

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

API 47 - 095 - 02844 County Tyler District Ellsworth
Quad Porter Falls 7.5' Pad Name Ed Yost Field/Pool Name -----
Farm name Edward Yost Estate Well Number Spili Unit 2H

Operator (as registered with the OOG) Antero Resources Corporation
Address 1615 Wynkoop Street City Denver State CO Zip 80202
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As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4377611m Easting 514066m
Landing Point of Curve Northing 4378085.13m Easting 514393.35m
Bottom Hole Northing 4383640m Easting 512521m
WM Department of
Environmental Protection

Elevation (ft) 1233' 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 12/19/2022 Date drilling commenced 1/23/2023 Date drilling ceased 5/3/2023

Date completion activities began 7/10/2023 Date completion activities ceased 9/17/2023

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 203' Open mine(s) (Y/N) depths No

Salt water depth(s) ft 1810' Void(s) encountered (Y/N) depths No

Coal depth(s) ft N/A Cavern(s) encountered (Y/N) depths No

Is coal being mined in area (Y/N) No

APPROVED

Reviewed by: [Signature]
02/16/2024

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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	28"	20"	130'	New	91.59#, J-55	N/A	Y
Surface	17-1/2"	13-3/8"	378'	New	54.5#, J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	3524'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4" /8-1/2"	5-1/2"	26721'	New	23#, P-110	N/A	Y
Tubing		2-3/8"	6887'		4.7#, J-55		
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	178 sx	15.6	1.18	210	0'	8 Hrs.
Surface	Class C	390 sx	15.8	1.17	456	0'	8 Hrs.
Coal							
Intermediate 1	Class C	1230 sx	15.8	1.16	1427	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	4455 sx (Tail)	13.5 (Lead), 15.2(Tail)	1.25 (Tail)	5569	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 26721' MD, 6719' TVD (BHL), 6798' TVD (Deepest Point Drilled) Loggers TD (ft) 26721' MD
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 6259'

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

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WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS JAN 05 2024

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

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WERE TRACERS USED Yes No TYPE OF TRACER(S) USED N/A

02/16/2024

API 47- 095 - 02844 Farm name Edward Yost Estate Well number Spili 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								

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Please insert additional pages as applicable.

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<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>		
<u>Marcellus</u>	<u>6740' (TOP)</u>	<u>TVD</u>	<u>7229' (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 _____ psi Bottom Hole --- _____ psi DURATION OF TEST --- _____ hrs

OPEN FLOW Gas 7607.60 mcfpd Oil 392.34 bpd NGL --- bpd Water 683.65 bpd GAS MEASURED BY Estimated Orifice Pilot

<u>LITHOLOGY/ FORMATION</u>	<u>TOP</u>		<u>BOTTOM</u>		<u>DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H₂S, ETC)</u>
	<u>DEPTH IN FT NAME TVD</u>	<u>DEPTH IN FT TVD</u>	<u>DEPTH IN FT MD</u>	<u>DEPTH IN FT MD</u>	

***PLEASE SEE ATTACHED EXHIBIT 3**

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Please insert additional pages as applicable.

Drilling Contractor H & P Drilling
Address 912 N Eagle Valley Rd City Howard State PA Zip 16841

Logging Company Nine Energy Services
Address 6500 West Fwy City Fort Worth State TX Zip 76116

Cementing Company Halliburton
Address 3000 N Sam Houston Pkwy E. City Houston State TX Zip 77032

Stimulating Company Halliburton
Address 3000 N Sam Houston Pkwy E. City Houston State TX Zip 77032

Please insert additional pages as applicable.

Completed by Stefan Gaspar Telephone 303-357-6959
Signature *S Gaspar* Title Permitting Agent Date 12/19/2023

