/14/2018	16848.5	17019.25	60	Marcellus
15	10/14/2018	16646.0	16816.75	60	Marcellus
16	10/15/2018	16443.5	16614.25	60	Marcellus
17	10/15/2018	16241.0	16411.75	60	Marcellus
18	10/16/2018	16038.5	16209.25	60	Marcellus
19	10/16/2018	15836.0	16006.75	60	Marcellus
20	10/17/2018	15633.5	15804.25	60	Marcellus
21	10/17/2018	15431.0	15601.75	60	Marcellus
22	10/17/2018	15228.5	15399.25	60	Marcellus
23	10/18/2018	15026.0	15196.75	60	Marcellus
24	10/18/2018	14823.5	14994.25	60	Marcellus
25	10/19/2018	14621.0	14791.75	60	Marcellus
26	10/19/2018	14418.5	14589.25	60	Marcellus
27	10/20/2018	14216.0	14386.75	60	Marcellus
28	10/20/2018	14013.5	14184.25	60	Marcellus
29	10/20/2018	13811.0	13981.75	60	Marcellus
30	10/21/2018	13608.5	13779.25	60	Marcellus
31	10/21/2018	13406.0	13576.75	60	Marcellus
32	10/21/2018	13203.5	13374.25	60	Marcellus
33	10/22/2018	13001.0	13171.75	60	Marcellus
34	10/22/2018	12798.5	12969.25	60	Marcellus
35	10/23/2018	12596.0	12766.75	60	Marcellus
36	10/23/2018	12393.5	12564.25	60	Marcellus
37	10/23/2018	12191.0	12361.75	60	Marcellus
38	10/24/2018	11988.5	12159.25	60	Marcellus
39	10/24/2018	11786.0	11956.75	60	Marcellus
40	10/25/2018	11583.5	11754.25	60	Marcellus
41	10/25/2018	11381.0	11551.75	60	Marcellus
42	10/25/2018	11178.5	11349.25	60	Marcellus
43	10/26/2018	10976.0	11146.75	60	Marcellus
44	10/26/2018	10773.5	10944.25	60	Marcellus
45	10/27/2018	10571.0	10741.75	60	Marcellus
46	10/27/2018	10368.5	10539.25	60	Marcellus
47	10/27/2018	10166.0	10336.75	60	Marcellus
48	10/27/2018	9963.5	10134.25	60	Marcellus
49	10/28/2018	9761.0	9931.75	60	Marcellus
50	10/28/2018	9558.5	9729.25	60	Marcellus
51	10/28/2018	9356.0	9526.75	60	Marcellus
52	10/28/2018	9153.5	9324.25	60	Marcellus
53	10/29/2018	8951.0	9121.75	60	Marcellus
54	10/29/2018	8748.5	8919.25	60	Marcellus
55	10/29/2018	8546.0	8716.75	60	Marcellus
56	10/30/2018	8343.5	8514.25	60	Marcellus
57	10/30/2018	8141.0	8311.75	60	Marcellus
58	10/30/2018	7938.5	8109.25	60	Marcellus
59	10/31/2018	7736.0	7906.75	60	Marcellus
60	10/31/2018	7533.5	7704.25	60	Marcellus
61	10/31/2018	7331.0	7501.75	60	Marcellus
62	10/31/2018	7128.5	7299.25	60	Marcellus

