

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

API 47-095-02827 County Tyler District Ellsworth
Quad Porter Falls 7.5' Pad Name Thin Air Field/Pool Name -----
Farm name Clara Suzanne Wallace & Rickie Wallace Well Number Embyr 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 4375453m Easting 517842m
Landing Point of Curve Northing 4375476.58m Easting 518240.57m
Bottom Hole Northing 4370748m Easting 519882m

Elevation (ft) 1200' 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

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Date permit issued 11/3/2022 Date drilling commenced 12/16/2022 Date drilling ceased 3/4/2023
Date completion activities began 4/27/2023 Date completion activities ceased 7/14/2023
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 328' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 1660' 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: Stephen May
10/26/23
04/12/2024

API 47-095 - 02827 Farm name Clara Suzanne Wallace & Rickie Wallace Well number Embry 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	28"	20"	125.5'	New	91.59#, J-55	N/A	Y
Surface	17-1/2"	13-3/8"	464'	New	54.5#, J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	3542'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4" /8-1/2"	5-1/2"	23940'	New	23#, P-110	N/A	Y
Tubing		2-3/8"	7006'		4.7#, P-110		
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	259 sx	15.6	1.18	306	0'	8 Hrs.
Surface	Class A	387 sx	15.6	1.20	464	0'	8 Hrs.
Coal							
Intermediate 1	Class A	1187 sx	15.6	1.20	1424	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	3867 sx (Tail)	13.5 (Lead), 15.2(Tail)	1.26 (Tail)	4872	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 23940' MD, 6949' TVD (BHL), 6950' TVD (Deepest Point Drilled) Loggers TD (ft) 23940' MD

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

Plug back procedure N/A

Kick off depth (ft) 6295'

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 _____

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WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

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

04/12/2024

Handwritten signatures and initials

API 47- 095 - 02827 Farm name Clara Suzanne Wallace & Rickie Wallace Well number Embry Unit 1H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>		
Marcellus	6837' (TOP)	TVD	7239' (TOP) MD

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 Oil NGL Water GAS MEASURED BY
 12228.71 mcfpd 411.20 bpd --- bpd 668.06 bpd Estimated Orifice Pilot

LITHOLOGY/ FORMATION	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**

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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 Schlumberger US Land
Address 3600 Briarpark Drive City Houston State TX Zip 77042

Stimulating Company Halliburton
Address 3000 W. Sam Houston Pkwy City Houston State TX Zip 76114

Please insert additional pages as applicable.

Completed by Stefan Gaspar Telephone 303-357-6959
Signature [Signature] Title Permitting Agent Date 10/13/23

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

04/12/2024
[Handwritten Signature]

