

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

API 47-095-02327 County Tyler District Ellsworth  
Quad Shirley 7.5' Pad Name Pierpoint Pad Field/Pool Name ----  
Farm name Lloyd C. Seckman Well Number Klondike Unit 1H  
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 4366963m Easting 512141m  
Landing Point of Curve Northing 4366788.480m Easting 511776.765m  
Bottom Hole Northing 4370111m Easting 510578m

Elevation (ft) 1201' 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 12/23/2015 Date drilling commenced 1/6/2016 Date drilling ceased 2/29/2016  
Date completion activities began 6/5/2016 Date completion activities ceased 7/7/2016  
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 256', 267' Open mine(s) (Y/N) depths No  
Salt water depth(s) ft 889', 2253' Void(s) encountered (Y/N) depths No  
Coal depth(s) ft None Cavern(s) encountered (Y/N) depths No  
Is coal being mined in area (Y/N) No

**APPROVED** reviewed by:  
NAME: [Signature]  
DATE: 7/11/16

API 47- 095 02327 Farm name Lloyd C. Seckman Well number Klondike Unit 1H

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	30"	20"	40'	New	106.5# J-55	N/A	Y
Surface	17-1/2"	13-3/8"	416'	New	48# H-40	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2531'	New	36# J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	18870'	New	23# P-110	N/A	Y
Tubing		2-3/8"	7065'		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	196 sx	15.6	1.18	38	0'	8 Hrs.
Surface	Class A	478 sx	15.6	1.18	289	0'	8 Hrs.
Coal							
Intermediate 1	Class A	983 sx	15.6	1.18	793	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	975 sx (Lead) 1921 sx (Tail)	13.5 (Lead), 15.2 (Tail)	1.44 (Lead), 1.84 (Tail)	3858	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 18870' MD, 6698' TVD (BHL); 6711' TVD (Deepest Point Drilled) Loggers TD (ft) 18821' MD  
 Deepest formation penetrated Marcellus Plug back to (ft) N/A  
 Plug back procedure N/A

Kick off depth (ft) 6499'

\*\* This is a subsequent well. Antero only runs wireline logs on one well on a multi-well pad (Morton Unit 1H API #47-017-06559). Please reference the wireline logs submitted with Form WR-35 for Morton Unit 1H. 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 \_\_\_\_\_

API 47- 095 - 02327 Farm name Lloyd C. Seckman Well number Klondike Unit 1H

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
			<b>SEE ATTACHED EXHIBIT 1</b>		

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)
			<b>SEE ATTACHED EXHIBIT 2</b>					

Please insert additional pages as applicable.

API 47- 095 - 02327 Farm name Lloyd C. Seckman Well number Klondike Unit 1H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>		
<u>Marcellus</u>	<u>6630' (TOP)</u>	<u>TVD</u>	<u>7131' (TOP)</u> <u>MD</u>

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 9842 mcfpd Oil 236 bpd NGL --- bpd Water 1227 bpd GAS MEASURED BY  Estimated  Orifice  Pilot

LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H <sub>2</sub> S, ETC)
	<u>0</u>		<u>0</u>		

**\*PLEASE SEE EXHIBIT 3**


Please insert additional pages as applicable.

Drilling Contractor Patterson - UTI Drilling Company, LLC  
Address 207 Carlton Dr. City Eighty-Four State PA Zip 15330

Logging Company Allied Horizontal Wireline Services  
Address 380 Bedford Rd. City North Huntingdon State PA Zip 15642

Cementing Company Allied Oil & Gas Services, LLC  
Address 1036 East Main St. City Bridgeport State WV Zip 26330

Stimulating Company US Well Services  
Address 533 Industrial Park Dr. City Jane Lew State WV Zip 26378

Please insert additional pages as applicable.

