

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

API 47 - 061 - 01864 County Monongalia District Clay  
Quad Blacksville Pad Name Cummins Field/Pool Name \_\_\_\_\_  
Farm name Jerry L. Yost et al Well Number 18H  
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 4390562.0 Easting 570280.4  
Landing Point of Curve Northing 4390831.7 Easting 570606.1  
Bottom Hole Northing 4392412.0 Easting 569371.1

Elevation (ft) 1,358' 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 FOR 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 3/26/2020 Date drilling commenced 8/24/2020 Date drilling ceased 11/28/2020  
Date completion activities began 4/1/2021 Date completion activities ceased 4/16/2021  
Verbal plugging (Y/N) NA Date permission granted NA Granted by NA

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

Freshwater depth(s) ft 750', 906', 1,248' Open mine(s) (Y/N) depths N  
Salt water depth(s) ft 2,123' Void(s) encountered (Y/N) depths N  
Coal depth(s) ft 530', 906', 1,248' Cavern(s) encountered (Y/N) depths N  
Is coal being mined in area (Y/N) N

Reviewed by: Dwight Hester  
**08/13/2021**

API 47-061 - 01864

Farm name Jerry L. Yost et al

Well number 18H

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"	40'	N		NA	Y
Surface	17-1/2"	13-3/8"	1,323'	N	54.5	NA	Y, 48 bbl
Coal							
Intermediate 1	12-1/4"	9-5/8"	2,466'	N	40	NA	Y, 20 bbl
Intermediate 2							
Intermediate 3							
Production	8-3/4"	5-1/2"	17,314'	N	20	NA	Y
Tubing							
Packer type and depth set							

Comment Details \_\_\_\_\_

CEMENT  
and Gas  
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CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	WV Department of Environmental Protection Cement Top (MD)	WOC (hrs)
Conductor	4500 psi ready mix	36				CTS	48
Surface	Class A	1,094	15.6	1.19	1,291	CTS	8
Coal							
Intermediate 1	Class A	813	15.6	1.18	960	CTS	8
Intermediate 2							
Intermediate 3							
Production	50:50 poz	3,135	14.5	1.16	3,633	1,921'	48
Tubing							

Drillers TD (ft) 17,314'

Loggers TD (ft) 17,314'

Deepest formation penetrated Marcellus

Plug back to (ft) NA

Plug back procedure \_\_\_\_\_

Kick off depth (ft) 6,269'

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 \_\_\_\_\_

08/13/2021

API 47- 061 - 01864 Farm name Jerry L. Yost et al Well number 18H

### PERFORATION RECORD

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

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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.

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API 47- 061 - 01864 Farm name Jerry L. Yost et al Well number 18H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>Marcellus</u>	<u>8,160'</u> TVD	<u>17,315'</u> MD
_____	_____	_____
_____	_____	_____
_____	_____	_____

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump  
 SHUT-IN PRESSURE Surface 2433 psi Bottom Hole 4150 psi DURATION OF TEST 24 hrs  
 OPEN FLOW Gas 4650 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		

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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 Lightning Energy Services  
 Address 104 Heliport Loop Road City Bridgeport State WV Zip 26330  
 Stimulating Company Producers Services  
 Address 109 Graham St. City Zanesville State OH Zip 43701

Please insert additional pages as applicable.

Completed by Hollie Medley Telephone 304-212-0445  
 Signature Hollie Medley Title Regulatory Manager Date 7-16-21