EXHIBIT 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	7/10/2023	26593	26549	60	Marcellus
2	7/10/2023	26509.55556	26344.3333	60	Marcellus
3	7/10/2023	26308.88889	26143.6667	60	Marcellus
4	7/13/2023	26108.22222	25943	60	Marcellus
5	7/14/2023	25907.55556	25742.3333	60	Marcellus
6	7/14/2023	25706.88889	25541.6667	60	Marcellus
7	7/14/2023	25506.22222	25341	60	Marcellus
8	7/14/2023	25305.55556	25140.3333	60	Marcellus
9	7/15/2023	25104.88889	24939.6667	60	Marcellus
10	7/15/2023	24904.22222	24739	60	Marcellus
11	7/15/2023	24703.55556	24538.3333	60	Marcellus
12	7/16/2023	24502.88889	24337.6667	60	Marcellus
13	7/16/2023	24302.22222	24137	60	Marcellus
14	7/16/2023	24101.55556	23936.3333	60	Marcellus
15	7/17/2023	23900.88889	23735.6667	60	Marcellus
16	7/17/2023	23700.22222	23535	60	Marcellus
17	7/17/2023	23499.55556	23334.3333	60	Marcellus
18	7/18/2023	23298.88889	23133.6667	60	Marcellus
19	7/18/2023	23098.22222	22933	60	Marcellus
20	7/18/2023	22897.55556	22732.3333	60	Marcellus
21	7/19/2023	22696.88889	22531.6667	60	Marcellus
22	7/19/2023	22496.22222	22331	60	Marcellus
23	7/19/2023	22295.55556	22130.3333	60	Marcellus
24	7/20/2023	22094.88889	21929.6667	60	Marcellus
25	7/20/2023	21894.22222	21729	60	Marcellus
26	7/20/2023	21693.55556	21528.3333	60	Marcellus
27	7/21/2023	21492.88889	21327.6667	60	Marcellus
28	7/21/2023	21292.22222	21127	60	Marcellus
29	7/21/2023	21091.55556	20926.3333	60	Marcellus
30	7/21/2023	20890.88889	20725.6667	60	Marcellus
31	7/21/2023	20690.22222	20525	60	Marcellus
32	7/22/2023	20489.55556	20324.3333	60	Marcellus
33	7/22/2023	20288.88889	20123.6667	60	Marcellus
34	7/23/2023	20088.22222	19923	60	Marcellus
35	7/23/2023	19887.55556	19722.3333	60	Marcellus
36	7/23/2023	19686.88889	19521.6667	60	Marcellus
37	7/24/2023	19486.22222	19321	60	Marcellus
38	7/24/2023	19285.55556	19120.3333	60	Marcellus
39	7/24/2023	19084.88889	18919.6667	60	Marcellus
40	7/24/2023	18884.22222	18719	60	Marcellus
41	7/25/2023	18683.55556	18518.3333	60	Marcellus
42	7/25/2023	18482.88889	18317.6667	60	Marcellus
43	7/25/2023	18282.22222	18117	60	Marcellus
44	7/25/2023	18081.55556	17916.3333	60	Marcellus
45	7/26/2023	17880.88889	17715.6667	60	Marcellus
46	7/26/2023	17680.22222	17515	60	Marcellus
47	7/26/2023	17479.55556	17314.3333	60	Marcellus
48	7/26/2023	17278.88889	17113.6667	60	Marcellus
49	7/27/2023	17078.22222	16913	60	Marcellus
50	7/27/2023	16877.55556	16712.3333	60	Marcellus
51	7/27/2023	16676.88889	16511.6667	60	Marcellus
52	7/28/2023	16476.22222	16311	60	Marcellus
53	7/28/2023	16275.55556	16110.3333	60	Marcellus
54	7/28/2023	16074.88889	15909.6667	60	Marcellus
55	7/28/2023	15874.22222	15709	60	Marcellus
56	7/29/2023	15673.55556	15508.3333	60	Marcellus
57	7/29/2023	15472.88889	15307.6667	60	Marcellus
58	7/29/2023	15272.22222	15107	60	Marcellus
59	7/30/2023	15071.55556	14906.3333	60	Marcellus
60	7/30/2023	14870.88889	14705.6667	60	Marcellus
61	7/30/2023	14670.22222	14505	60	Marcellus
62	7/30/2023	14469.55556	14304.3333	60	Marcellus
63	7/30/2023	14268.88889	14103.6667	60	Marcellus
64	7/31/2023	14068.22222	13903	60	Marcellus
65	7/31/2023	13867.55556	13702.3333	60	Marcellus
66	7/31/2023	13666.88889	13501.6667	60	Marcellus
67	7/31/2023	13466.22222	13301	60	Marcellus
68	8/1/2023	13265.55556	13100.3333	60	Marcellus
69	8/1/2023	13064.88889	12899.6667	60	Marcellus
70	8/1/2023	12864.22222	12699	60	Marcellus
71	8/2/2023	12663.55556	12498.3333	60	Marcellus
72	8/3/2023	12462.88889	12297.6667	60	Marcellus
73	8/3/2023	12262.22222	12097	60	Marcellus
74	8/3/2023	12061.55556	11896.3333	60	Marcellus
75	8/3/2023	11860.88889	11695.6667	60	Marcellus
76	8/4/2023	11660.22222	11495	60	Marcellus