Completed by Natalie Komp Telephone 303-357-6820  
Signature  Title Permitting Agent Date 10/13/2016

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

## EXHIBIT 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	5-Jun-16	18,596	18,765	60	Marcellus
2	6-Jun-16	18,395	18,565	60	Marcellus
3	7-Jun-16	18,195	18,364	60	Marcellus
4	7-Jun-16	17,995	18,164	60	Marcellus
5	7-Jun-16	17,794	17,963	60	Marcellus
6	8-Jun-16	17,594	17,763	60	Marcellus
7	8-Jun-16	17,393	17,562	60	Marcellus
8	9-Jun-16	17,193	17,362	60	Marcellus
9	9-Jun-16	16,992	17,161	60	Marcellus
10	9-Jun-16	16,792	16,961	60	Marcellus
11	10-Jun-16	16,591	16,760	60	Marcellus
12	11-Jun-16	16,391	16,560	60	Marcellus
13	11-Jun-16	16,190	16,359	60	Marcellus
14	11-Jun-16	15,990	16,159	60	Marcellus
15	12-Jun-16	15,790	15,959	60	Marcellus
16	12-Jun-16	15,589	15,758	60	Marcellus
17	12-Jun-16	15,389	15,558	60	Marcellus
18	13-Jun-16	15,188	15,357	60	Marcellus
19	13-Jun-16	14,988	15,157	60	Marcellus
20	13-Jun-16	14,787	14,956	60	Marcellus
21	14-Jun-16	14,587	14,756	60	Marcellus
22	15-Jun-16	14,386	14,555	60	Marcellus
23	15-Jun-16	14,186	14,355	60	Marcellus
24	15-Jun-16	13,985	14,154	60	Marcellus
25	15-Jun-16	13,785	13,954	60	Marcellus
26	16-Jun-16	13,584	13,754	60	Marcellus
27	16-Jun-16	13,384	13,553	60	Marcellus
28	17-Jun-16	13,184	13,353	60	Marcellus
29	17-Jun-16	12,983	13,152	60	Marcellus
30	17-Jun-16	12,783	12,952	60	Marcellus
31	18-Jun-16	12,582	12,751	60	Marcellus
32	18-Jun-16	12,382	12,551	60	Marcellus
33	18-Jun-16	12,181	12,350	60	Marcellus
34	19-Jun-16	11,981	12,150	60	Marcellus
35	19-Jun-16	11,780	11,949	60	Marcellus
36	19-Jun-16	11,580	11,749	60	Marcellus
37	20-Jun-16	11,379	11,548	60	Marcellus
38	20-Jun-16	11,179	11,348	60	Marcellus
39	21-Jun-16	10,978	11,148	60	Marcellus
40	22-Jun-16	10,778	10,947	60	Marcellus
41	22-Jun-16	10,578	10,747	60	Marcellus
42	23-Jun-16	10,377	10,546	60	Marcellus
43	23-Jun-16	10,177	10,346	60	Marcellus
44	24-Jun-16	9,976	10,145	60	Marcellus
45	24-Jun-16	9,776	9,945	60	Marcellus
46	24-Jun-16	9,575	9,744	60	Marcellus
47	25-Jun-16	9,375	9,544	60	Marcellus
48	25-Jun-16	9,174	9,343	60	Marcellus
49	25-Jun-16	8,974	9,143	60	Marcellus
50	26-Jun-16	8,773	8,942	60	Marcellus
51	26-Jun-16	8,573	8,742	60	Marcellus
52	26-Jun-16	8,372	8,542	60	Marcellus
53	27-Jun-16	8,172	8,341	60	Marcellus
54	27-Jun-16	7,972	8,141	60	Marcellus
55	27-Jun-16	7,771	7,940	60	Marcellus
56	27-Jun-16	7,571	7,740	60	Marcellus
57	28-Jun-16	7,370	7,539	60	Marcellus
58	28-Jun-16	7,170	7,339	60	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-Jun-16	69.2	7,924	0	4,324	345,350	9,727	N/A
2	6-Jun-16	68.1	7,903	5,139	4,388	356,500	8,343	N/A
3	7-Jun-16	76	7,717	5,060	4,889	353,200	9,195	N/A
4	7-Jun-16	67.2	7,901	5,271	4,574	353,750	9,164	N/A
5	7-Jun-16	64	7,708	5,465	4,410	353,550	8,338	N/A
6	8-Jun-16	70	7,902	5,536	4,352	356,830	8,498	N/A