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

### Cummins 18H Perforation Summary

Stage Number	Report Date	Cluster 5 Bottom TD	Cluster 1 Top TD	Total Shots
1	04/01/21	17,164	-	-
2	04/02/21	16,961	17,120	40
3	04/02/21	16,760	16,919	40
4	04/02/21	16,558	16,717	40
5	04/02/21	16,357	16,516	40
6	04/02/21	16,155	16,314	40
7	04/03/21	15,954	16,113	40
8	04/03/21	15,752	15,911	40
9	04/03/21	15,551	15,710	40
10	04/03/21	15,349	15,509	40
11	04/04/21	15,148	15,307	40
12	04/04/21	14,946	15,106	40
13	04/05/21	14,745	14,904	40
14	04/05/21	14,543	14,703	40
15	04/06/21	14,342	14,501	40
16	04/06/21	14,141	14,300	40
17	04/06/21	13,939	14,098	40
18	04/07/21	13,738	13,897	40
19	04/07/21	13,536	13,695	40
20	04/07/21	13,335	13,494	40
21	04/08/21	13,133	13,292	40
22	04/08/21	12,932	13,091	40
23	04/08/21	12,730	12,889	40
24	04/08/21	12,529	12,688	40
25	04/09/21	12,327	12,486	40
26	04/09/21	12,126	12,285	40
27	04/09/21	11,924	12,084	40
28	04/10/21	11,723	11,882	40
29	04/10/21	11,521	11,681	40
30	04/11/21	11,320	11,479	40
31	04/11/21	11,119	11,278	40
32	04/12/21	10,917	11,076	40
33	04/12/21	10,716	10,875	40
34	04/13/21	10,514	10,673	40
35	04/13/21	10,313	10,472	40
36	04/13/21	10,111	10,270	40
37	04/14/21	9,910	10,069	40
38	04/14/21	9,708	9,867	40
39	04/14/21	9,507	9,666	40
40	04/15/21	9,305	9,464	40
41	04/15/21	9,104	9,263	40

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### Cummins 18H Stimulation Summary

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	04/01/21	5,973	6,699	9,157	86	516	6,336	294,300	384
2	04/02/21	6,258	6,347	9,133	84	460	9,116	361,180	-
3	04/02/21	6,098	6,285	9,340	87	28	6,857	280,300	375
4	04/02/21	5,946	6,787	9,392	82	20	5,800	304,360	370
5	04/02/21	5,783	6,420	9,451	79	69	5,710	300,140	366
6	04/02/21	6,747	6,721	8,826	78	133	6,676	298,800	362
7	04/03/21	5,725	7,010	9,353	82	308	5,991	302,140	357
8	04/03/21	5,258	6,973	9,544	83	16	5,499	303,020	352
9	04/03/21	5,384	6,983	9,454	84	15	8,855	457,660	348
10	04/03/21	6,026	6,805	9,283	83	19	9,115	461,980	343
11	04/04/21	5,833	7,638	9,521	86	15	9,549	462,920	339
12	04/04/21	5,650	7,150	9,389	86	30	8,528	463,200	334
13	04/05/21	5,292	7,968	9,147	81	18	8,402	462,040	330
14	04/05/21	6,786	6,434	8,834	76	7	9,488	451,260	343
15	04/06/21	5,395	7,336	8,945	84	3	8,363	456,580	321
16	04/06/21	5,509	7,395	9,100	83	14	8,289	463,360	317
17	04/06/21	5,920	7,806	9,138	84	3	8,284	464,140	312
18	04/07/21	6,755	7,454	9,329	85	15	8,147	460,540	308
19	04/07/21	6,455	7,182	9,022	85	15	8,018	460,540	303
20	04/07/21	5,737	7,902	8,606	84	4	8,321	459,440	305
21	04/08/21	6,105	8,077	9,153	85	15	8,257	468,000	294
22	04/08/21	5,757	8,012	9,191	83	15	8,500	387,650	290
23	04/08/21	6,266	7,555	9,030	83	24	8,386	456,580	292
24	04/08/21	6,220	7,269	8,843	85	5	8,136	454,840	286
25	04/09/21	6,354	7,523	8,796	81	12	8,164	467,720	276
26	04/09/21	6,614	7,464	8,649	83	15	9,239	457,600	279
27	04/09/21	6,727	8,046	9,188	84	5	8,279	454,560	269
28	04/10/21	5,983	7,598	8,996	86	13	8,214	454,640	263
29	04/10/21	6,075	7,611	8,664	84	4	8,236	463,120	264
30	04/11/21	6,813	7,324	8,699	86	21	8,448	460,940	254
31	04/11/21	6,151	7,850	8,662	85	9	8,150	455,040	251
32	04/12/21	6,460	7,308	8,616	85	7	8,187	463,940	246
33	04/12/21	5,746	7,003	8,578	86	15	8,257	463,540	241
34	04/13/21	6,130	7,352	8,758	87	4	8,131	459,080	244
35	04/13/21	6,013	7,704	8,972	89	5	8,057	457,520	232
36	04/13/21	6,084	7,608	9,098	89	16	7,616	454,680	231
37	04/14/21	5,961	7,889	8,927	88	5	8,168	460,780	223
38	04/14/21	6,158	7,671	8,787	90	18	8,204	466,800	222
39	04/14/21	6,102	7,304	8,602	90	15	7,097	454,640	216
40	04/15/21	6,279	7,577	8,409	90	15	8,069	455,900	214
41	04/15/21	5,488	7,112	8,283	90	11	8,240	464,280	206

