

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

API 47-061-01888 County Monongalia District Battelle  
Quad Mannington Pad Name McClellan Field/Pool Name \_\_\_\_\_  
Farm name McClellan Well Number 11H  
Operator (as registered with the OOG) Northeast Natural Energy LLC  
Address 707 Virginia St. E., Suite 1200 City Charleston State WV Zip 25301

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey  
Top hole Northing 4386004.7 Easting 561899.6  
Landing Point of Curve Northing 4385549.6 Easting 560940.1  
Bottom Hole Northing 4389120.1 Easting 558478.3

Elevation (ft) 1,412' 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)  
Synthetic Based Mud - Horizontal Section: BIO-BASE 365, CALCIUM CHLORIDE POWDER, G-SEAL PLUS, HRP, LIME, M-I WATE (BARITE),  
M-I-X II MEDIUM, MEGADRIL P SYSTEM, MEGADRIL P SYSTEM RENTAL, MEGAMUL, SAFE-CARB 250, VERSATHIN HF, VERSAWET, VG-PLUS, VINSEAL MEDIUM, WALNUT NUT PLUG MEDIUM

Date permit issued 9/17/2021 Date drilling commenced 2/22/2022 Date drilling ceased 10/9/2022  
Date completion activities began 12/15/22 Date completion activities ceased 1/6/23  
Verbal plugging (Y/N) NA Date permission granted \_\_\_\_\_ Granted by \_\_\_\_\_

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft 726', 1105', 1135' Open mine(s) (Y/N) depths N  
Salt water depth(s) ft 2150', 2470' Void(s) encountered (Y/N) depths N  
Coal depth(s) ft 1095' Cavern(s) encountered (Y/N) depths N  
Is coal being mined in area (Y/N) N

Reviewed by:  
02/23/2024

API 47-061 - 01888 Farm name McClellan Well number 11H

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"	24"	100'	N		NA	
Surface	17-1/2"	13-3/8"	1,450'	N	54.5	NA	Y, 47 bbl
Coal							
Intermediate 1	12-1/4"	9-5/8"	2,675'	N	40	NA	Y, 18 bbl
Intermediate 2							
Intermediate 3							
Production	8-3/4"	5-1/2"	25,557'	N	20	NA	Y
Tubing							
Packer type and depth set							

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	4,500 PSI Grout						48
Surface	Class A + 2%	1,240	15.6	1.19	1,472	CTS	8
Coal							
Intermediate 1	Class A + 1%	915	15.6	1.18	1,083	CTS	8
Intermediate 2							
Intermediate 3							
Production	50:50 Class A + Additives	4,755	14.5	1.16	5,507	591'	48
Tubing							

Drillers TD (ft) 23,705' Loggers TD (ft) 23,675'  
 Deepest formation penetrated Marcellus Plug back to (ft) \_\_\_\_\_  
 Plug back procedure \_\_\_\_\_

Kick off depth (ft) 7,004'

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 \_\_\_\_\_

Surface: Bow spring centralizers every 3rd joint or approximately 120'

Intermediate: Bow spring centralizers every 3rd joint or approximately 120'

Production: Rigid body centralizers placed at a minimum of every other joint (~80') from TD to surface

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- 061 - 01888 Farm name McClellan Well number 11H

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
	See attached				

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)
	See	Attached						

Please insert additional pages as applicable.

API 47- 061 - 01888 Farm name McClellan Well number 11H

PRODUCING FORMATION(S)	DEPTHS	
Marcellus	8,082'	TVD 22,379' 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 2888 psi DURATION OF TEST 24 hrs

OPEN FLOW Gas 6169 mcfpd Oil \_\_\_\_\_ bpd NGL \_\_\_\_\_ bpd Water \_\_\_\_\_ 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)
See attached	0		0		

Please insert additional pages as applicable.

Drilling Contractor Patterson UTI  
Address 4000 Town Center Blvd, Suite 240 City Canonsburg State PA Zip 15317

Logging Company Baker Hughes  
Address 837 Phillippi Pike City Clarksburg State WV Zip 26301

Cementing Company NextTier  
Address 4000 Town Center Blvd City Canonsburg State PA Zip 15317

Stimulating Company ProFrac  
Address 800 Mountain View Drive City Smithfield State PA Zip 15478

Please insert additional pages as applicable.