7	8-Jun-16	72	7,807	5,171	4,628	355,700	8,264	N/A
8	9-Jun-16	73	7,444	5,211	5,035	354,200	9,213	N/A
9	9-Jun-16	73	7,681	4,957	5,078	355,600	8,294	N/A
10	9-Jun-16	73	8,001	5,057	4,427	354,300	8,364	N/A
11	10-Jun-16	73.3	7,971	5,161	4,545	349,700	8,345	N/A
12	11-Jun-16	69	7,949	5,096	4,892	352,900	9,548	N/A
13	11-Jun-16	76.5	7,299	4,885	4,706	352,400	8,206	N/A
14	11-Jun-16	75	7,783	5,121	4,910	353,650	9,511	N/A
15	12-Jun-16	71	7,479	5,396	4,628	352,630	8,320	N/A
16	12-Jun-16	78.5	7,725	5,668	4,767	351,500	8,235	N/A
17	12-Jun-16	73	7,521	5,143	4,220	352,850	9,231	N/A
18	13-Jun-16	73	7,675	5,171	4,413	352,950	9,097	N/A
19	13-Jun-16	81.4	8,068	5,078	3,923	355,440	8,744	N/A
20	13-Jun-16	72	7,611	5,053	5,309	340,600	8,669	N/A
21	14-Jun-16	76	7,841	5,225	4,678	354,350	8,159	N/A
22	15-Jun-16	73	7,670	5,325	4,828	354,350	8,149	N/A
23	15-Jun-16	79.2	7,764	5,794	4,556	358,980	9,037	N/A
24	15-Jun-16	78.9	7,726	5,551	4,256	354,070	8,163	N/A
25	15-Jun-16	74	7,162	5,543	4,867	325,700	8,152	N/A
26	16-Jun-16	73	7,671	5,257	5,182	355,050	8,136	N/A
27	16-Jun-16	75	7,447	5,447	5,586	352,700	9,201	N/A
28	17-Jun-16	76	7,966	5,604	4,567	352,500	8,096	N/A
29	17-Jun-16	77.9	7,765	5,289	4,685	353,750	8,084	N/A
30	17-Jun-16	77	7,892	5,354	4,381	353,250	8,165	N/A
31	18-Jun-16	75	7,968	5,057	4,392	352,950	8,088	N/A
32	18-Jun-16	79.4	7,589	5,279	4,907	353,690	8,053	N/A
33	18-Jun-16	79	7,524	5,157	4,567	353,500	8,822	N/A
34	19-Jun-16	78	7,639	5,139	4,653	354,050	8,033	N/A
35	19-Jun-16	80.4	7,388	5,282	4,542	354,150	8,048	N/A
36	19-Jun-16	80	7,473	5,726	4,231	353,925	8,207	N/A
37	20-Jun-16	80	7,572	5,343	4,481	353,600	8,008	N/A
38	20-Jun-16	77.3	7,523	5,411	4,528	357,350	8,000	N/A
39	21-Jun-16	80.6	7,665	5,515	4,492	353,500	8,127	N/A
40	22-Jun-16	76.7	7,496	5,379	3,719	342,250	7,974	N/A
41	22-Jun-16	71.1	7,156	5,300	4,241	353,620	7,991	N/A
42	23-Jun-16	79	7,619	5,801	3,530	353,850	9,911	N/A
43	23-Jun-16	82.1	7,290	5,243	4,613	353,000	7,958	N/A
44	24-Jun-16	80.7	7,515	5,000	4,424	354,000	7,996	N/A
45	24-Jun-16	80.9	7,338	5,554	4,585	354,350	7,940	N/A
46	24-Jun-16	76.6	7,284	5,057	3,909	352,980	8,596	N/A
47	25-Jun-16	81.3	7,221	5,475	3,909	353,800	8,013	N/A
48	25-Jun-16	79.4	7,391	5,547	4,535	353,830	7,916	N/A
49	25-Jun-16	75.5	7,139	5,400	3,501	355,970	8,003	N/A
50	26-Jun-16	78.9	7,206	5,565	3,859	357,990	7,915	N/A
51	26-Jun-16	78.9	7,205	5,808	4,452	354,850	7,905	N/A
52	26-Jun-16	78	6,733	5,990	3,995	352,600	7,916	N/A
53	27-Jun-16	79	7,098	6,223	3,866	354,980	7,921	N/A
54	27-Jun-16	81	7,049	6,341	4,288	353,700	7,878	N/A
55	27-Jun-16	80	7,220	5,915	3,927	355,350	8,757	N/A
56	27-Jun-16	76.9	7,422	6,841	3,787	352,520	8,637	N/A
57	28-Jun-16	75.2	7,304	6,630	3,798	355,400	8,852	N/A
58	28-Jun-16	75	7,306	6,462	4,220	292,770	9,208	N/A
AVG=		75.2	7,668	5,174	4,576	15,511,735	8,497	TOTAL

