

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

API 47 - 095 - 02745 County Tyler District Ellsworth
Quad Porter Falls 7.5' Pad Name Margery Field/Pool Name -----
Farm name Kayla Leek Well Number National 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 4374239m Easting 514708m
Landing Point of Curve Northing 4374260.99m Easting 515094.29m
Bottom Hole Northing 4370261m Easting 516503m

Elevation (ft) 1040' 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 7/29/2021 Date drilling commenced 8/18/2021 Date drilling ceased 10/29/2021
Date completion activities began 12/9/2021 Date completion activities ceased 2/18/2022
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 102' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 1998' 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

Reviewed by:

06/02/2023

API 47-095 - 02745 Farm name Kayla Leek Well number National 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	28"	20"	125.5'	New	94#, H-40	N/A	Y
Surface	17-1/2"	13-3/8"	405'	New	54.5#, J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2651'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	21151'	New	23#, P-110	N/A	Y
Tubing		2-3/8"	6805'		4.7#, C-75		
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 ²)	Cement Top (MD)	WOC (hrs)
Conductor	Class A	390 sx	15.6	1.18	460	0'	8 Hrs.
Surface	Class A	431 sx	15.6	1.20	517	0'	8 Hrs.
Coal							
Intermediate 1	Class A	891 sx	15.6	1.19	1060	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class G	3361 sx (Tail)	13.5 (Lead), 15.2(Tail)	1.26 (Tail)	4235	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 21151' MD, 6658' TVD (BHL), 6689' (Deepest Point Drilled) Loggers TD (ft) 21151' MD
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 5939'

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 _____

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____ WV Department of Environmental Protection

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

06/02/2023

API 47- 095 - 02745 Farm name Kayla Leek Well number National Unit 2H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>Marcellus</u>	<u>6604' (TOP)</u> TVD	<u>6981' (TOP)</u> MD
_____	_____	_____
_____	_____	_____
_____	_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 1741 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 16553 mcfpd Oil 481 bpd NGL --- bpd Water 701 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 ₂ S, ETC)
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***PLEASE SEE ATTACHED EXHIBIT 3**

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 1080 US-33 City Weston State WV Zip 26452

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

Please insert additional pages as applicable.

Completed by Carly Marvel Telephone 303-357-7373
Signature *Carly Marvel* Title Permitting Agent Date 3/1/2023

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

06/02/2023

API 47-095-02745 Farm Name Kayla Leek Well Number National Unit 2H

Exhibit 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	12/09/2021	21040.0	0	60	Marcellus
2	12/09/2021	20955.7	20776.4	60	Marcellus
3	12/10/2021	20701.8	20522.5	60	Marcellus
4	12/10/2021	20447.9	20268.5	60	Marcellus
5	12/11/2021	20194.0	20014.6	60	Marcellus
6	12/12/2021	19940.1	19760.7	60	Marcellus
7	12/12/2021	19686.2	19506.8	60	Marcellus
8	12/12/2021	19432.3	19252.9	60	Marcellus
9	12/13/2021	19178.4	18999.0	60	Marcellus
10	12/13/2021	18924.5	18745.1	60	Marcellus
11	12/14/2021	18670.5	18491.2	60	Marcellus
12	12/14/2021	18416.6	18237.3	60	Marcellus
13	12/15/2021	18162.7	17983.4	60	Marcellus
14	12/15/2021	17908.8	17729.5	60	Marcellus
15	12/16/2021	17654.9	17475.5	60	Marcellus
16	12/17/2021	17401.0	17221.6	60	Marcellus
17	12/17/2021	17147.1	16967.7	60	Marcellus
18	12/17/2021	16893.2	16713.8	60	Marcellus
19	12/18/2021	16639.3	16459.9	60	Marcellus
20	12/18/2021	16385.4	16206.0	60	Marcellus
21	12/19/2021	16131.5	15952.1	60	Marcellus
22	12/19/2021	15877.5	15698.2	60	Marcellus
23	12/20/2021	15623.6	15444.3	60	Marcellus
24	12/20/2021	15369.7	15190.4	60	Marcellus
25	12/21/2021	15115.8	14936.5	60	Marcellus
26	12/21/2021	14861.9	14682.5	60	Marcellus
27	12/22/2021	14608.0	14428.6	60	Marcellus
28	12/22/2021	14354.1	14174.7	60	Marcellus
29	12/23/2021	14100.2	13920.8	60	Marcellus
30	12/24/2021	13846.3	13666.9	60	Marcellus
31	12/25/2021	13592.4	13413.0	60	Marcellus
32	12/25/2021	13338.5	13159.1	60	Marcellus
33	12/26/2021	13084.5	12905.2	60	Marcellus
34	12/27/2021	12830.6	12651.3	60	Marcellus
35	12/27/2021	12576.7	12397.4	60	Marcellus
36	12/27/2021	12322.8	12143.5	60	Marcellus
37	12/28/2021	12068.9	11889.5	60	Marcellus
38	12/28/2021	11815.0	11635.6	60	Marcellus
39	12/28/2021	11561.1	11381.7	60	Marcellus
40	12/28/2021	11307.2	11127.8	60	Marcellus
41	12/29/2021	11053.3	10873.9	60	Marcellus
42	12/29/2021	10799.4	10620.0	60	Marcellus
43	12/29/2021	10545.5	10366.1	60	Marcellus
44	12/29/2021	10291.5	10112.2	60	Marcellus
45	12/30/2021	10037.6	9858.3	60	Marcellus
46	12/30/2021	9783.7	9604.4	60	Marcellus
47	12/30/2021	9529.8	9350.5	60	Marcellus
48	12/30/2021	9275.9	9096.5	60	Marcellus
49	12/31/2021	9022.0	8842.6	60	Marcellus
50	12/31/2021	8768.1	8588.7	60	Marcellus
51	12/31/2021	8514.2	8334.8	60	Marcellus
52	12/31/2021	8260.3	8080.9	60	Marcellus
53	12/31/2021	8006.4	7827.0	60	Marcellus
54	01/01/2022	7752.5	7573.1	60	Marcellus
55	01/01/2022	7498.5	7319.2	60	Marcellus
56	01/01/2022	7244.6	7065.3	60	Marcellus