Completed by Hollie Medley Telephone 304-212-0422  
Signature Hollie Medley Title Regulatory Manager Date 1/17/2024

McClellan Completion lithology Lithology/Formation	Top Depth in FT TVD	Bottom Depth in FT TVD	Describe rock type and record quantity and type of fluid (freshwater, brine, oil, gas, H2S, etc)
Sand/silt	0	160	Sand/silt
silt/red shale	160	490	silt/red shale
siltstone/sandstone/limestone	490	520	siltstone/sandstone/limestone
limestone/siltstone/sandstone	520	576	siltstone
coal	576	580	coal
siltstone/limestone/shale	580	760	siltstone/shale
coal	760	992	siltstone/shale/limestone
siltstone/sandstone	992	998	coal
coal	998	1084	siltstone/shale/limestone
sandstone/siltstone/limestone	1084	1092	coal - Pittsburgh
coal-Pittsburgh	1092	1120	siltstone/shale/limestone
sandstone/limestone	1120	1150	sandstone
red shale/siltstone	1150	1480	siltstone/limestone/sand/red shale
Limestone/siltstone	1480	2050	siltstone/sandstone
sandstone	2050	2110	sandstone
sandstone/siltstone/red shale	2110	2260	siltstone/sandstone
siltstone/sandstone	2260	2470	siltstone/limestone
sandstone	2470	2500	Big Injun Sandstone
Upper Devonian Sands/silts	2500	3010	sandstone/siltstone
shale/siltstone	3010	3020	Gantz sandstone
Upper Devonian Sands/silts	3020	3560	Upper Devonian sandstones/siltstones
Devonian siltstones/shales	3560	7620	Devonian siltstones/shales
Middlesex shale/silt	7620	7790	Middlesex shale/silt
Burkett shale	7790	7816	Burkett Shale
Geneseo shale	7816	7845	Geneseo shale
Tully Limestone	7845	7898	Tully Limestone
Hamilton shale	7898	7996	Hamilton shale
Marcellus shale	7996	TD	Marcellus shale

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**McClellan 11H**  
Stimulation Report

Stage Number	Report Date	ISIP (psi)	Breakdown Pressure (psi)	Avg Treating Pressure (psi)	Avg Treating Rate (BPM)	Pad Volume (bbls)	Total Clean Fluid (Bbls)	Total Proppant Amount (lbs)	Flush Volume (bbls)
1	12/17/2022	5,058		9,601	91	867	8,288	299,980	574
2	12/17/2022	5,866	6,209	9,033	80	35	10,648	499,920	567
3	12/17/2022	5,866	6,295	9,338	83	45	10,946	505,000	569
4	12/18/2022	5,311	6,125	9,171	82	43	12,869	500,000	643
5	12/18/2022	5,814	6,578	9,245	85	46	10,749	499,268	557
6	12/18/2022	5,637	4,993	9,232	85	30	10,737	498,580	551
7	12/18/2022	5,385	5,548	9,423	88	116	11,017	500,000	555
8	12/18/2022	5,585	7,354	9,397	88	116	10,839	500,000	534
9	12/19/2022	6,568	7,266	9,387	89	532	11,414	498,330	537
10	12/19/2022	6,931	6,152	8,813	85	67	11,322	501,450	537
11	12/18/2022	5,906	7,422	9,249	84	58	10,779	498,700	537
12	12/19/2022	5,800	6,794	9,384	87	69	10,974	500,000	537
13	12/20/2022	5,882	7,298	9,378	87	79	10,968	500,000	537
14	12/20/2022	6,467	7,309	9,172	84	36	11,182	497,440	537
15	12/20/2022	6,251	7,505	9,219	84	49	10,604	497,420	537
16	12/20/2022	5,674	6,798	9,211	89	98	10,813	501,777	537
17	12/21/2022	5,525	6,973	9,086	88	92	10,886	499,112	537
18	12/21/2022	6,173	7,383	9,054	85	83	10,964	498,281	537
19	12/21/2022	5,910	7,099	9,246	85	39	10,768	500,560	537
20	12/21/2022	6,218	6,357	9,226	89	30	10,680	503,733	537
21	12/21/2022	5,382	7,906	9,189	90	87	10,947	499,654	537
22	12/22/2022	5,572	7,445	9,326	91	58	10,691	499,076	537
23	12/22/2022	6,401	5,481	9,254	83	106	11,009	498,200	481
24	12/22/2022	6,802	7,364	9,216	84	58	11,371	498,358	479
25	12/22/2022	6,004	6,778	9,266	86	63	10,729	507,099	479
26	12/22/2022	6,040	6,169	9,223	84	47	10,621	500,031	479
27	12/23/2022	5,893	8,194	9,225	78	68	10,659	497,558	535
28	12/26/2022	5,858	6,650	9,159	83	705	11,113	499,040	450
29	12/26/2022	5,326	8,285	9,246	87	44	10,616	500,617	459
30	12/27/2022	4,943	8,513	9,099	85	72	11,059	501,245	456
31	12/27/2022	5,574	8,148	9,239	86	58	9,685	454,976	410
32	12/27/2022	5,619	8,077	9,110	82	69	10,020	448,520	405
33	12/27/2022	5,473	8,347	9,010	84	66	10,063	455,699	402
34	12/28/2022	5,783	8,352	9,192	86	28	10,364	454,960	425
35	12/28/2022	5,503	7,673	8,973	86	90	10,273	453,300	385
36	12/28/2022	5,758	7,931	9,257	85	46	9,447	454,758	385
37	12/28/2022	5,760	7,294	9,259	88	43	9,868	455,893	353
38	12/29/2022	5,481	7,317	9,211	89	29	10,064	456,395	340
39	12/29/2022	6,224	8,272	9,215	84	28	9,545	454,260	365
40	12/29/2022	5,628	7,187	9,153	86	88	9,476	454,980	363
41	12/29/2022	5,597	8,122	9,183	82	81	10,079	457,224	333