## 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	256'	N/A	256'	N/A
Fresh Water	267'	N/A	267'	N/A
Siltstone	est. 0	296	est. 0	296
Siltstone w/trace coal	est. 296	316	est. 296	316
Siltstone	est. 316	336	est. 316	336
Sandstone	est. 336	376	est. 336	376
Siltstone w/trace coal	est. 376	466	est. 376	466
Sandstone	est. 466	716	est. 466	716
Sandstone/Siltstone	est. 716	956	est. 716	956
Limestone/Siltstone	est. 956	1,176	est. 956	1176
Siltstone/Sandstone w/trace coal	est. 1,176	1,216	est. 1,176	1216
Siltstone	est. 1,216	1,356	est. 1,216	1356
Sandstone	est. 1,356	1,496	est. 1,356	1496
Siltstone w/trace coal	est. 1,496	1,516	est. 1,496	1516
Sandstone/Siltstone	est. 1,516	1,916	est. 1,516	1916
Sandstone w/trace coal	est. 1,916	1,956	est. 1,916	1956
Sandstone/Siltstone	est. 1956	2,101	est. 1956	2106
Big Lime	2,101	2,211	2106	2216
Big Injun	2,211	2,695	2216	2700
Gantz Sand	2,695	2,834	2700	2839
Fifty Foot Sandstone	2,834	2,924	2839	2929
Gordon	2,924	3,283	2929	3288
Fifth Sandstone	3,283	3,324	3288	3329
Bayard	3,324	3,676	3329	3686
Warren	3,676	4,088	3686	4125
Speechley	4,088	4,784	4125	4884
Bradford	4,784	5,191	4884	5347
Benson	5,191	5,427	5347	5613
Alexander	5,427	5,580	5613	5784
Elk	5,580	6,001	5784	6267
Rhinestreet	6,001	6,305	6267	6623
Sycamore	6,305	6,474	6623	6834
Middlesex	6,474	6,573	6834	6994
Burkett	6,573	6,594	6994	7036
Tully	6,594	6,630	7036	7131
Marcellus	6,630	NA	7131	NA

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\*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:	6/5/2016
Job End Date:	6/28/2016
State:	West Virginia
County:	Tyler
API Number:	47-095-02327-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Klondike 1H
Latitude:	39.45206100
Longitude:	-80.85906100
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,711
Total Base Water Volume (gal):	21,501,186
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	Base Fluid	Water	7732-18-5	100.00000	89.44202	
Sand	J.S. Well Services, LLC	Proppant	Crystalline Silica, quartz	14808-60-7	100.00000	10.18617	
HCL Acid (12.6%-18.0%)	J.S. Well Services, LLC	Bulk Acid	Water	7732-18-5	87.50000	0.14363	
			Hydrogen Chloride	7647-01-0	18.00000	0.03431	
WFRA-405	J.S. Well Services	Friction Reducer	Water	7732-18-5	60.00000	0.04785	
			2-Propanoic acid, polymer with 28003-06-9 propenamide	28003-06-9	30.00000	0.02393	
			Hydrated light distillate (petroleum)	64742-47-8	30.00000	0.01926	
			Ethoxylated alcohol blend	68002-97-1	4.00000	0.00319	
LGC-15	J.S. Well Services	Gelling Agents	Guar Gum	9000-30-0	50.00000	0.03452	
			Petroleum Distillates	64742-47-8	60.00000	0.03269	
			Suspending agent (solid)	14808-60-7	3.00000	0.00528	