EXHIBIT 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	4/27/2023	23814	23770	60	Marcellus
2	4/27/2023	23730.50407	23565.0244	60	Marcellus
3	4/28/2023	23529.52846	23364.0488	60	Marcellus
4	4/29/2023	23328.55285	23163.0732	60	Marcellus
5	4/29/2023	23127.57724	22962.0976	60	Marcellus
6	4/30/2023	22926.60163	22761.122	60	Marcellus
7	5/1/2023	22725.62602	22560.1463	60	Marcellus
8	5/1/2023	22524.65041	22359.1707	60	Marcellus
9	5/1/2023	22323.6748	22158.1951	60	Marcellus
10	5/2/2023	22122.69919	21957.2195	60	Marcellus
11	5/2/2023	21921.72358	21756.2439	60	Marcellus
12	5/2/2023	21720.74797	21555.2683	60	Marcellus
13	5/3/2023	21519.77236	21354.2927	60	Marcellus
14	5/3/2023	21318.79675	21153.3171	60	Marcellus
15	5/4/2023	21117.82114	20952.3415	60	Marcellus
16	5/4/2023	20916.84553	20751.3659	60	Marcellus
17	5/5/2023	20715.86992	20550.3902	60	Marcellus
18	5/5/2023	20514.89431	20349.4146	60	Marcellus
19	5/6/2023	20313.9187	20148.439	60	Marcellus
20	5/6/2023	20112.94309	19947.4634	60	Marcellus
21	5/7/2023	19911.96748	19746.4878	60	Marcellus
22	5/7/2023	19710.99187	19545.5122	60	Marcellus
23	5/8/2023	19510.01626	19344.5366	60	Marcellus
24	5/8/2023	19309.04065	19143.561	60	Marcellus
25	5/9/2023	19108.06504	18942.5854	60	Marcellus
26	5/9/2023	18907.08943	18741.6098	60	Marcellus
27	5/10/2023	18706.11382	18540.6341	60	Marcellus
28	5/10/2023	18505.13821	18339.6585	60	Marcellus
29	5/11/2023	18304.1626	18138.6829	60	Marcellus
30	5/11/2023	18103.18699	17937.7073	60	Marcellus
31	5/11/2023	17902.21138	17736.7317	60	Marcellus
32	5/12/2023	17701.23577	17535.7561	60	Marcellus
33	5/12/2023	17500.26016	17334.7805	60	Marcellus
34	5/12/2023	17299.28455	17133.8049	60	Marcellus
35	5/12/2023	17098.30894	16932.8293	60	Marcellus
36	5/13/2023	16897.33333	16731.8537	60	Marcellus
37	5/13/2023	16696.35772	16530.878	60	Marcellus
38	5/13/2023	16495.38211	16329.9024	60	Marcellus
39	5/13/2023	16294.4065	16128.9268	60	Marcellus
40	5/14/2023	16093.43089	15927.9512	60	Marcellus
41	5/14/2023	15892.45528	15726.9756	60	Marcellus
42	5/14/2023	15691.47967	15526	60	Marcellus
43	5/14/2023	15490.50407	15325.0244	60	Marcellus
44	5/15/2023	15289.52846	15124.0488	60	Marcellus
45	5/15/2023	15088.55285	14923.0732	60	Marcellus
46	5/15/2023	14887.57724	14722.0976	60	Marcellus
47	5/15/2023	14686.60163	14521.122	60	Marcellus
48	5/15/2023	14485.62602	14320.1463	60	Marcellus
49	5/16/2023	14284.65041	14119.1707	60	Marcellus
50	5/16/2023	14083.6748	13918.1951	60	Marcellus
51	5/16/2023	13882.69919	13717.2195	60	Marcellus
52	5/16/2023	13681.72358	13516.2439	60	Marcellus
53	5/17/2023	13480.74797	13315.2683	60	Marcellus
54	5/17/2023	13279.77236	13114.2927	60	Marcellus
55	5/17/2023	13078.79675	12913.3171	60	Marcellus
56	5/17/2023	12877.82114	12712.3415	60	Marcellus
57	5/17/2023	12676.84553	12511.3659	60	Marcellus
58	5/18/2023	12475.86992	12310.3902	60	Marcellus
59	5/18/2023	12274.89431	12109.4146	60	Marcellus
60	5/18/2023	12073.9187	11908.439	60	Marcellus
61	5/18/2023	11872.94309	11707.4634	60	Marcellus
62	5/19/2023	11671.96748	11506.4878	60	Marcellus
63	5/20/2023	11470.99187	11305.5122	60	Marcellus