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API 47-095-02745 Farm Name Kayla Leek Well Number National 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	12/09/2021	82.1	10279	11154	2743.09	172200	241682	N/A
2	12/09/2021	88.6	10145	6177	4051	509320	418488	N/A
3	12/10/2021	87.5	10194	6556	3766	503140	446398	N/A
4	12/10/2021	89.6	10255	5769	4079	522480	400800	N/A
5	12/11/2021	87.6	10026	6105	4203	510290	389600	N/A
6	12/12/2021	93.1	9994	5718	4131	515490	394956	N/A
7	12/12/2021	91.5	10105	6600	4461	500670	375860	N/A
8	12/12/2021	90.5	10143	8897	4201	509090	374289	N/A
9	12/13/2021	90.4	10302	9999	4176	499660	365531	N/A
10	12/13/2021	88.6	9921	10230	3843	498260	367841	N/A
11	12/14/2021	87.1	10375	10281	3847	501480	363098	N/A
12	12/14/2021	92.1	9976	10491	4019	507270	361173	N/A
13	12/15/2021	87.1	9991	9888	3580	509916	374823	N/A
14	12/15/2021	94.1	10033	9887	3731	512680	364066	N/A
15	12/16/2021	92.4	10037	9690	3705	515440	367748	N/A
16	12/17/2021	90.6	10027	9989	4069	502820	361131	N/A
17	12/17/2021	85.5	10007	8607	4096	511380	377827	N/A
18	12/17/2021	91.9	10033	9990	4037	512620	366375	N/A
19	12/18/2021	92.9	9784	9991	4109	508620	361272	N/A
20	12/18/2021	93.6	9750	9608	4352	515140	371079	N/A
21	12/19/2021	94.6	9844	8298	3882	518300	362907	N/A
22	12/19/2021	93.8	9636	10310	3451	516810	381603	N/A
23	12/20/2021	85.0	9059	8517	3627	514480	361285	N/A
24	12/20/2021	92.7	9977	10278	4188	517150	361979	N/A
25	12/21/2021	93.3	9881	6866	4089	526180	370289	N/A
26	12/21/2021	95.8	9614	7459	3774	507410	364520	N/A
27	12/22/2021	96.3	9924	6210	3800	503550	365983	N/A
28	12/22/2021	96.6	9079	8347	4030	499650	359237	N/A
29	12/23/2021	96.0	9047	8660	3816	497180	360731	N/A
30	12/24/2021	94.7	9075	7665	3482	510020	370758	N/A
31	12/25/2021	93.3	9048	5584	3651	518220	362099	N/A
32	12/25/2021	94.7	9083	7956	3979	485940	342372	N/A
33	12/26/2021	95.0	9057	8880	3913	507490	359123	N/A
34	12/27/2021	96.5	9564	6611	3445.04	513880	361839	N/A
35	12/27/2021	94.9	9061	8971	3805	516560	361409	N/A
36	12/27/2021	96.5	8907	7094	3438	500540	356735	N/A
37	12/28/2021	95.6	8885	5570	3779.44	520260	384000	N/A
38	12/28/2021	96.9	9018	9612	3354	509770	360987	N/A
39	12/28/2021	96.5	9072	8894	3431	508540	353275	N/A
40	12/28/2021	93.5	8673	6006	3945	504960	364430	N/A
41	12/29/2021	94.3	8614	5944	3652	520550	360627	N/A
42	12/29/2021	98.2	8912	7967	3531	510630	354941	N/A
43	12/29/2021	95.8	8790	8047	3393	521560	365512	N/A
44	12/29/2021	97.2	8752	9018	3641.48	509350	362940	N/A
45	12/30/2021	96.8	8413	6078	4028	507490	361299	N/A
46	12/30/2021	94.5	8374	5986	3692	505970	397608	N/A
47	12/30/2021	98.5	8485	7515	3768	512040	357749	N/A
48	12/30/2021	99.0	8334	8035	3874.36	501100	356996	N/A
49	12/31/2021	97.8	8086	5995	4201	508360	349244	N/A
50	12/31/2021	98.3	8060	5992	3625	515200	365542	N/A
51	12/31/2021	97.4	8282	8681	3740	500800	351304	N/A
52	12/31/2021	98.2	8237	8508	3744	512390	356542	N/A
53	12/31/2021	97.7	7949	6359	3887	522390	364724	N/A
54	01/01/2022	97.7	7737	5886	4107	506450	355876	N/A
55	01/01/2022	98.5	7669	7728	3906	503000	344378	N/A
56	01/01/2022	99.3	7580	7836	3982	500840	330960	N/A
	AVERAGE	94	9,271	8,018	3,837	28,192,976	20,445,840	TOTAL