SI-1100s	J.S. Well Services	Scale Inhibitor	Surfactant	68439-51-0	3.00000	0.00207
			Water	7732-18-5	80.00000	0.01023
			Copolymer of Maleic and Acrylic acid	52255-49-9	10.00000	0.00151
			Potassium salt of diethylene triamine penta (methylene phosphonic acid)	15827-60-8	7.50000	0.00130
			Hexamethylene triamine penta (methylene phosphonic acid)	34690-00-1	5.00000	0.00083
			Phosphino carboxylic acid polymer	71050-62-9	5.00000	0.00083
			Hexamethylene diamine penta (methylene phosphonic acid)	23605-74-5	2.00000	0.00033
BIOCLEAR 2000	J.S. Well Services	Anti-Bacterial Agent				
			2,2-dibromo-3-nitropropionamide	10222-01-2	30.00000	0.00621
			Deionized Water	7732-18-5	28.00000	0.00237
AP One	J.S. Well Services	Gel Breakers				
			Ammonium Persulfate	7727-54-0	100.00000	0.00112
AI-302	J.S. Well Services	Acid Corrosion Inhibitors				
			Water	7732-18-5	95.00000	0.00032
			2-Propyn-1-ol compound with methyloxirane	38172-91-7	15.00000	0.00005

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)

LATITUDE 39°27'30"

7,265'

614' TO BOTTOM HOLE

LATITUDE 39°30'00"

LONGITUDE 80°52'30"

2,285'

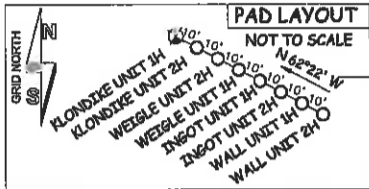
7,146' TO BOTTOM HOLE

LONGITUDE 80°50'00"

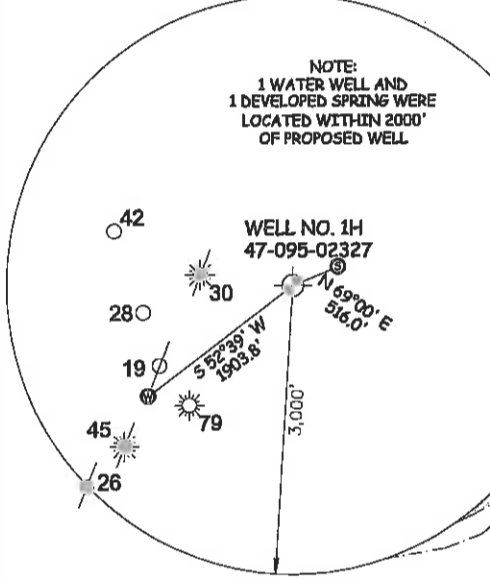
Antero Resources Corporation  
Well No. Klondike Unit 1H  
47-095-02327 (AS DRILLED)

AS DRILLED DATA:  
WELL 1H TOP HOLE INFORMATION:  
N: 349,663ft E: 1,616,241ft  
LAT: 39°27'07.42" LON: 80°51'32.62"  
BOTTOM HOLE INFORMATION:  
N: 360,081ft E: 1,611,285ft  
LAT: 39°28'49.63" LON: 80°52'37.83"  
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 1H TOP HOLE INFORMATION:  
N: 4,366,963m E: 512,141m  
BOTTOM HOLE INFORMATION:  
N: 4,370,111m E: 510,578m



- 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.