64	5/21/2023	11270.01626	11104.5366	60	Marcellus
65	5/21/2023	11069.04065	10903.561	60	Marcellus
66	5/21/2023	10868.06504	10702.5854	60	Marcellus
67	5/21/2023	10667.08943	10501.6098	60	Marcellus
68	5/21/2023	10466.11382	10300.6341	60	Marcellus
69	5/22/2023	10265.13821	10099.6585	60	Marcellus
70	5/22/2023	10064.1626	9898.6829	60	Marcellus
71	5/22/2023	9863.18699	9697.7073	60	Marcellus
72	5/22/2023	9662.21138	9496.7317	60	Marcellus
73	5/23/2023	9461.23577	9295.7561	60	Marcellus
74	5/23/2023	9260.26016	9094.78049	60	Marcellus
75	5/23/2023	9059.28455	8893.80488	60	Marcellus
76	5/23/2023	8858.30894	8692.82927	60	Marcellus
77	5/24/2023	8657.33333	8491.85366	60	Marcellus
78	5/24/2023	8456.35772	8290.87805	60	Marcellus
79	5/24/2023	8255.38211	8089.90244	60	Marcellus
80	5/24/2023	8054.40650	7888.92683	60	Marcellus
81	5/24/2023	7853.43089	7687.95122	60	Marcellus
82	5/25/2023	7652.45528	7486.97561	60	Marcellus
83	5/25/2023	7451.47967	7286	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	4/27/2023	71.59	9815	8105	3664	168800	5186.8702	N/A
2	4/27/2023	82.03039	9860.979	5498.01	3970.318	411080	7803.3621	N/A
3	4/28/2023	84.46879	10496.2	6900.37	3731.847	395330	7077.6848	N/A
4	4/29/2023	90.52231	10150.86	6769.88	3779.001	395700	8423.644	N/A
5	4/29/2023	90.41942	10172.26	5686.18	3919.719	414590	7287.041	N/A
6	4/30/2023	94.66693	10501.18	5986.89	3940.006	417140	7315.9183	N/A
7	5/1/2023	94.01893	10430.8	6579.79	3693.612	415140	7267.3181	N/A
8	5/1/2023	94.93	10541	5876	3923	410910	7295.8098	N/A
9	5/1/2023	94.54378	10490.41	6141.72	3744.857	416500	7247.0669	N/A
10	5/2/2023	93.5109	10329.72	6018.84	3844.619	399640	7100.5557	N/A
11	5/2/2023	95.48	10464	5731	3985	415420	7431.4645	N/A
12	5/2/2023	94.48159	10435.73	5981.52	3990.868	415540	7282.549	N/A
13	5/3/2023	95.17369	10282.07	6261.42	4156.621	412320	7307.2417	N/A
14	5/3/2023	94.43532	10321.04	6095.55	3940.387	411720	8353.5202	N/A
15	5/4/2023	94.86	10423	6082	3631	410550	7413.8867	N/A
16	5/4/2023	96.42699	10407.02	6216.23	3733.682	411800	7372.5526	N/A
17	5/5/2023	96.55	10294	5947	3730	415420	7312.9814	N/A
18	5/5/2023	94.36706	10169.64	6271.55	4068.788	397400	7189.5695	N/A
19	5/6/2023	96.2666	10307.62	4945.82	3873.832	398860	7258.0186	N/A
20	5/6/2023	93.77	10024	6064	4102	400040	7152.5076	N/A
21	5/7/2023	94.42	10097	4460	3902	416880	7355.5521	N/A
22	5/7/2023	95.51187	9952.272	4613.04	4083.188	395898	7165.6605	N/A
23	5/8/2023	95.42905	10059.96	4836.8	3905.915	414210	7419.1438	N/A
24	5/8/2023	92.29499	9739.093	4031.69	3958.941	413460	7254.9195	N/A
25	5/9/2023	96.37469	9768.143	4677.61	3907.197	413130	8079.5324	N/A
26	5/9/2023	96.32302	10043.47	6068.8	3815.142	414260	7145.5967	N/A
27	5/10/2023	97.49	10051	5729	3674	414110	7355.7498	N/A
28	5/10/2023	97.11	10116	4573	3826	417030	7181.8626	N/A
29	5/11/2023	97.4811	9979.328	3977.69	3734.366	414180	7082.0467	N/A
30	5/11/2023	96.43	9943	3989	3695	415160	7315.5	N/A
31	5/11/2023	97.53008	9986.156	3979.72	3687.2	402140	6945.6371	N/A
32	5/12/2023	97.94078	9899.481	4122.46	3658.474	399730	6866.8943	N/A
33	5/12/2023	97.32	9902	4140	3724	417880	7310.731	N/A