77	8/4/2023	11459.55556	11294.3333	60	Marcellus
78	8/4/2023	11258.88889	11093.6667	60	Marcellus
79	8/4/2023	11058.22222	10893	60	Marcellus
80	8/5/2023	10857.55556	10692.3333	60	Marcellus
81	8/5/2023	10656.88889	10491.6667	60	Marcellus
82	8/5/2023	10456.22222	10291	60	Marcellus
83	8/5/2023	10255.55556	10090.3333	60	Marcellus
84	8/5/2023	10054.88889	9889.6667	60	Marcellus
85	8/6/2023	9854.22222	9689	60	Marcellus
86	8/6/2023	9653.55556	9488.3333	60	Marcellus
87	8/6/2023	9452.88889	9287.6667	60	Marcellus
88	8/6/2023	9252.22222	9087	60	Marcellus
89	8/7/2023	9051.55556	8886.3333	60	Marcellus
90	8/7/2023	8850.88889	8685.6667	60	Marcellus
91	8/7/2023	8650.22222	8485	60	Marcellus
92	8/7/2023	8449.55556	8284.3333	60	Marcellus
93	8/8/2023	8248.88889	8083.6667	60	Marcellus
94	8/8/2023	8048.22222	7883	60	Marcellus
95	8/8/2023	7847.55556	7682.3333	60	Marcellus
96	8/8/2023	7646.88889	7481.6667	60	Marcellus
97	8/9/2023	7446.22222	7281	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 (bbbls)	Amount of Nitrogen/other (units)
1	7/10/2023	81.45372	9433.422	6595.29	3566.618	167420	6450.3076	N/A
2	7/10/2023	85.74521	10097.9	4772.23	4096.534	414140	7821.3431	N/A
3	7/10/2023	87.33805	10223.57	5811.62	3916.505	422620	7795.7662	N/A
4	7/13/2023	84.84	10202	6328	4595	418720	7747.5324	N/A
5	7/14/2023	88.94	10390	3548	4067	414760	7487.336	N/A
6	7/14/2023	87.73369	10324.9	5076.16	3965.238	422140	7101.9036	N/A
7	7/14/2023	85.48	10621	5591	3861	416240	7359.2048	N/A
8	7/14/2023	85.80536	10503.4	5344.76	3938.753	420880	7450.9476	N/A
9	7/15/2023	85.0193	10481.5	5338.49	4002.001	414780	7510.9981	N/A
10	7/15/2023	87.17493	10241.67	4819.4	3803.383	423620	7254.0993	N/A
11	7/15/2023	89.1729	10309.53	4946.06	3928.78	423520	7396.4405	N/A
12	7/16/2023	92.28757	10496.89	5509.93	4350.758	422780	7644.4764	N/A
13	7/16/2023	90.07	10581	5249	4293	420300	7361.1395	N/A
14	7/16/2023	92.18	10487	5103	4496	419190	7434.0917	N/A
15	7/17/2023	89.16759	10357.14	5563.19	4376.222	418740	7374.6219	N/A
16	7/17/2023	91.68385	10316.27	5061.26	4351.171	402340	7356.6117	N/A
17	7/17/2023	91.94	10215	5447	4276	427660	7308.3721	N/A
18	7/18/2023	89.7706	10409	5381.22	4400.864	409980	7658.9007	N/A
19	7/18/2023	90.00975	10438.72	5824.84	4120.493	425800	7469.9807	N/A
20	7/18/2023	91.34672	10446.5	5466.79	4177.494	420220	7354.1448	N/A
21	7/19/2023	91.45	10395	4631	4352	409360	7223.0183	N/A
22	7/19/2023	89.87613	10298.56	5544.77	4432.038	400360	7094.5936	N/A
23	7/19/2023	83.4004	9404.667	5723.51	4055.595	416340	7426.0017	N/A
24	7/20/2023	81.6163	9615.189	5431.25	4294.335	413300	7384.1855	N/A
25	7/20/2023	82.54	9829	5896	3844	418520	7405.6776	N/A
26	7/20/2023	86.34949	9638.115	5066.23	3787.519	416400	7530.7702	N/A
27	7/21/2023	85.9106	10049.19	5632.87	4054.184	411940	7188.5717	N/A
28	7/21/2023	90.5936	10161.78	4764.52	3901.704	404680	7242.8536	N/A
29	7/21/2023	89.66506	10003.73	5066.99	3922.415	422100	7118.8055	N/A
30	7/21/2023	90.61	10146	5476	4026	416280	7153.0079	N/A
31	7/21/2023	90.99944	10022.26	3980.57	3933.717	403440	7009.8843	N/A
32	7/22/2023	89.40953	9770.119	4252.67	4057.089	399380	7122.235	N/A
33	7/22/2023	91.29189	10103.04	4093.2	4083.824	416500	7310.5752	N/A
34	7/23/2023	91.52713	9648.717	3707.85	4108.365	405600	7280.3948	N/A
35	7/23/2023	93.36	9926	3421	3833	418140	7338.8274	N/A
36	7/23/2023	85.86	9253	3603	3843	411420	8801.7757	N/A
37	7/24/2023	91.3	9694	4064	3960	418560	7356.6719	N/A
38	7/24/2023	93.99	9907	3631	3916	415080	7125.5169	N/A
39	7/24/2023	95.61	9824	5338	3973	415320	7210.0233	N/A
40	7/24/2023	94.8699	9776.392	5831.76	3648.867	417700	7288.4376	N/A