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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
Silty Sandstone	74	134	74	134
Shaley Siltstone	134	194	134	194
Shaley Sandstone	194	344	194	344
Shaley Siltstone	344	734	344	734
Sandy Siltstone	734	854	734	854
Shaley Siltstone, Tr Limestone	854	1,334	854	1,334
Shaley Sandstone	1,334	1,454	1,334	1,454
Sandstone, Tr Shale	1,454	1,634	1,454	1,634
Silty Shale	1,634	1,784	1,634	1,784
Shaley Siltstone	1,784	1,844	1,784	1,844
Sandy Shale	1,844	1,874	1,844	1,874
Shale, Tr Limestone	1,874	1,904	1,874	1,904
Shaley Limestone	1,904	1,917	1,904	1,943
Big Lime	1,943	2,731	1,943	2,771
Fifty Foot Sandstone	2,731	2,843	2,745	2,887
Gordon	2,843	3,100	2,861	3,152
Fifth Sandstone	3,100	3,212	3,126	3,267
Bayard	3,212	3,945	3,241	4,018
Speechley	3,945	4,201	3,992	4,279
Balltown	4,201	4,520	4,253	4,605
Bradford	4,520	4,950	4,579	5,047
Benson	4,950	5,259	5,021	5,364
Alexander	5,259	6,440	5,338	6,620
Sycamore	6,313	6,414	6,464	6,594
Middlesex	6,414	6,517	6,594	6,757
Burkett	6,517	6,543	6,757	6,808
Tully	6,543	6,604	6,808	6,981
Marcellus	6,604	NA	6,981	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.

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LATITUDE 39°32'30"

10,550'

LATITUDE 39°32'30"

4,690' TO BOTTOM HOLE

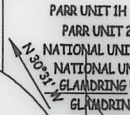
Antero Resources Corporation Well No. National Unit 2H

AS DRILLED DATA:
WELL 2H TOP HOLE INFORMATION:
 N: 373,398ft E: 1,625,064ft
 LAT: 39°31'03.30" LON: 80°49'44.63"
BOTTOM HOLE INFORMATION:
 N: 360,247ft E: 1,630,735ft
 LAT: 39°28'54.14" LON: 80°48'29.82"
 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 2H TOP HOLE INFORMATION:
 N: 4,374,239m E: 514,708m
BOTTOM HOLE INFORMATION:
 N: 4,370,261m E: 516,503m

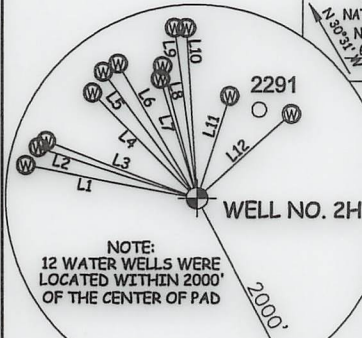
PAD LAYOUT

NOT TO SCALE



2H TOP HOLE

22-16.3	Charles Stevens
22-17	Dorothy Stevens Revocable Trust
22-18	Clara Baker
22-18.1	Dorothy Stevens Revocable Trust
22-21	Paul Baker
22-22	Paul Baker
22-23	Anthony Parr
22-23.1	Raymond Parr
22-23.2	Anthony Parr
22-24	Ruth Weekley Est.
22-25	Paul Baker
22-26	John Sale
22-27	Carol Knapp Revocable Trust
22-28	WSD Properties LLC
22-29	WSD Properties LLC
22-30	WSD Properties LLC
22-31	Richard Grodsky Et Al
22-32	Richard Grodsky Et Al
22-33	Wilma Weekley
22-34	Raymond Parr Et Al
22-38	Bruce Parr
22-40	Ronald Webb