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Stage Number	Report Date	ISIP (psi)	Breakdown Pressure (psi)	Avg Treating Pressure (psi)	Avg Treating Rate (BPM)	Pad Volume (bbls)	Total Clean Fluid (Bbls)	Total Proppant Amount (lbs)	Flush Volume (bbls)
42	12/30/2022	5,990	8,158	9,364	85	48	10,218	456,114	349
43	12/30/2022	6,153	9,072	9,111	86	69	9,544	455,620	350
44	12/30/2022	5,406	7,767	9,057	85	66	9,681	455,736	348
45	12/30/2022	6,678	7,886	9,134	87	71	9,747	455,627	329
46	12/30/2022	6,019	7,737	9,153	86	45	10,039	457,555	321
47	12/31/2022	5,591	8,001	9,034	87	23	10,010	455,221	320
48	12/31/2022	5,632	7,108	8,776	86	158	9,569	454,320	319
49	12/31/2022	5,553	8,159	9,074	87	85	9,417	453,800	378
50	12/31/2022	5,588	7,494	9,063	86	80	9,666	460,871	367
51	1/1/2023	5,818	7,730	9,033	89	48	10,346	455,218	336
52	1/1/2023	5,412	7,216	8,776	86	59	9,452	461,911	325
53	1/1/2023	5,689	7,721	8,813	89	73	8,974	453,706	315
54	1/1/2023	5,658	7,560	8,832	90	17	9,692	454,329	343
55	1/2/2023	5,812	7,017	8,616	90	93	9,772	456,593	358
56	1/2/2023	5,789	7,249	8,678	90	85	9,308	454,256	325
57	1/2/2023	5,816	7,086	8,633	89	66	9,140	454,400	315
58	1/2/2023	5,757	6,620	8,573	89	51	9,512	453,820	310
59	1/2/2023	5,778	7,570	8,586	89	13	9,782	456,014	276
60	1/3/2023	6,257	7,310	8,704	89	65	11,200	453,920	275
61	1/3/2023	5,600	7,782	8,637	89	84	9,227	454,940	250
62	1/4/2023	5,752	6,615	8,414	88	31	9,565	456,140	308
63	1/4/2023	5,427	7,971	8,422	88	55	9,472	456,120	300
64	1/4/2023	5,396	7,575	8,221	88	45	9,227	454,920	295
65	1/4/2023	5,987	7,937	8,209	89	65	9,470	460,240	296
66	1/4/2023	5,847	7,434	8,359	89	71	10,327	456,440	335
67	1/5/2023	5,820	7,099	8,302	89	57	9,794	455,860	301
68	1/5/2023	5,823	7,088	8,384	89	58	9,436	455,040	275
69	1/5/2023	5,691	7,657	8,131	90	39	9,308	454,100	260
70	1/5/2023	5,881	7,544	8,215	89	58	9,734	455,780	272
71	1/6/2023	5,849	6,653	7,942	88	86	9,565	450,440	272
72	1/6/2023	6,162	7,071	8,292	89	59	9,703	454,020	264
73	1/6/2023	5,073	7,856	8,264	92	49	9,121	437,915	250