41	7/25/2023	95.08832	10248.96	5798.19	3656.681	411580	7089.7205	N/A
42	7/25/2023	95.01031	9662.026	3576.6	3926.692	403720	7673.3471	N/A
43	7/25/2023	96.88173	9746.824	3354.47	3942.703	416960	7438.4624	N/A
44	7/25/2023	95.89409	9829.464	5352.6	3885.334	402000	7097.8783	N/A
45	7/26/2023	94.0098	9488.998	3724.85	3661.084	419560	7354.0388	N/A
46	7/26/2023	93.45927	9416.281	3810.48	3624.385	415480	7263.3195	N/A
47	7/26/2023	90.04054	9414.552	4482.68	3952.272	410520	7077.7569	N/A
48	7/26/2023	88.85708	9094.226	4055.64	4025.186	422140	7440.1171	N/A
49	7/27/2023	97	9900	3853	3620	413140	7170.0781	N/A
50	7/27/2023	97.36141	9863.898	3812.67	4101.52	416120	7314.1148	N/A
51	7/27/2023	96.23035	9558.187	3280.26	4205.484	418020	7250.0943	N/A
52	7/28/2023	96.62	9114	3511	4218	417780	7192.6117	N/A
53	7/28/2023	96.36315	9194.5	3734.69	4091.478	410840	7202.7064	N/A
54	7/28/2023	96.49973	9015.897	3688.41	3835.233	417920	7325.026	N/A
55	7/28/2023	96.28917	9061.304	3725.06	4056.638	409180	7046.6795	N/A
56	7/29/2023	95.83	9047	3798	4127	417440	7041.0398	N/A
57	7/29/2023	96.98226	9034.159	3947.82	4293.218	409920	7486.5712	N/A
58	7/29/2023	97.75901	9092.204	4525.3	3985.446	414940	7163.9017	N/A
59	7/30/2023	95.29	8992	5004	4180	408840	7026.3471	N/A
60	7/30/2023	97.17	9035	5288	4329	411820	7027.6624	N/A
61	7/30/2023	96.47254	8713.622	3760.16	3983.547	412640	7105.9133	N/A
62	7/30/2023	96.16999	8720.017	5387.3	4012.433	413840	7184.9229	N/A
63	7/30/2023	93.33	8385	3625	4308	421040	8802.2405	N/A
64	7/31/2023	96.83	8682	3662	4029	411860	7023.6064	N/A
65	7/31/2023	98.65	8653	3393	3736	419300	7148.7031	N/A
66	7/31/2023	97.76	8596	3229	3570	417800	7175.5102	N/A
67	7/31/2023	97.39009	8704.071	5468.16	3839.122	423060	7150.3945	N/A
68	8/1/2023	96.93539	8743.766	3533.12	3648.611	416800	7069.731	N/A
69	8/1/2023	98.09272	8697.066	3297.78	3690.254	421900	7171.7902	N/A
70	8/1/2023	97.59102	8802.961	4968.65	4051.787	417180	7358.425	N/A
71	8/2/2023	96.79	8388	3774	3740	413460	7014.3171	N/A
72	8/3/2023	97.25	8304	3809	3623	415300	6979.626	N/A
73	8/3/2023	97.251	8560.425	4885.13	3355.267	416840	7247.7674	N/A
74	8/3/2023	97.91035	8726.958	5312.89	3517.504	413380	7203.9279	N/A
75	8/3/2023	97.01236	8716.806	5180.22	3530.023	418500	7034.7517	N/A
76	8/4/2023	97.15	8713	4732	3574	422240	7179.284	N/A
77	8/4/2023	85.42987	7561.594	4068.41	4091.883	415180	8765.6195	N/A
78	8/4/2023	94.75454	8155.562	5067.33	3788.442	417040	7181.1552	N/A
79	8/4/2023	97.14	8458	5168	3667	413600	6975.3802	N/A
80	8/5/2023	96.71	8358	5169	3710	413340	6922.1211	N/A
81	8/5/2023	96.46436	8249.015	3894.09	3817.646	397960	7020.8893	N/A
82	8/5/2023	98.46762	8239.933	5275.99	3567.082	415900	7294.1579	N/A
83	8/5/2023	97.24	8037	5491	3720	413000	7043.8517	N/A
84	8/5/2023	96.67801	8230.798	4650.18	3485.021	412840	6786.8086	N/A
85	8/6/2023	97.68	8254	5173	3512	414620	6919.144	N/A
86	8/6/2023	97.85171	8141.43	4714.04	3596.192	399550	6835.1831	N/A
87	8/6/2023	98.32	7983	4878	3561	412960	7121.5345	N/A
88	8/6/2023	97.49666	8004.889	5478.84	3688.795	419620	6865.4879	N/A
89	8/7/2023	97.14	7888	4626	3627	408000	6775.2783	N/A
90	8/7/2023	98.36365	7827.091	6072.3	3202.678	413240	6896.0576	N/A
91	8/7/2023	98.05897	8245.53	3999.31	3312.605	410040	6965.5331	N/A
92	8/7/2023	95.88858	7852.946	5674.16	3332.438	415100	7264.625	N/A
93	8/8/2023	92.84	7689	4956	3255	420960	6914.5262	N/A
94	8/8/2023	87.9762	6951.275	5708.96	3547.675	406820	7514.826	N/A
95	8/8/2023	96.31354	7179.401	4558.97	3282.934	412840	6949.7662	N/A
96	8/8/2023	97.23	7375	6561	3713	416380	7235.1793	N/A
97	8/9/2023	97.4	7313	4048	3184	409680	6910.8319	N/A
AVERAGE		93.1	9,237	4,717	3,889	39,977,800	705,660	0