API 47-095-02419 Farm Name Jarret W. Shepherd et al Well Number McKim 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	10/8/2018	71.30	7865	0	3410	239060	7258.0476	N/A
2	10/8/2018	72.71	8152	5235	3611	331550	7132.9762	N/A
3	10/8/2018	74.20	8209	5416	3713	362280	7395.5952	N/A
4	10/9/2018	73.64	8117	5483	3628	357560	7675.5714	N/A
5	10/9/2018	72.10	8138	5722	3955	362960	7140.9286	N/A
6	10/10/2018	72.55	8015	6031	3838	355080	7218.7857	N/A
7	10/10/2018	73.00	8144	5939	4203	374030	7953.6429	N/A
8	10/11/2018	68.71	7853	5666	3611	366820	7582.4524	N/A
9	10/11/2018	75.30	8022	5268	4016	372760	7313.8095	N/A
10	10/12/2018	65.25	7892	5537	3661	368370	8108.4286	N/A
11	10/12/2018	72.20	8177	5473	3697	377520	8255.0000	N/A
12	10/13/2018	65.93	7773	5483	3506	357400	7614.1667	N/A
13	10/13/2018	75.90	8253	5434	3756	378700	7615.7857	N/A
14	10/14/2018	63.75	8049	6799	3382	362320	7503.8571	N/A
15	10/14/2018	70.50	7945	5522	3615	354660	8042.7381	N/A
16	10/15/2018	66.87	7629	5826	3637	358200	7648.9048	N/A
17	10/15/2018	74.30	7975	6030	3429	361440	7393.2381	N/A
18	10/16/2018	71.31	7578	7708	3759	357740	7227.2619	N/A
19	10/16/2018	68.35	7884	5022	4116	354450	7884.2619	N/A
20	10/17/2018	68.21	8006	6674	3875	364820	8061.7143	N/A
21	10/17/2018	66.54	7682	5658	4082	376380	8022.0000	N/A
22	10/17/2018	79.93	8077	4399	3952	363280	7342.1429	N/A
23	10/18/2018	69.02	7653	5423	3996	359260	8096.0000	N/A
24	10/18/2018	72.31	8027	4953	3706	365180	7693.1905	N/A
25	10/19/2018	70.82	7798	4883	4121	366280	7726.4048	N/A
26	10/19/2018	70.47	7698	4103	3895	362420	7195.6429	N/A
27	10/20/2018	72.31	7786	5981	3685	361460	7520.1190	N/A
28	10/20/2018	70.14	7450	5504	3489	361780	7819.1429	N/A
29	10/20/2018	73.77	8025	4001	3856	360800	7558.9524	N/A
30	10/21/2018	71.78	7939	5731	3773	359580	9504.7857	N/A
31	10/21/2018	71.21	7507	5498	3884	358600	7069.7857	N/A
32	10/21/2018	67.80	7903	6390	3400	357260	6931.4524	N/A
33	10/22/2018	75.01	7817	5830	4089	358380	7070.9524	N/A
34	10/22/2018	66.30	7461	4767	3822	361580	9646.7619	N/A
35	10/23/2018	76.90	7859	5908	3429	353100	7378.8571	N/A
36	10/23/2018	69.40	7385	5679	3621	356300	7389.5476	N/A
37	10/23/2018	72.60	7798	5398	3670	357460	6873.8571	N/A
38	10/24/2018	75.54	7609	6214	3470	355640	7169.5476	N/A
39	10/24/2018	73.80	8057	4890	3540	354640	6863.0476	N/A
40	10/25/2018	75.70	5743	5743	3646	355740	6811.3333	N/A
41	10/25/2018	72.81	7641	4030	3609	366220	6956.5000	N/A
42	10/25/2018	77.10	8066	4262	3788	361780	7009.9286	N/A
43	10/26/2018	74.75	7631	6048	3677	361900	7116.2857	N/A
44	10/26/2018	77.05	7995	5700	3741	359500	6945.5476	N/A
45	10/27/2018	77.26	8014	5428	3744	354220	6827.4286	N/A
46	10/27/2018	77.00	7847	4682	3796	352400	7105.4286	N/A
47	10/27/2018	77.58	8029	5301	3892	359340	7048.6190	N/A
48	10/27/2018	80.04	8049	6539	3651	355400	6660.3810	N/A
49	10/28/2018	80.56	7910	6690	3579	369360	6963.0000	N/A
50	10/28/2018	66.34	6513	5653	3512	354240	7097.9524	N/A
51	10/28/2018	78.42	7661	5360	3679	357860	6946.9048	N/A
52	10/28/2018	78.85	7648	5443	3774	369220	6949.2857	N/A
53	10/29/2018	78.63	7858	6342	3801	361720	6844.7619	N/A
54	10/29/2018	65.95	6962	5453	3432	363840	6962.1429	N/A
55	10/29/2018	74.65	7265	5360	4734	360200	8710.2143	N/A
56	10/30/2018	81.80	7628	5198	3632	358300	6217.0476	N/A
57	10/30/2018	74.77	7346	5720	3569	360240	7243.6429	N/A
58	10/30/2018	70.00	7188	4799	3315	362180	9032.3571	N/A
59	10/31/2018	77.61	7441	6623	3819	357840	7033.0476	N/A
60	10/31/2018	71.76	6745	5604	3520	360200	6843.0476	N/A
61	10/31/2018	76.97	7376	6416	3523	360480	6786.0000	N/A
62	10/31/2018	80.02	7237	6073	3575	360780	6731.1429	N/A
AVG=		73	7,726	5,483	3,724	22,250,060	459,741	TOTAL

API 47-095-02419 Farm Name Jarret W. Shepherd et al Well Number McKim 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	2,062	est 1887	2,098
Big Lime	2,062	2,298	2,098	2,347
Big Injun	2,298	2,643	2,347	2,708
Gantz Sand	2,643	2,811	2,708	2,884
Fifty Foot Sandstone	2,811	2,970	2,884	3,052
Gordon	2,970	3,082	3,052	3,172
Fifth Sandstone	3,082	3,470	3,172	3,595
Bayard	3,470	3,636	3,595	3,776
Warren	3,636	4,021	3,776	4,195
Speechley	4,021	4,234	4,195	4,429
Balltown	4,234	4,753	4,429	4,990
Bradford	4,753	5,107	4,990	5,372
Benson	5,107	5,323	5,372	5,607
Alexander	5,323	5,863	5,607	6,191
Rhinestreet	5,863	6,216	6,191	6,600
Sycamore	6,216	6,317	6,600	6,755
Middlesex	6,317	6,410	6,755	6,958
Burkett	6,410	6,432	6,958	7,024
Tully	6,432	6,447	7,024	7,077
Marcellus	6,447	NA	7,077	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:	10/8/2018
Job End Date:	10/31/2018
State:	West Virginia
County:	Tyler
API Number:	47-095-02419-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	McKim 2H
Latitude:	39.37962400
Longitude:	-80.95950300
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,539
Total Base Water Volume (gal):	20,239,414
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	88.22014	Density = 8.330
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.12436	