47 - 095 - 02327  
STATE COUNTY PERMIT



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 # 15-055WA  
DRAWING # KLONDIKE1HAD  
SCALE 1" = 1000'  
MINIMUM DEGREE OF ACCURACY SUBMETER  
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

LEGEND

- Surface Owner Boundary Lines +/-
- Interior Surface Tracts +/-
- Existing Fence
- Found monument, as noted
- Proposed Well Path
- As Drilled Well Path

DATE 10/05/16  
OPERATOR'S WELL# KLONDIKE UNIT #1H

STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS

WELL TYPE: OIL \_\_\_ GAS  LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
(IF "GAS") PRODUCTION \_\_\_ STORAGE \_\_\_ DEEP \_\_\_ SHALLOW   
LOCATION: ELEVATION 1,216' ORIGINAL - 1,201' AS DRILLED WATERSHED OUTLET MIDDLE ISLAND CREEK  
QUADRANGLE SHIRLEY 7.5 (TH) MIDDLEBOURNE 7.5 (BH) DISTRICT ELLSWORTH COUNTY TYLER  
SURFACE OWNER LLOYD C. SECKMAN ACREAGE 128.5 ACRES +/-

OIL & GAS ROYALTY OWNER LLOYD C. SECKMAN; ELIZABETH ANN GARNER; THOMAS L. BURKHART; LEASE ACREAGE 128.5 ACRES +/-; 80.805 ACRES +/-; 90 ACRES +/-  
JOSEPH SAYRE; JAMES C. RYMER; WVDNR; RONALD G. MERCER; WVDNR; PATSY FLETCHER; JOHN H. CRUMRINE ET AL 100 AC +/-; 143.88 AC +/-; 20 AC +/-; 405.37 AC +/-; 71.74 AC +/-; 60 AC +/-; 19.6 AC +/-; 258 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 6,698' TVD 18,870' MD  
WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER - CT CORPORATION SYSTEM  
ADDRESS 1615 WYNKOOP STREET DENVER, CO 80202 ADDRESS 5400 D BIG TYLER ROAD CHARLESTON, WV 25313

LATITUDE 39°27'30"

7,265'

614' TO BOTTOM HOLE

LATITUDE 39°30'00"

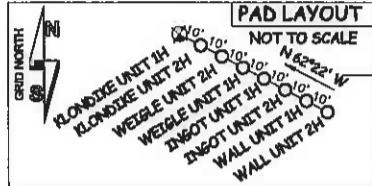
LONGITUDE 80°52'30"

LONGITUDE 80°50'00"

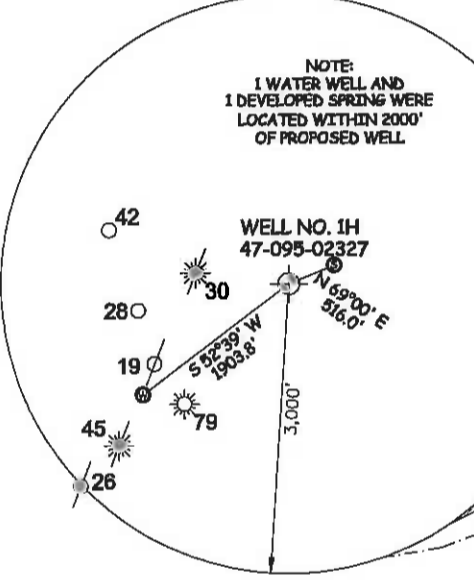
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NOTE:  
1 WATER WELL AND  
1 DEVELOPED SPRING WERE  
LOCATED WITHIN 2000'  
OF PROPOSED WELL

47 - 095 - 02327  
STATE COUNTY PERMIT



STATE OF WEST VIRGINIA, DIVISION  
OF ENVIRONMENTAL PROTECTION,  
OFFICE OF OIL AND GAS

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STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS

LEGEND

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DATE 10/05/16  
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