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WV Department of
Environmental Protection

02/16/2024

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	170	70	170
Silty Shale	170	330	170	330
shaly sand	330	420	330	420
Shale	420	850	420	850
Dolomitic Shale	850	1,000	850	1,000
Shaly Siltstone	1,000	1,100	1,000	1,100
Silty Sandstone	1,100	1,320	1,100	1,320
Shaly Sand	1,320	1,470	1,320	1,470
Sandstone	1,470	1,720	1,470	1,720
Silty, Shaly, Sandstone	1,720	1,760	1,720	1,760
Sandstone, Tr Shale, Tr Coal	1,760	1,800	1,760	1,800
Silty Sandstone	1,800	1,880	1,800	1,880
Shaly Siltstone	1,880	2,086	1,880	2,141
Big Lime	2,116	2,954	2,171	3,038
Fifty Foot Sandstone	2,954	3,008	3,038	3,094
Gordon	3,008	3,212	3,094	3,303
Fifth Sandstone	3,212	3,457	3,303	3,556
Bayard	3,457	4,105	3,556	4,228
Speechley	4,105	4,339	4,228	4,472
Balltown	4,339	4,822	4,472	4,974
Bradford	4,822	5,099	4,974	5,263
Benson	5,099	5,486	5,263	5,665
Alexander	5,486	6,592	5,665	6,872
Sycamore	6,451	6,562	6,692	6,842
Middlesex	6,562	6,656	6,842	6,998
Burkett	6,656	6,673	6,998	7,035
Tully	6,673	6,740	7,035	7,229
Marcellus	6,740	NA	7,229	NA