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**Cummins 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	210	Sand/silt
silt/red shale	210	382	silt/red shale
coal/silt	382	400	coal/silt
limestone/siltstone/sandstone	400	530	limestone/siltstone/sandstone
coal	530	540	coal
siltstone/limestone/shale	540	710	siltstone/limestone/shale
limestone/siltstone	710	750	limestone/siltstone
siltstone/sandstone	750	802	siltstone/sandstone
coal	802	810	coal
sandstone/siltstone/limestone	810	862	sandstone/siltstone/limestone
coal	862	866	coal
sandstone/limestone	866	906	sandstone/limestone
coal - Pittsburgh	906	915	coal - Pittsburgh
Limestone/siltstone	915	1010	Limestone/siltstone
sandstone	1010	1030	sandstone
sandstone/siltstone/red shale	1030	1250	sandstone/siltstone/red shale
siltstone/sandstone	1250	1330	siltstone/sandstone
sandstone	1330	1340	sandstone
sandstone/siltstone/shale	1340	2010	sandstone/siltstone/shale
sandstone	2010	2040	sandstone
sandstone/siltstone/red shale	2040	2120	sandstone/siltstone/red shale
Little Lime	2123	2204	Little Lime
Big Lime	2204	2270	Big Lime
Big Injun Sandstone	2270	2365	Big Injun Sandstone
Siltstone	2365	2460	Siltstone
Berea Sandstone	2460	2470	Berea Sandstone
siltstone/shale	2470	2721	siltstone/shale
Gantz sandstone	2721	2730	Gantz sandstone
Gordon Sandstones	2730	3210	Gordon Sandstones
Upper Devonian Sands/silts	3210	5800	Upper Devonian Sands/silts
Elk siltstones and shales	5800	6500	Elk siltstones and shales
siltstone/gray shale	6500	7364	siltstone/gray shale
Middlesex shale/silt	7364	7667	Middlesex shale/silt
Burkett shale	7667	7846	Burkett shale
Geneseo shale	7846	7899	Geneseo shale
Tully Limestone	7899	7980	Tully Limestone
Hamilton shale	7980	8084	Hamilton shale
Marcellus shale	8084	TD	Marcellus shale

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Ticket #: 0

Remit to:  
 Lightning Energy Services  
 104 Heliport Loop Road  
 Bridgeport, WV 26330

Job Times				
Date:	On Loc:	Job Start:	Job End:	Off Loc:
	11/21/20		11/21/20	
Time:	5:00am	8:00am	10:14am	

Customer and Well Information					
Customer: Northeast		Well Name:		Well #: 18H	Well Type: Gas
County:	State: WV	AFE #/API #:		PO #/Permit #:	Well Class:
Field:		Lease: Cummins		Rig Name/# : Decker #8	
Wellbore Information					
Bit Size (Inches): 17 1/2	Well MD (ft):	Well TVD (ft): 1348	BHST (F°):	BHCT (F°):	Deviation (°):
Drilling Fluid Type: air	Drilling Fluid Density (ppg):		Packer Depth (ft):	Treating Down:	
Previous Casing/Liner					
Size (Inches): 24	Weight (lb/ft):	Thread:	Grade:	Total Footage (ft): 40	
Casing/Liner/Tubing					
Size (Inches): 13 3/8	Weight (lb/ft): 54 1/2	Thread: 8rd	Grade:	Total Footage (ft): 1325.5	
Job					
Job Type: Surface		Connection to Well: YES		Top Plug: YES	
Lift Pressure (PSI): 488	Max Annulus Pressure (PSI):		Mix Water Temp (F°):	Bottom Plug: No	
Casing/Tubing Secured : Yes	Pipe Rotated: No	Cement Return to Surface (bbl): 48		Top Job (bbl):	
Pipe Reciprocated : No	Circulation Lost: No	Job Completed: YES	48bbbls cement to surface		