NOTE:
 12 WATER WELLS WERE LOCATED WITHIN 2000' OF THE CENTER OF PAD

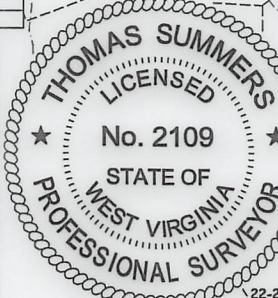
LINE	BEARING	DIST.	LINE	BEARING	DIST.
L1	N 79°23' W	1820.64'	L7	N 17°11' W	1289.39'
L2	N 72°38' W	1737.73'	L8	N 14°44' W	1409.38'
L3	N 69°39' W	1680.54'	L9	N 07°35' W	1774.82'
L4	N 45°05' W	1540.95'	L10	N 03°37' W	1761.12'
L5	N 36°53' W	1627.55'	L11	N 17°55' E	1113.36'
L6	N 30°40' W	1612.05'	L12	N 48°24' E	1322.09'

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE RULES ISSUED AND PERSCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.



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

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



JOB # 21-007WA
 DRAWING # NATIONAL2HAD
 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 04/07/22
 OPERATOR'S WELL # NATIONAL UNIT #2H

WELL 2H POINT OF ENTRY INFORMATION:
 WV STATE PLANE NAD '27 (NORTH ZONE):
 N: 373,658ft E: 1,626,282ft
 GEOGRAPHIC (NAD) 27:
 LAT: 39°31'06.04" LON: 80°49'29.13"
 (NAD) 83 (UTM) ZONE 17 COORDS:
 N: 4,374,324m E: 515,078m

- NOTES**
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 ANTERO RESOURCES CORPORATION.
 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.

Ellsworth District - Tyler County	
11-51	Bear Knob Holdings LLC
16-5	David Leek
16-5.1	Richard Ferrell
16-6	Kayla Leek
16-7	John Thomas
16-7.1	Lianne Wilson
16-8	Jean Neel Et Al
16-9	Bear Knob Holdings LLC
16-10	Jean Neel Et Al
16-11	Jean Neel Et Al
16-15	Harvey Miller Et Al
16-16	Harvey Miller Et Al
16-16.1	Barbara Kittle
16-17	Alfred Steele
16-18	Alfred Steele
16-19	Jean Neel Et Al
16-20	Jean Neel Et Al
16-21	Kayla Leek
16-24	James Eastham
16-25	Nancy Fowler
16-26	Barbara Kittle
16-27	Gilbert Eddy
16-28	Kenneth Tomblin Et Al
16-36	George Karabetis
16-37	Rosella Murner
16-38	EQT Production Company
16-39	Richard Pyles
16-39.1	Leo Wiker
16-40	Gary Weekley
16-42	Richard Pyles
16-42.3	Richard Pyles
16-58	American Energy Marcellus Minerals LLC
22-6	EQT Production Company
22-7	Kenneth Baker
22-8	EQT Production Company
22-9	Steven Wright
22-10	Leslie Henderson
22-13	Debra Blake
22-14	Leslie Weekley
22-15	Lannie Wade Et Al
22-16	Darlene Stephens
22-16.1	Joann McSwegin
22-16.2	Sarah Bassett

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL API WELL # 47 - 095 - 02745
 (IF "GAS") PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: ELEVATION AS BUILT - 1,040' WATERSHED OUTLET MIDDLE ISLAND CREEK STATE COUNTY PERMIT
 QUADRANGLE PORTER FALLS 7.5' DISTRICT ELLSWORTH COUNTY TYLER
 SURFACE OWNER KAYLA LEEK ACREAGE 69.06 ACRES +/-
 OIL & GAS ROYALTY OWNER RIDGETOP CAPITAL LP; BRC APPALACHIAN MINERALS I LLC; LEASE ACREAGE 69.06 AC.±; 373.47 AC.±;
 BRC APPALACHIAN MINERALS I LLC; BOUNTY MINERALS LLC; S.A. SMITH & C.B. MORRIS HEIRS TRUST; 55.13 AC.±; 92.25 AC.±; 304.5 AC.±;
 BRC APPALACHIAN MINERALS I LLC; DAVID E. BOWYER; DAVID E. BOWYER; 35 AC.±; 60 AC.±; 75 AC.±;
 BRENDA CUIC; BETTY MOREHEAD ET VIR; PAUL RICHARD BAKER 114 AC.±; 68.88 AC.±; 39.96 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 6,658' TVD 21,151' MD
 WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER - CT CORPORATION SYSTEM
 ADDRESS 1615 WYNKOOP ST. ADDRESS 5400 D BIG TYLER ROAD
 FORM WW-6 DENVER, CO 80202 CHARLESTON, WV 25313