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## Perforation Report

Stage Number	Report Date	Total Shots	Cluster 1 Top TD	Cluster 5 Bottom TD
1	12/17/2022			23,627
2	12/17/2022	40	23,583	23,424
3	12/17/2022	40	23,382	23,224
4	12/18/2022	40	23,181	23,023
5	12/18/2022	40	22,981	22,822
6	12/18/2022	40	22,780	22,622
7	12/18/2022	40	22,579	22,421
8	12/18/2022	40	22,379	22,220
9	12/19/2022	40	22,178	22,019
10	12/19/2022	40	21,977	21,819
11	12/18/2022	40	21,777	21,618
12	12/19/2022	40	21,576	21,417
13	12/20/2022	40	21,375	21,217
14	12/20/2022	40	21,175	21,016
15	12/20/2022	40	20,974	20,815
16	12/20/2022	40	20,773	20,615
17	12/21/2022	40	20,573	20,414
18	12/21/2022	40	20,372	20,213
19	12/21/2022	40	20,171	20,013
20	12/21/2022	40	19,971	19,812
21	12/21/2022	40	19,770	19,611
22	12/22/2022	40	19,569	19,411
23	12/22/2022	40	19,368	19,210
24	12/22/2022	40	19,168	19,009
25	12/22/2022	40	18,967	18,809
26	12/22/2022	40	18,766	18,608
27	12/23/2022	40	18,566	18,407
28	12/26/2022	40	18,365	18,207
29	12/26/2022	40	18,164	18,006
30	12/27/2022	40	17,964	17,805
31	12/27/2022	40	17,763	17,605
32	12/27/2022	40	17,562	17,404
33	12/27/2022	40	17,362	17,203
34	12/28/2022	40	17,161	17,002
35	12/28/2022	40	16,960	16,802
36	12/28/2022	40	16,760	16,601
37	12/28/2022	40	16,559	16,400
38	12/29/2022	40	16,358	16,200
39	12/29/2022	40	16,158	15,999
40	12/29/2022	40	15,957	15,798
41	12/29/2022	40	15,756	15,598
42	12/30/2022	40	15,556	15,397
43	12/30/2022	40	15,355	15,196
44	12/30/2022	40	15,154	14,996
45	12/30/2022	40	14,954	14,795
46	12/30/2022	40	14,753	14,594
47	12/31/2022	40	14,552	14,394

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Stage Number	Report Date	Total Shots	Cluster 1 Top TD	Cluster 5 Bottom TD
48	12/31/2022	40	14,351	14,193
49	12/31/2022	40	14,151	13,992
50	12/31/2022	40	13,950	13,792
51	1/1/2023	40	13,749	13,591
52	1/1/2023	40	13,549	13,390
53	1/1/2023	40	13,348	13,190
54	1/1/2023	40	13,147	12,989
55	1/2/2023	40	12,947	12,788
56	1/2/2023	40	12,746	12,588
57	1/2/2023	40	12,545	12,387
58	1/2/2023	40	12,345	12,186
59	1/2/2023	40	12,144	11,985
60	1/3/2023	40	11,943	11,785
61	1/3/2023	40	11,743	11,584
62	1/4/2023	40	11,542	11,383
63	1/4/2023	40	11,341	11,183
64	1/4/2023	40	11,141	10,982
65	1/4/2023	40	10,940	10,781
66	1/4/2023	40	10,739	10,581
67	1/5/2023	40	10,539	10,380
68	1/5/2023	40	10,338	10,179
69	1/5/2023	40	10,137	9,979
70	1/5/2023	40	9,937	9,778
71	1/6/2023	40	9,736	9,577
72	1/6/2023	40	9,535	9,377
73	1/6/2023	40	9,334	9,175