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Ticket #: 0

Remit to:  
 Lightning Energy Services  
 104 Heliport Loop Road  
 Bridgeport, WV 26330

Job Times				
Date:	On Loc: 11/23/20	Job Start: 11/23/20	Job End: 11/23/20	Off Loc: 11/23/10
Time:	8:30AM	2:15PM	4:30PM	5:30PM

Customer and Well Information					
Customer: NORTHEAST		Well Name: 18H	Well #:	Well Type: GAS	
County:	State: WV	AFE #/API #:	PO #/Permit #:	Well Class:	
Field:	Lease: CUMMINS	Rig Name/# : DECKER #8			
Wellbore Information					
Bit Size (Inches): 12 3/8	Well MD (ft):	Well TVD (ft): 2500	BHST (F°):	BHCT (F°):	Deviation (°):
Drilling Fluid Type:	Drilling Fluid Density (ppg):	Packer Depth (ft):	Treating Down:		
Previous Casing/Liner					
Size (Inches): 13 3/8	Weight (lb/ft): 54 1/2	Thread: 8RD	Grade:	Total Footage (ft): 1323	
Casing/Liner/Tubing					
Size (Inches): 9 5/8	Weight (lb/ft): 36	Thread: 8RD	Grade:	Total Footage (ft): 2466	
Job					
Job Type: INTERMEDIATE		Connection to Well: PLUG CONTAINER		Top Plug: YES	
Lift Pressure (PSI): 1018	Max Annulus Pressure (PSI):	Mix Water Temp (F°):		Bottom Plug: No	
Casing/Tubing Secured : YES	Pipe Rotated: No	Cement Return to Surface (bbl): 20	Top Job (bbl):		
Pipe Reciprocated : No	Circulation Lost: NO	Job Completed: yes			

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**Cement Job Log**



Customer:	NORTHEAST NATURAL ENERGY LLC	Date:	24-Jan-21	Serv. Supervisor:	TIM MONOSKEY
Cust. Rep.:	SAM	Ticket #:	BPA-2101-0034	Serv. Center:	Black Lick - 1571
Well Name:	Cummins 18H	API Well #:	47-061-01884	County:	Monongalia
Well Type:		Rig:	PATTERSON 277	State:	WV
				Type of Job:	CM-PROD. CASING

Materials Furnished by NexTier		Physical Slurry Properties						
Plugs	Casing Hardware	Sacks of Cement	Fluid Density (lb/gal)	Excess	Yield (cuft/sk)	Mix Water (gal/sk)	Fluid Volume (bbls)	Mix Water (bbls)
CUSTOMER SUPPLIED	NEXTier 5.5" PLUG CONTAINER							
TOP AND BOTTOM								
13.5 lb/gal PureScrub Spacer w/Surfactant	+7.0 PPB NFP-701+1.0 GPB NTC-880+0.2 GPB NSU-883L	115	14.5		4.70	19.50	110.00	53
14.5 lb/gal Cement	50 % NCM-910+50 % NPZ-010 +0.2 % NFP-701+0.15 % NAS-504+0.2 % NRT-213+0.15 % NFL-549+0.1 % NTC-405	3135	14.5		1.18	4.89	645.89	365
Fresh Water Displacement			8.33		-	-	380.69	
0					-	-		
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Displacement Chemicals: N/A