6,653' TO BOTTOM HOLE
8,773'
LONGITUDE 80°47'30"
LONGITUDE 80°47'30"
COUNTY TYLER
PERMIT NAME

LATITUDE 39.32'30"

10,250'

LATITUDE 39.32'30" 4,680' TO BOTTOM HOLE

Well No. National Unit 2H
Antero Resources Corporation

AS DRILLED DATA:
WELL 2H TOP HOLE INFORMATION:
N: 373,388ft E: 1,625,064ft
LAT: 39°31'03.30" LON: 80°48'44.63"
BOTTOM HOLE INFORMATION:
N: 360,247ft E: 1,630,737ft
LAT: 39°28'54.14" LON: 80°48'25.85"
WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE. ZONE WAS DERIVED FROM MEASUREMENTS TAKEN WITH TRIANGLE GEOTECH SUBMETER MAPPING GRADE 625 UNIT. PLAT ORIENTATION, CORNER, AND WELL REFERENCE TIE LINES ARE BASED ON GRID NORTH.

(NAD 83 (UTM) ZONE 17 COORDS):
WELL 2H TOP HOLE INFORMATION:
N: 4,374,239m E: 214,708m
BOTTOM HOLE INFORMATION:
N: 4,370,261m E: 216,503m

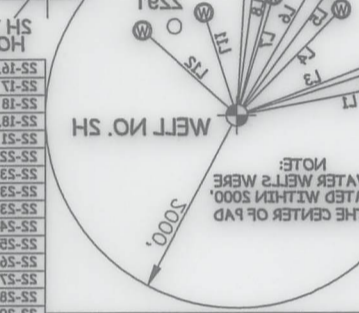


Table with columns: LINE, BEARING, DIST., TIME BEARING, DIST. Lists well identifiers and coordinates.

STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WILLOW LAND SURVEYING P.L.L.C.
520 WASHINGTON AVE. PENNSBORO, WEST VIRGINIA 26155

OPERATOR'S WELL # NATIONAL UNIT 2H
DATE 04/02/22
THOMAS SUMMERS P.S. 2109
SUBMETER PROVEN SOURCE OF ELEV. ACCURACY
SCALE 1" = 2000'
DRAWING # NATIONAL SHAD
JOB # 21-007WA

FORM W-6
ADDRESS 1615 WYKHOOP ST. DENVER, CO 80202
WELL OPERATOR ANTERO RESOURCES CORP.
TARGET FORMATION MARCELLUS
SPECIFIC AS DRILLED
PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL
PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
SURFACE OWNER KAYLA LEEK
QUADRANGLE PORTER FALLS T.S.
LOCATION: ELEVATION AS BUILT - 1,040'
WATERSHED OUTLET MIDDLE ISLAND CREEK
STATE COUNTY PERMIT
WELL TYPE: OIL GAS X LIQUID INJECTION
PRODUCTION X STORAGE DEEP
WASTE DISPOSAL SHALLOW X
ACREAGE 89.08 ACRES +/-
DISTRICT ELLSWORTH COUNTY TYLER
COUNTY NAME
PERMIT

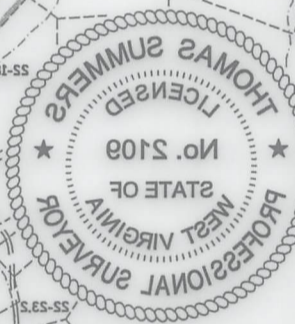
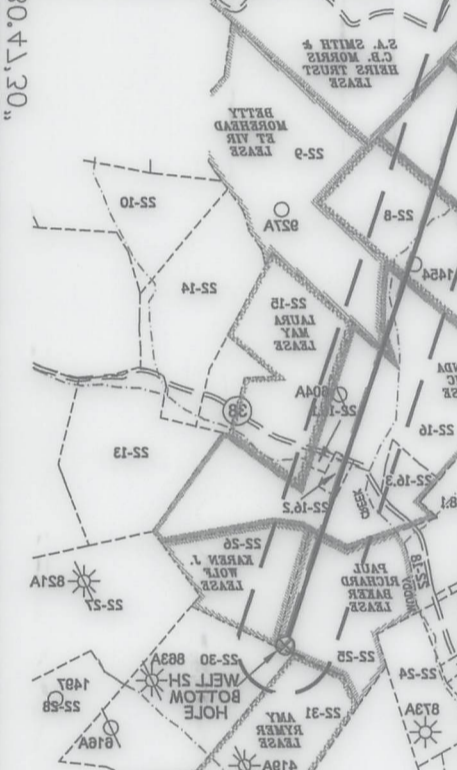


Table listing well identifiers and lease information. Includes names like 'Antero Resources Corporation', 'BRC Appalachia', and 'Minerals & Co. Morris Hirs Trust'.