34	5/12/2023	90.62	9525	6146	3716	402200	7061.221	N/A
35	5/12/2023	97.19555	9989.576	5636.03	3447.729	397590	6871.6655	N/A
36	5/13/2023	96.45	9932	6014	3440	415390	7101.8064	N/A
37	5/13/2023	96.43	9846	3227	3594	413010	7284.1181	N/A
38	5/13/2023	97.34	9838	5596	3806	418540	7164.6819	N/A
39	5/13/2023	98.21973	9880.706	6044.34	3759.531	411190	7016.2636	N/A
40	5/14/2023	94.82	9978	6176	3977	395200	6821.404	N/A
41	5/14/2023	98.29	9926	6250	3775	412590	7233.884	N/A
42	5/14/2023	96.8	9570	5641	3688	418410	7080.5464	N/A
43	5/14/2023	94.52	8930	5598	3722	416530	7126.1721	N/A
44	5/15/2023	96.52	9350	4114	3786	415950	7093.5579	N/A
45	5/15/2023	98.16	9303	5313	3454	397950	6927.7048	N/A
46	5/15/2023	96.42	9582	5637	3580	397260	7025.3293	N/A
47	5/15/2023	97.52059	9060.318	4259.75	3548.546	410200	7000.4693	N/A
48	5/15/2023	97.74	9169	3852	3643	412670	6969.6795	N/A
49	5/16/2023	98.09861	9329.009	5382.28	3549.317	410150	7042.5674	N/A
50	5/16/2023	96.25597	8985.641	5095.03	3413.154	418270	7195.1938	N/A
51	5/16/2023	96.13849	9007.011	6401.9	3568.895	416090	7160.6793	N/A
52	5/16/2023	98.4	8977	5555	3687	413640	6994.2343	N/A
53	5/17/2023	97.04	8926	4040	3516	415760	7023.7243	N/A
54	5/17/2023	95.28128	8983.069	7015.73	3611.086	395730	6763.0719	N/A
55	5/17/2023	96.12	9083	5743	3635	399500	6937.1757	N/A
56	5/17/2023	95.98	8721	6425	3805	398110	6872.9914	N/A
57	5/17/2023	98.38192	8810.346	4621.59	4035.594	412760	6920.8795	N/A
58	5/18/2023	98.48	8770	6091	3894	414940	6955.3255	N/A
59	5/18/2023	93.41	8468	6434	3999	415000	7515.6702	N/A
60	5/18/2023	96.64	8509	6079	3827	411300	7036.651	N/A
61	5/18/2023	97.9	8931	6419	3854	410490	6882.7071	N/A
62	5/19/2023	97.45	8907	5775	3737	404230	6820.9214	N/A
63	5/20/2023	82.86357	8321.195	5894.91	4226.285	412620	8830.3643	N/A
64	5/21/2023	93.82	8640	5884	3837	398310	6798.2805	N/A
65	5/21/2023	93.84927	8273.821	6028.36	3741.574	413840	7114.1788	N/A
66	5/21/2023	96.59129	8439.498	5691.39	3784.109	410380	7083.9121	N/A
67	5/21/2023	96.29	8552	6378	3680	417780	7057.5995	N/A
68	5/21/2023	93.13935	8091.059	5131.99	3830.46	397590	6817.9748	N/A
69	5/22/2023	96.5992	8139.381	6148.89	3952.584	407720	6980.2679	N/A
70	5/22/2023	95.23363	8092.321	5530.74	3835.833	416280	7022.3826	N/A
71	5/22/2023	92.59456	8289.664	5756.92	3548.891	412760	6908.704	N/A
72	5/22/2023	96.99	8369	6093	3762	410490	6892.589	N/A
73	5/23/2023	96.96	8288	5984	3380	405260	6699.5071	N/A
74	5/23/2023	96.96532	8203.118	6741.83	3624.233	419260	7189.9479	N/A
75	5/23/2023	96.50806	7996.946	5654.88	3596	398320	6895.879	N/A
76	5/23/2023	97.51197	7994.321	5556.74	3552.638	412760	7047.1155	N/A
77	5/24/2023	97.74	8358	5809	3565	415550	7006.5505	N/A
78	5/24/2023	97.96493	7679.072	6074.51	3653.892	398410	6769.885	N/A
79	5/24/2023	97.01	7859	5843	3742	415100	6997.45	N/A
80	5/24/2023	97.62089	7885.918	6037.32	4025.695	412953	6999.0443	N/A
81	5/24/2023	98.38	7652	5031	3471	413880	7472.2721	N/A
82	5/25/2023	97.63	7466	4985	3597	417630	6938.8479	N/A
83	5/25/2023	94.149	7491.718	5474.18	3651.186	408550	6889.934	N/A
	AVERAGE	95.2	9,323	6,598	3,763	33,772,061	592,871	0