OPEN HOLE DATA			TUBULAR DATA								
8.75 in. O.H. 2,482 to 7,820 ft 8.5 in. O.H. 7,820 to 17,169 ft			5.5 in. 20#, ( 0 to 17,169 ft)		SIZE WEIGHT	THRD	DEPTH (ft)	GRADE	ID (in)	BURST (psi)	COLLAPSE (psi)
Mix Cemt. Temperature °F	Lead Temp.	Middle Temp.	Tail Temp.		5.5" 20#	BTC	17270	P-110	4.778	12640	11080
43.0 °F			51.0 °F								
PREVIOUS CASING DATA			PERFORATED INTERVAL DATA				CASING EQUIPMENT DEPTHS				
8.625 in. 36# ( 0 to 2,482 ft)			TOP	BTM	SPF	SIZE	SHOE	FLOAT	STAGE	ACP	
							17270	17238			
WELL FLUID			DISPLACEMENT FLUID			DIFF PRESS (psi)	DSG LFT (psi)	MAX PRESS (psi)	Total Number of Runs		WATER ON LOC (bbl)
TYPE	DENSITY	VOLUME	TYPE	DENSITY							
OBM	12.2 ppg	382.7 bbl	H2O	8.3 ppg		2625		7500			1600
Bumped Plug	Final Differential (psi)	Floats Held (Y/N)	PSI Lft on Casing	Cement to Surface (bbl)	Top of Cement (ft)	Full Circ. During Job (Y/N)	Max Pump Pressure (psi)	Casing Rotation	Additional Hrs Charged (hrs)	Casing Reciprocation	Rathole Length (ft)
Yes	3,450.00	Y	-	-	1,921	Yes	7,500.00	No		No	44

Comments/Special Customer Instructions:  
 14 BARRELS OF SPACER BACK TO SURFACE TOP OF CEMENT @ 2,004'

 T.M. MONOSKEY Service Supervisor		24-Jan-21 Date
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08/13/2021

# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	4/1/2021
Job End Date:	4/15/2021
State:	West Virginia
County:	Monongalia
API Number:	47-061-01864-00-00
Operator Name:	Northeast Natural Energy LLC
Well Name and Number:	Cummins 18H
Latitude:	39.66199360
Longitude:	-80.18061780
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	8,208
Total Base Water Volume (gal):	13,730,430
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	Company 1	Carrier/Base Fluid	Water	7732-18-5	100.00000	86.36170	None
Sand (Proppant)	Producers Service Corp	Proppant	Silica Substrate	14808-60-7	100.00000	13.22754	None
SlimSTREAM SC 405	Producers Service Corp	Scale Inhibitor	Non-hazardous substances	Proprietary	70.00000	0.02722	None
			Diethylenetriamine penta (methylene phosphonic acid) (DTPMP)	15827-60-8	10.00000	0.00389	None
			Citric Acid	77-92-9	10.00000	0.00389	None
			2-Phosphono-1,2,4-butanetricarboxylic acid (PBTC)	37971-36-1	10.00000	0.00389	None
7.5% HCL	Producers Service Corp	Acidizing	Hydrochloric Acid	7647-01-0	7.50000	0.02192	None
Clearal 268	Producers Service Corp	Biocide	Non-hazardous substances	Proprietary	80.00000	0.01538	None
			Glutaraldehyde	111-30-8	20.00000	0.00385	None