INFORMATION THAT HAS BEEN PROVIDED.
2. WELL 2H IS BEING RESPONSIBLE FOR ANY ERRORS OR INACCURACIES WITH THE DATA AND BOUNDARIES.
3. ONLY THE RELATIONSHIP TO THE DATA AND INFORMATION PROVIDED LISTED IN THE DATA AND WELL 2H POINT OF ENTRY INFORMATION:
WV STATE PLANE NAD 83 (NORTH ZONE):
N: 373,388ft E: 1,625,282ft
GEOGRAPHIC (NAD) 83:
LAT: 39°31'06.04" LON: 80°48'25.73"
(NAD 83 (UTM) ZONE 17 COORDS):
N: 4,374,239m E: 214,708m

1. NO OCCUPIED DWELLINGS OR BUILDINGS TWO THOUSAND FIVE HUNDRED (2,500) SQUARE FEET OR LARGER USED TO HOUSE OR SHEDDER DAIRY CALVES OR POLYURETHANE HUSBANDRY ARE LOCATED WITHIN ONE HUNDRED TWENTY-FIVE (25) FEET OF THE CENTER OF THE WELL PAD.
2. TOP HOLE DATA SHOWN HEREON WAS PROVIDED BY ANTERO RESOURCES CORPORATION.
3. AS DRILLED DATA WAS PROVIDED BY ANTERO RESOURCES CORPORATION.
4. WELL 2H NOT CERTIFYING THE DATA AND INFORMATION PROVIDED LISTED IN THE DATA AND WELL 2H POINT OF ENTRY INFORMATION:
WV STATE PLANE NAD 83 (NORTH ZONE):
N: 373,388ft E: 1,625,282ft
GEOGRAPHIC (NAD) 83:
LAT: 39°31'06.04" LON: 80°48'25.73"
(NAD 83 (UTM) ZONE 17 COORDS):
N: 4,374,239m E: 214,708m

CHARLESTON, WV 25313
4000 D BIG TYLER ROAD
DIANNA STAMBER - CT CORPORATION SYSTEM
DESIGNATED AGENT
ESTIMATED DEPTH
6888 TWD 21 161 MD
CLEAN OUT & REPLUG
PLUG & ABANDON
OTHER PHYSICAL CHANGE IN WELL
FRACTURE OR STIMULATE
114 AC +/- 88.88 AC +/- 39.98 AC +/-
38 AC +/- 80 AC +/- 78 AC +/-
52.13 AC +/- 82.52 AC +/- 304.5 AC +/-
LEASE ACREAGE 89.08 AC +/- 373.47 AC +/-
ACREAGE 89.08 ACRES +/-
DISTRICT ELLSWORTH COUNTY TYLER
COUNTY NAME
PERMIT

LATITUDE 39°32'30"

10,550'

LATITUDE 39°32'30"

4,690' TO BOTTOM HOLE

6,663' TO BOTTOM HOLE

8,773'

LONGITUDE 80°47'30"

LONGITUDE 80°47'30"

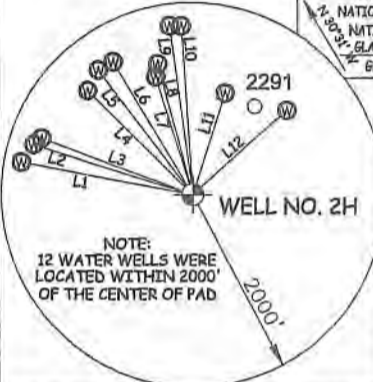
Antero Resources Corporation Well No. National Unit 2H

AS DRILLED DATA:
WELL 2H TOP HOLE INFORMATION:
 N: 373,398ft E: 1,625,064ft
 LAT: 39°31'03.30" LON: 80°49'44.63"
BOTTOM HOLE INFORMATION:
 N: 360,247ft E: 1,630,735ft
 LAT: 39°28'54.14" LON: 80°48'29.82"
 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 2H TOP HOLE INFORMATION:
 N: 4,374,239m E: 514,708m
BOTTOM HOLE INFORMATION:
 N: 4,370,261m E: 516,503m