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EXHIBIT 3

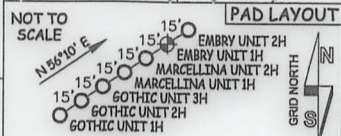
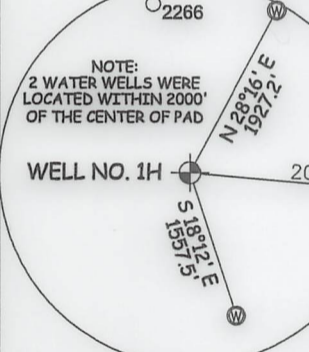
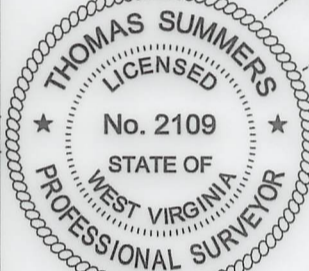
LITHOLOGY/ FORMATION	TOP DEPTH (TVD)	BOTTOM DEPTH (TVD)	TOP DEPTH (MD)	BOTTOM DEPTH (MD)
	From Surface	From Surface	From Surface	From Surface
Shaly Siltstone, tr LS	91	275	91	274.5
Sandy Siltstone, Coal	275	335	275	335
Silty Sandstone	335	425	335	425
Shaly Siltstone, occ LS	425	635	425	635
Sandy Siltstone, occ LS	635	965	635	965
Shaly Siltstone, occ SS	965	1,025	965	1,025
Shaly Siltstone	1,025	1,435	1,025	1,435
Sandy Siltstone, occ Shale	1,435	1,525	1,435	1,525
Silty Sandstone, tr coal	1,525	1,615	1,525	1,615
Silty Sandstone, coal, tr shale	1,615	1,735	1,615	1,735
Silty Sandstone, occ shale	1,735	1,885	1,735	1,885
Shaly Sandstone, coal, occ slst	1,885	2,125	1,885	2,125
Silty Sandstone, coal, occ Shale	2,125	2,098	2,125	2,133
Big Lime	2,123	2,900	2,133	2,957
Fifty Foot Sandstone	2,900	2,961	2,932	3,020
Gordon	2,961	3,205	2,995	3,269
Fifth Sandstone	3,205	3,475	3,244	3,545
Bayard	3,475	4,154	3,520	4,246
Speechley	4,154	4,463	4,221	4,564
Balltown	4,463	4,910	4,539	5,024
Bradford	4,910	5,162	4,999	5,283
Benson	5,162	5,393	5,258	5,522
Alexander	5,393	6,669	5,497	6,875
Sycamore	6,530	6,644	6,707	6,850
Middlesex	6,644	6,745	6,850	7,008
Burkett	6,745	6,776	7,008	7,071
Tully	6,776	6,837	7,071	7,239
Marcellus	6,837	NA	7,239	NA

Antero Resources Corporation Well No. Embry Unit 1H

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12-23	ROBERT BARD
12-32	CARL WILCOX

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 N: 361,661ft E: 1,641,850ft
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16-13	GAIL NEFF
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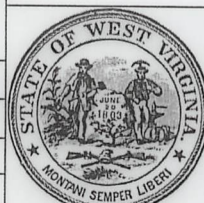
JOB # 20-011WA
 DRAWING # EMBRY1HAD
 SCALE 1" = 2000'
 MINIMUM DEGREE OF ACCURACY SUBMETER
 PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

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

LEGEND

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

THOMAS SUMMERS P.S. 2109
 DATE 10/02/23
 OPERATOR'S WELL# EMBRY UNIT #1H



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

WILLOW LAND SURVEYING PLLC
 220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

WELL TYPE: OIL ___ GAS LIQUID INJECTION ___ WASTE DISPOSAL ___ 47 - 095 - 02827
 (IF "GAS") PRODUCTION STORAGE ___ DEEP ___ SHALLOW STATE COUNTY PERMIT
 LOCATION: ELEVATION 1,200' - AS BUILT WATERSHED OUTLET MIDDLE ISLAND CREEK
 QUADRANGLE PORTER FALLS 7.5' (TH) - SHIRLEY 7.5' (BH) DISTRICT ELLSWORTH COUNTY TYLER
 SURFACE OWNER CLARA SUZANNE WALLACE & RICKIE WALLACE ACREAGE 60 ACRES +/-
 OIL & GAS ROYALTY OWNER PHILLIP K. GEORGE LEASE ACREAGE 60 ACRES +/-

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 6,949' TVD 23,940' MD
 WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT KEVIN ELLIS
 ADDRESS 1615 WYNKOOP ST. ADDRESS 535 WHITE OAKS BLVD
 DENVER, CO 80202 BRIDGEPORT, WV 26330