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02/16/2024

LATITUDE 39°35'00" 882'

LATITUDE 39°37'30"

5,916' TO BOTTOM HOLE

8,258' TO BOTTOM HOLE

12,875'

LONGITUDE 80°50'00"

LONGITUDE 80°50'00"

COUNTY TYLER

PERMIT

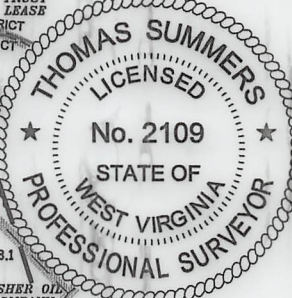
Antero Resources Corporation Well No. Spili Unit 2H

GREEN DISTRICT - WETZEL COUNTY	
6-10	CRISTEL STEELE
6-10.1	LUELLA RABEL
6-10.2	SVEN RABEL
6-15	MICHAEL HURLEY
6-16	MICHAEL HURLEY
ELLSWORTH DISTRICT - TYLER COUNTY	
1-3	DANIEL WITSCHY
1-4	DANIEL WITSCHY
3-1	WITSCHY REALTY INC.
3-7	JOYCE MORRIS
3-7.2	JEFFREY SHADE
3-15	JCW INC.
3-16	JCW INC.
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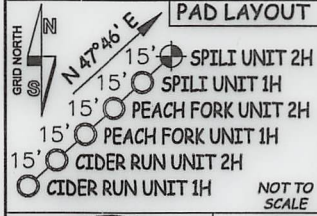
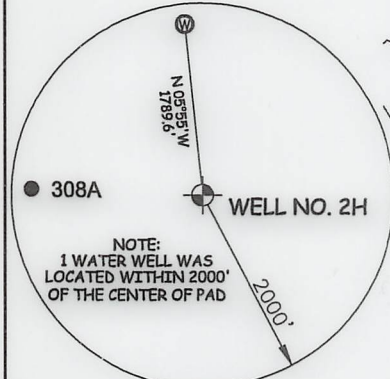
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 BOTTOM HOLE INFORMATION:
 N: 404,368ft E: 1,618,402ft
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 WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE. ZONE WAS DERIVED FROM MEASUREMENTS TAKEN WITH TRIMBLE GEOXT SUBMETER MAPPING GRADE GPS UNIT. PLAT ORIENTATION, CORNER, AND WELL REFERENCE TIE LINES ARE BASED ON GRID NORTH.

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WV NORTH ZONE GRID NORTH



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STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
 WILLLOW LAND SURVEYING PLLC
 220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

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.

JOB # 20-011WA
 DRAWING # SPILIZHAD
 SCALE 1" = 2000'
 MINIMUM DEGREE OF ACCURACY SUBMETER
 PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

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

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

THOMAS SUMMERS P.S. 2109
 DATE 11/09/23
 OPERATOR'S WELL# SPILI UNIT #2H

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL 47 095 02844
 (IF "GAS") PRODUCTION STORAGE DEEP SHALLOW STATE COUNTY PERMIT
 LOCATION: ELEVATION 1,233' - AS BUILT WATERSHED OUTLET MIDDLE ISLAND CREEK
 QUADRANGLE PORTER FALLS 7.5' DISTRICT ELLSWORTH COUNTY TYLER
 SURFACE OWNER EDWARD YOST ESTATE ACREAGE 109.06 ACRES +/-
 OIL & GAS ROYALTY OWNER FISHER OIL COMPANY LEASE ACREAGE 45.67 ACRES +/-