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# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	12/17/2022
Job End Date:	1/6/2023
State:	West Virginia
County:	Monongalia
API Number:	47-061-01888-00-00
Operator Name:	Northeast Natural Energy LLC
Well Name and Number:	McClellan 11H
Latitude:	39.62156900
Longitude:	-80.27880500
Datum:	NAD27
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	8,082
Total Base Water Volume (gal):	31,254,972
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	Northeast Natural Energy	Carrier/Base Fluid	Water	7732-18-5	100.00000	88.08350	None
Sand (100 Mesh Proppant)	ProFrac	Proppant	Silica Substrate	14808-60-7	100.00000	10.45843	None
Sand (40/70 White Proppant)	ProFrac	Proppant	Silica Substrate	14808-60-7	100.00000	1.14623	None
Hydrochloric Acid (7.5%)	CNR	Acidizing	Water	7732-18-5	85.00000	0.18287	None
			Hydrochloric Acid (Hydrogen Chloride)	7647-01-0	37.00000	0.07960	None
StimSTREAM FR 9800	Chemstream	Friction Reducer	Butene, homopolymer	9003-29-6	25.00000	0.01510	None
			alkanes, C16-20-iso-	90622-59-6	25.00000	0.01510	None
			Ethoxylated alcohols (C12-18)	68213-23-0	3.00000	0.00181	None
Clearal 268	Chemstream	Biocide	Non-hazardous substances	Proprietary	80.00000	0.01775	None

			Glutaraldehyde	111-30-8	20.00000	0.00444	None
			Didecyl dimethyl ammonium chloride	7173-51-5	3.00000	0.00067	None
			Quaternary Ammonium Compounds	68424-85-1	3.00000	0.00067	None
			Ethanol	64-17-5	1.50000	0.00033	None
StimSTREAM SC 405	Chemstream	Scale Control					
			Non-Hazardous Substances	Proprietary	70.00000	0.00906	None
			Diethylenetriamine penta (methylene phosphonic acid) (DTPMP)	15827-60-8	10.00000	0.00129	None
			2-Phosphono-1,2,4-butanetricarboxylic acid (PBTC)	37971-36-1	10.00000	0.00129	None
			Citric Acid	77-92-9	10.00000	0.00129	None
ProHib 100	CNR	Acid Inhibitor					
			2-Butoxyethanol	111-76-2	60.00000	0.00039	None
			Proprietary material	Proprietary	30.00000	0.00020	None
			Proprietary non-ionic surfactant	Proprietary	20.00000	0.00013	None
			Proprietary corrosion inhibitor	Proprietary	10.00000	0.00007	None
			Proprietary ethoxylated alcohol	Proprietary	10.00000	0.00007	None
ProFE 105	CNR	Iron Control					
			Citric Acid	77-92-9	20.00000	0.00010	None
			Acetic Acid	64-19-7	5.00000	0.00003	None
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.							
Other Chemical(s)	Listed Above	See Trade Name(s) List					
			Water	7732-18-5	85.00000	0.18287	
			Non-hazardous substances	Proprietary	80.00000	0.01775	
			Butene, homopolymer	9003-29-6	25.00000	0.01510	
			Non-Hazardous Substances	Proprietary	70.00000	0.00906	
			Ethoxylated alcohols (C12-18)	68213-23-0	3.00000	0.00181	
			Citric Acid	77-92-9	10.00000	0.00129	
			Diethylenetriamine penta (methylene phosphonic acid) (DTPMP)	15827-60-8	10.00000	0.00129	
			Quaternary Ammonium Compounds	68424-85-1	3.00000	0.00067	
			Didecyl dimethyl ammonium chloride	7173-51-5	3.00000	0.00067	
			Ethanol	64-17-5	1.50000	0.00033	
			Proprietary material	Proprietary	30.00000	0.00020	
			Proprietary non-ionic surfactant	Proprietary	20.00000	0.00013	
			Proprietary corrosion inhibitor	Proprietary	10.00000	0.00007	
			Proprietary ethoxylated alcohol	Proprietary	10.00000	0.00007	
			Acetic Acid	64-19-7	5.00000	0.00003	