PAD LAYOUT

NOT TO SCALE



NOTE:
12 WATER WELLS WERE LOCATED WITHIN 2000' OF THE CENTER OF PAD

22-16.3	Charles Stevens
22-17	Dorothy Stevens Revocable Trust
22-18	Clara Baker
22-18.1	Dorothy Stevens Revocable Trust
22-21	Paul Baker
22-22	Paul Baker
22-23	Anthony Parr
22-23.1	Raymond Parr
22-23.2	Anthony Parr
22-24	Ruth Weekley Est.
22-25	Paul Baker
22-26	John Sole
22-27	Carol Knapp Revocable Trust
22-28	WSD Properties LLC
22-29	WSD Properties LLC
22-30	WSD Properties LLC
22-31	Richard Gradsky Et Al
22-32	Richard Gradsky Et Al
22-33	Wilma Weekley
22-34	Raymond Parr Et Al
22-38	Bruce Parr
22-40	Ronald Webb

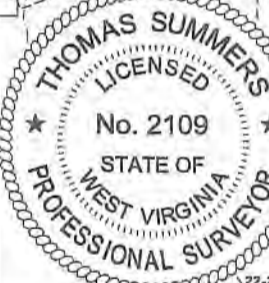
LINE	BEARING	DIST.	LINE	BEARING	DIST.
L1	N 79°23' W	1820.64'	L7	N 17°11' W	1289.39'
L2	N 72°38' W	1737.73'	L8	N 14°44' W	1409.38'
L3	N 69°39' W	1680.54'	L9	N 07°35' W	1774.82'
L4	N 45°05' W	1540.95'	L10	N 03°37' W	1761.12'
L5	N 36°53' W	1627.85'	L11	N 17°55' E	1113.36'
L6	N 30°40' W	1612.05'	L12	N 48°24' E	1322.09'

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE RULES ISSUED AND PERSCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.



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

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



JOB # 21-007WA
 DRAWING # NATIONAL2HAD
 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

Thomas Summers
 THOMAS SUMMERS P.S. 2109

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

DATE 04/07/22
 OPERATOR'S WELL# NATIONAL UNIT #2H

WELL 2H POINT OF ENTRY INFORMATION:
 WV STATE PLANE NAD '27 (NORTH ZONE):
 N: 373,658ft E: 1,626,282ft
 GEOGRAPHIC (NAD) 27:
 LAT: 39°31'06.04" LON: 80°49'29.13"
 (NAD) 83 (UTM) ZONE 17 COORDS:
 N: 4,374,324m E: 515,078m

- NOTES**
- NO OCCUPIED DWELLINGS OR BUILDINGS TWO THOUSAND FIVE HUNDRED (2,500) SQUARE FEET OR LARGER USED TO HOUSE OR SHELTER DAILY CATTLE OR POULTRY HUSBANDRY ARE LOCATED WITHIN SIX HUNDRED TWENTY-FIVE (625) FEET OF THE CENTER OF THE WELL PAD.
 - TOP HOLE DATA SHOWN HEREON WAS PROVIDED BY ANTERO RESOURCES CORPORATION.
 - AS DRILLED DATA WAS PROVIDED BY ANTERO RESOURCES CORPORATION.
 - WLS IS NOT CERTIFYING THE DATA AND INFORMATION PROVIDED LISTED IN NOTES 2 AND 3, ONLY THE RELATIONSHIP TO THE DATA AND INFORMATION PROVIDED TO THE LEASE BOUNDARIES.
 - WLS IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS OR INACCURACIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.

Ellsworth District - Tyler County	
11-51	Bear Knob Holdings LLC
16-5	David Leek
16-5.1	Richard Ferrell
16-6	Kayla Leek
16-7	John Thomas
16-7.1	Lianne Wilson
16-8	Jean Neel Et Al
16-9	Bear Knob Holdings LLC
16-10	Jean Neel Et Al
16-11	Jean Neel Et Al
16-15	Harvey Miller Et Al
16-16	Harvey Miller Et Al
16-16.1	Barbara Kittle
16-17	Alfred Steele
16-18	Alfred Steele
16-19	Jean Neel Et Al
16-20	Jean Neel Et Al
16-21	Kayla Leek
16-24	James Eastham
16-25	Nancy Fowler
16-26	Barbara Kittle
16-27	Gilbert Eddy
16-28	Kenneth Tomblin Et Al
16-36	George Karabetis
16-37	Rosella Murner
16-38	EQT Production Company
16-39	Richard Pyles
16-39.1	Les Wilker
16-40	Gary Weekley
16-42	Richard Pyles
16-42.3	Richard Pyles
16-58	American Energy Marcellus Minerals LLC
22-6	EQT Production Company
22-7	Kenneth Baker
22-8	EQT Production Company
22-9	Steven Wright
22-10	Leslie Henderson
22-13	Debra Blake
22-14	Leslie Weekley
22-15	Lannie Wade Et Al
22-16	Darlene Stephens
22-16.1	Joann McSwegin
22-16.2	Sarah Bassett