SP BREAKER	Halliburton	Breaker							
					Listed Below				
FDP-S1296-17	Halliburton	Corrosion Inhibitor							
					Listed Below				
MC B-8614	Halliburton	Biocide							
					Listed Below				
HYDROCHLORIC ACID	Halliburton	Solvent							
					Listed Below				
SAND-COMMON WHITE-100 MESH, SSA-2, BULK (100003676)	Halliburton	Proppant							
					Listed Below				
SCALECHEK LP-70	Halliburton	Scale Inhibitor							
					Listed Below				
WG-36 GELLING AGENT	Halliburton	Gelling Agent							
					Listed Below				
EXCELERATE PS-2	Halliburton	Friction Reducer							
					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	11.61163		
				Acrylamide acrylate polymer	Proprietary	30.00000	0.01822		Denise Tuck, Halliburton, 3000 N. Sam Houston Pkwy E., Houston, TX 77032, 281-871-6226
				Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.01822		
				Inorganic salt	Proprietary	30.00000	0.01822		
				Guar gum	9000-30-0	100.00000	0.01215		
				Hydrochloric acid	7647-01-0	15.00000	0.01092		
				Ethylene glycol	107-21-1	60.00000	0.00823		
				Glutaraldehyde	111-30-8	30.00000	0.00248		
				Telmer	Proprietary	10.00000	0.00137		
				Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl chlorides	68424-85-1	5.00000	0.00041		
				Sodium persulfate	7775-27-1	100.00000	0.00040		
				Methanol	67-56-1	100.00000	0.00014		
				Sodium polyacrylate	9003-04-7	1.00000	0.00014		
				Ethanol	64-17-5	1.00000	0.00008		
				Modified thiourea polymer	Proprietary	30.00000	0.00004		
				Phosphoric acid	7664-38-2	0.10000	0.00001		
				Propargyl alcohol	107-19-7	5.00000	0.00001		
				Ethoxylated alcohols	Proprietary	5.00000	0.00001		
				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"

9,802'

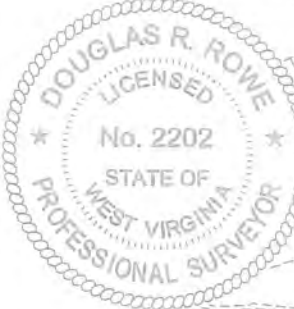
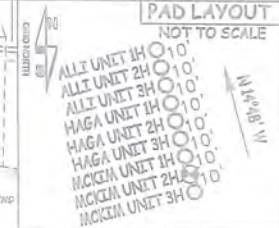
LATITUDE 39°22'30" 3,433' TO BOTTOM HOLE

Antero Resources Corporation Well No. McKim Unit 2H

AS DRILLED DATA: WELL 2H TOP HOLE INFORMATION: N: 325,795ft E: 1,589,793ft LAT: 39°23'07.44" LON: 80°57'04.84" BOTTOM HOLE INFORMATION: N: 314,518ft E: 1,595,984ft LAT: 39°21'16.98" LON: 80°55'43.71" 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: 4,359,556m E: 504,205m BOTTOM HOLE INFORMATION: N: 4,356,152m E: 506,148m



- 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.

JOB # 16-062WA DRAWING # MCKIM2HAD 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 WILLLOW LAND SURVEYING PLLC 220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

LEGEND: Surface Owner Boundary Lines +/- Interior Surface Tracts +/- Proposed Well Path As Drilled Well Path DOUGLAS R. ROWE P.S. 2202 DATE 02/13/19 OPERATOR'S WELL# MCKIM UNIT 12H

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 JOE LYNN FAMILY TRUST; JOE-DOM INC.; RUTH M. HUFFORD; ELLEN WILLIAMS; LEASE ACREAGE 431.53 AC.; 380 AC.; 93.78 AC.; 47 AC.; OLEY J. BISHOP; HAUGHT FAMILY TRUST; NORMAN FLEMING ET UX; JOHN A. MILLIGAN ET UX; BLANCHE STEWART 60 AC.; 323 AC.; 130 AC.; 44.5 AC.; 60 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 6,534' TVD 19,680' 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

7,386' TO BOTTOM HOLE

1,138'

LONGITUDE 80°55'00"

LONGITUDE 80°55'00"

COUNTY NAME

PERMIT