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 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 6,719' TVD 26,721' MD
 WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT KEVIN ELLIS
 ADDRESS 1615 WYNKOOP ST. ADDRESS 535 WHITE OAK BLVD.
 DENVER, CO 80202 BRIDGEPORT, WV 26330

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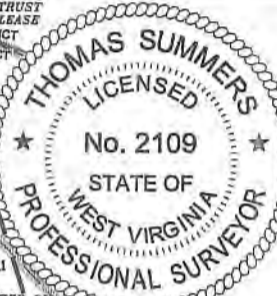
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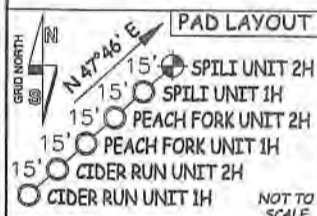
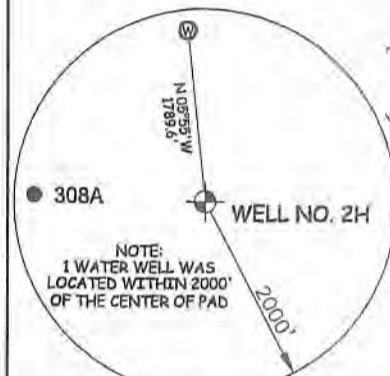
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WV NORTH ZONE
GRID NORTH



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 DRAWING # SPIL2HAD
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 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

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 DATE 11/09/23
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 ADDRESS 1615 WYNKOOP ST. ADDRESS 535 WHITE OAK BLVD.
 DENVER, CO 80202 BRIDGEPORT, WV 26330

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	7/10/2023
Job End Date:	8/9/2023
State:	West Virginia
County:	Tyler
API Number:	47-095-02844-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	SPILI UNIT 2H
Latitude:	39.54798000
Longitude:	-80.83641000
Datum:	WGS84
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,751
Total Base Water Volume (gal):	31,952,540
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
Produced Water	Halliburton	Base Fluid					
			Water	7732-18-5	100.00000	86.77969	Density = 8.34
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.17271	

MC B-8614A	MultiChem	Biocide					
				Listed Below			
OPTIFLO-II DELAYED RELEASE BREAKER	Halliburton	Breaker					
				Listed Below			
100 Mesh Permian	Halliburton	Proppant					
				Listed Below			
FDP-S1464-22	Halliburton	Friction Reducer					
				Listed Below			
WG-36 GELLING AGENT	Halliburton	Gelling Agent					
				Listed Below			
HYDROCHLORI C ACID, 22 BAUME	Halliburton	Solvent					
				Listed Below			
HAI-501	Halliburton	Acid Corrosion Inhibitor					
				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	13.01865	
			Hydrochloric acid	7647-01-0	30.00000	0.03923	
			Complex amine compound	Proprietary	60.00000	0.03377	

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			Hydrotreated distillate	Proprietary	30.00000	0.01688	
			Guar gum	9000-30-0	100.00000	0.00600	
			Ethoxylated alcohol	Proprietary	5.00000	0.00281	
			Fatty nitrogen derived amides	Proprietary	5.00000	0.00281	
			Ammonium chloride	12125-02-9	5.00000	0.00281	
			Glutaraldehyde	111-30-8	30.00000	0.00246	
			Sorbitan, mono-9-octadecenoate, (Z)	1338-43-8	1.00000	0.00056	
			Sorbitan monooleate polyoxyethylene derivative	9005-65-6	1.00000	0.00056	
			Alkyl (C12-16) dimethylbenzyl ammonium chloride	68424-85-1	5.00000	0.00041	
			Methanol	67-56-1	100.00000	0.00033	
			Ammonium persulfate	7727-54-0	100.00000	0.00013	
			Modified thiourea polymer	Proprietary	30.00000	0.00010	
			Mixture of dimer and trimer fatty acids of indefinite composition derived from tall oil	61790-12-3	30.00000	0.00010	
			Ethanol	64-17-5	1.00000	0.00008	
			Oxylated phenolic resin	Proprietary	30.00000	0.00004	
			Hexadecene	629-73-2	5.00000	0.00002	
			Propargyl alcohol	107-19-7	5.00000	0.00002	
			Ethoxylated alcohols	Proprietary	5.00000	0.00002	
			C.I. pigment Orange 5	3468-63-1	1.00000	0.00000	

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* 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)