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL API WELL # 47 - 095 - 02745
 (IF "GAS") PRODUCTION STORAGE DEEP SHALLOW STATE COUNTY PERMIT
 LOCATION: ELEVATION AS BUILT - 1,040' WATERSHED OUTLET MIDDLE ISLAND CREEK
 QUADRANGLE PORTER FALLS 7.5' DISTRICT ELLSWORTH COUNTY TYLER
 SURFACE OWNER KAYLA LEEK ACREAGE 69.06 ACRES +/-
 OIL & GAS ROYALTY OWNER RIDGETOP CAPITAL LP: BRC APPALACHIAN MINERALS I LLC; LEASE ACREAGE 69.06 AC.±: 373.47 AC.±;
 BRC APPALACHIAN MINERALS I LLC; BOUNTY MINERALS LLC; S.A. SMITH & C.B. MORRIS HEIRS TRUST; 55.13 AC.±; 92.25 AC.±; 06/02/2023
 BRC APPALACHIAN MINERALS I LLC; DAVID E. BOWYER; DAVID E. BOWYER; 35 AC.±; 60 AC.±; 75 AC.±;
 BRENDA CUIIC; BETTY MOREHEAD ET VIR; PAUL RICHARD BAKER 114 AC.±; 68.88 AC.±; 39.96 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 6,658' TVD 21,151' MD
 WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER - CT CORPORATION SYSTEM
 ADDRESS 1615 WYNKOOP ST. ADDRESS 5400 D BIG TYLER ROAD
 FORM WW-6 DENVER, CO 80202 CHARLESTON, WV 25313

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	12/9/2021
Job End Date:	1/1/2022
State:	West Virginia
County:	Tyler
API Number:	47-095-02745-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	NATIONAL UNIT 2H
Latitude:	39.51758000
Longitude:	-80.82906000
Datum:	WGS84
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,689
Total Base Water Volume (gal):	21,119,542
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	86.30402	Density = 8.50
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.05946	

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FLUID Enviro-Syn HCR-7000-WL	Fluid Energy Group	Acid Replacement					
				Listed Below			
MC B-8614A	MultiChem	Biocide					
				Listed Below			
HYDROCHLORIC ACID, 22 BAUME	Halliburton	Solvent					
				Listed Below			
HAI-501	Halliburton	Acid Corrosion Inhibitor					
				Listed Below			
WG-36 GELLING AGENT	Halliburton	Gelling Agent					
				Listed Below			
OPTIFLO-II DELAYED RELEASE BREAKER	Halliburton	Breaker					
				Listed Below			
Sand-Common White-100 Mesh, SSA-2	Halliburton	Proppant					
				Listed Below			
Excelerate LX-15	Halliburton	Friction Reducer					
				Listed Below			

RECEIVED
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 WV Department of
 Environmental Protection

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	13.55405	
			Complex Amine Compound	Proprietary	60.00000	0.03581	
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.01791	
			Proprietary	Proprietary	20.00000	0.01080	
			Proprietary	Proprietary	10.00000	0.00540	
			Guar gum	9000-30-0	100.00000	0.00442	
			Hydrochloric acid	7647-01-0	30.00000	0.00442	
			Sorbitan, mono-9-octadecenoate, (Z)	1338-43-8	5.00000	0.00298	
			Surfactant	Proprietary	5.00000	0.00298	
			Glutaraldehyde	111-30-8	30.00000	0.00267	
			Ethoxylated alcohols	Proprietary	5.00000	0.00060	
			Organic chloride compound	Proprietary	1.00000	0.00060	
			Alkoxyated polyhydric alcohol	Proprietary	1.00000	0.00060	
			Alkyl (C12-16) dimethylbenzyl ammonium chloride	68424-85-1	5.00000	0.00045	
			Ammonium persulfate	7727-54-0	100.00000	0.00016	
			Ethanol	64-17-5	1.00000	0.00009	
			Oxylated phenolic resin	Proprietary	30.00000	0.00005	
			Methanol	67-56-1	100.00000	0.00003	
			Mixture of dimer and trimer fatty acids of indefinite composition derived from tall oil	61790-12-3	30.00000	0.00001	
			Modified thiourea polymer	Proprietary	30.00000	0.00001	
			Formaldehyde	50-00-0	0.01000	0.00001	
			Sodium hydroxide	1310-73-2	0.01000	0.00001	
			Nitrated acetate salt	Proprietary	0.01000	0.00001	
			Organic salt #2	Proprietary	0.01000	0.00001	

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 Environmental Protection

			Sodium glycolate	2836-32-0	0.01000	0.00001	
			Organic salt #1	Proprietary	0.01000	0.00001	
			Acrylamide	79-06-1	0.01000	0.00001	
			C.I. pigment Orange 5	3468-63-1	1.00000	0.00000	
			Hexadecene	629-73-2	5.00000	0.00000	
			Propargyl alcohol	107-19-7	5.00000	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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WV Department of
Environmental Protection