04/12/2024

COUNTY NAME

PERMIT

Antero Resources Corporation
Well No. Embry Unit 1H

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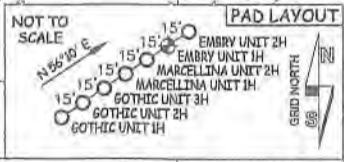
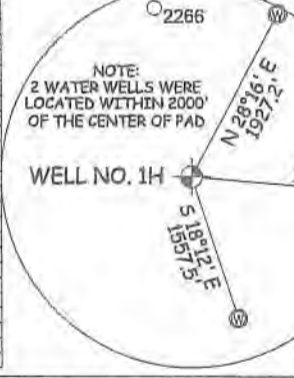
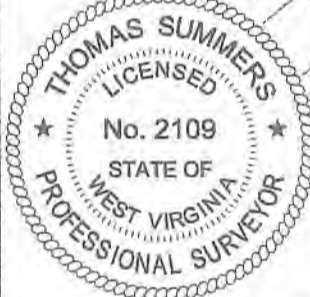
WV NORTH ZONE
GRID NORTH

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DRAWING # EMBRY1HAD
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STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY
DIVISION OF OIL AND GAS

LEGEND
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----- Interior Surface Tracts +/-
----- Proposed Well Path
----- As Drilled Well Path
THOMAS SUMMERS P.S. 2109
DATE 10/02/23
OPERATOR'S WELL# EMBRY UNIT #1H



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WILLOW LAND SURVEYING PLLC
220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

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WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT KEVIN ELLIS
ADDRESS 1615 WYNKOOP ST. ADDRESS 535 WHITE OAKS BLVD
FORM WW-6 DENVER, CO 80202 BRIDGEPORT, WV 26330

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	4/27/2023
Job End Date:	5/25/2023
State:	West Virginia
County:	Tyler
API Number:	47-095-02827-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	EMBRY UNIT 1H
Latitude:	39.52846000
Longitude:	-80.79257000
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	7,972
Total Base Water Volume (gal):	26,101,555
Total Base Non Water Volume:	0

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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	86.40339	Density = 8.34
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.16743	

DM

HYDROCHLORIC ACID, 22 BAUME	Halliburton	Solvent					
				Listed Below			
MC B-8614A	MultiChem	Biocide					
				Listed Below			
HAI-501	Halliburton	Acid Corrosion Inhibitor					
				Listed Below			
WG-36 GELLING AGENT	Halliburton	Gelling Agent					
				Listed Below			
FDP-S1464-22	Halliburton	Friction Reducer					
				Listed Below			
Sand-Common White-100 Mesh, SSA-2	Halliburton	Proppant					
				Listed Below			
OPTIFLO-II DELAYED RELEASE 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	13.40467	
			Hydrochloric acid	7647-01-0	30.00000	0.03870	
			Complex amine compound	Proprietary	60.00000	0.03002	

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			Hydrotreated distillate	Proprietary	30.00000	0.01501	
			Guar gum	9000-30-0	100.00000	0.00416	
			Glutaraldehyde	111-30-8	30.00000	0.00252	
			Ammonium chloride	12125-02-9	5.00000	0.00250	
			Fatty nitrogen derived amides	Proprietary	5.00000	0.00250	
			Ethoxylated alcohol	Proprietary	5.00000	0.00250	
			Sorbitan, mono-9-octadecenoate, (Z)	1338-43-8	1.00000	0.00050	
			Sorbitan monooleate polyoxyethylene derivative	9005-65-6	1.00000	0.00050	
			Alkyl (C12-16) dimethylbenzyl ammonium chloride	68424-85-1	5.00000	0.00042	
			Methanol	67-56-1	100.00000	0.00024	
			Ammonium persulfate	7727-54-0	100.00000	0.00009	
			Ethanol	64-17-5	1.00000	0.00008	
			Modified thiourea polymer	Proprietary	30.00000	0.00007	
			Mixture of dimer and trimer fatty acids of indefinite composition derived from tall oil	61790-12-3	30.00000	0.00007	
			Oxylated phenolic resin	Proprietary	30.00000	0.00003	
			Ethoxylated alcohols	Proprietary	5.00000	0.00001	
			Propargyl alcohol	107-19-7	5.00000	0.00001	
			Hexadecene	629-73-2	5.00000	0.00001	
			C.I. pigment Orange 5	3468-63-1	1.00000	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)

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