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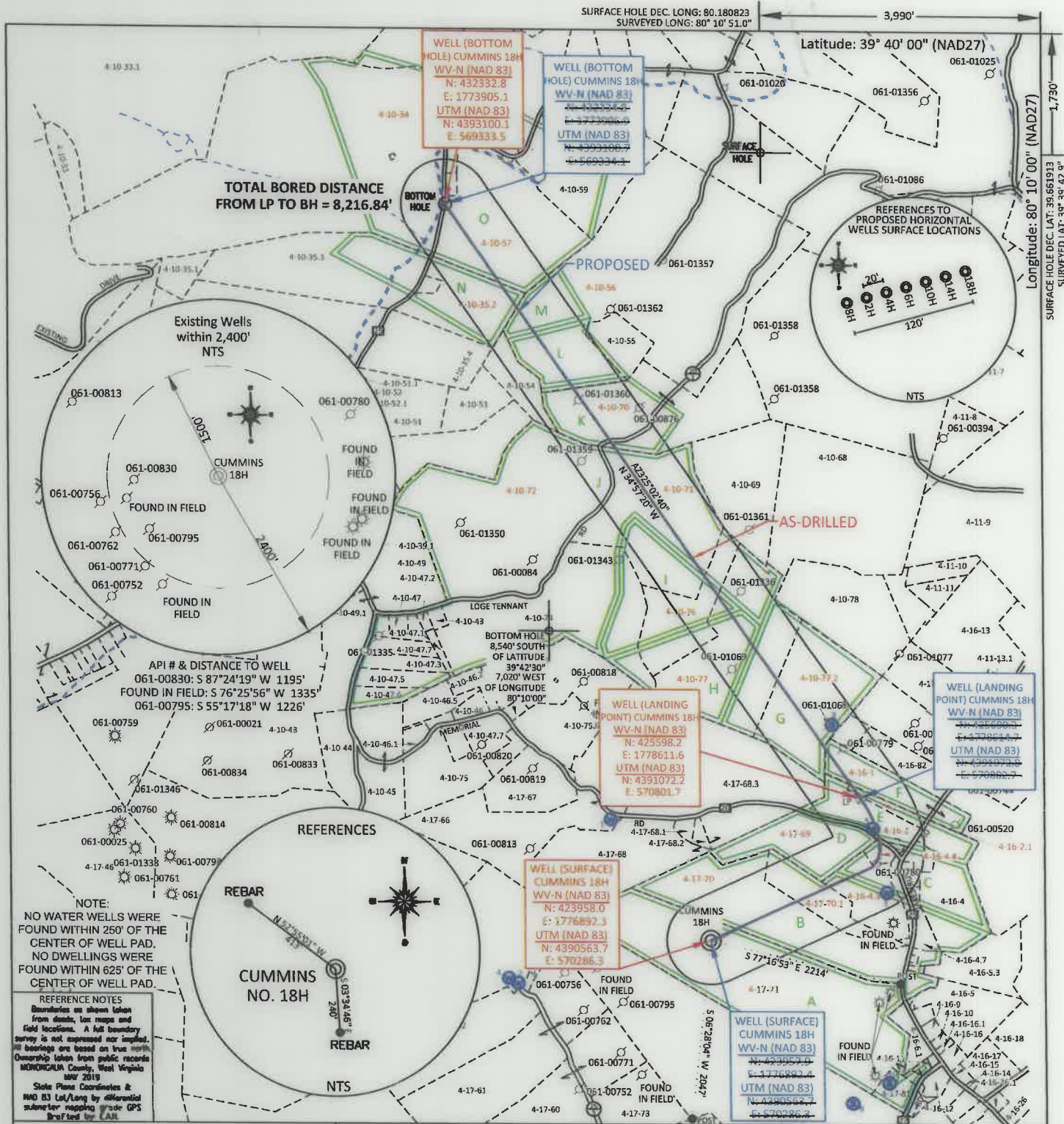
			Quaternary Ammonium Compounds	68424-85-1	3.00000	0.00058	None
			Didecyl dimethyl ammonium chloride	7173-51-5	3.00000	0.00058	None
			Ethanol	64-17-5	1.50000	0.00029	None
StimSTREAM FR 2800	Producers Service Corp	Friction Reducer					
			Petroleum Distillate	64742-47-8	25.00000	0.01494	None
			Alcohols, C11-14, ethoxylated	78330-21-9	5.00000	0.00299	None
4-N-1	Producers Service Corp	Inhibitor					
			Acetic acid	64-18-7	90.00000	0.00050	None
			Methanol	67-56-1	10.00000	0.00006	None
			2-Ethylhexanol	104-76-7	10.00000	0.00006	None
			Cocamide Diethanolamine	68603-42-9	5.00000	0.00003	None
			Diethanolamine	111-42-2	1.00000	0.00001	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					
			Non-hazardous substances	Proprietary	80.00000	0.01538	
			Citric Acid	77-92-9	10.00000	0.00389	
			Diethylenetriamine penta (methylene phosphonic acid) (DTPMP)	15827-60-8	10.00000	0.00389	
			2-Phosphono-1,2,4-butanetricarboxylic acid (PBTC)	37971-36-1	10.00000	0.00389	
			Alcohols, C11-14, ethoxylated	78330-21-9	5.00000	0.00299	
			Quaternary Ammonium Compounds	68424-85-1	3.00000	0.00058	
			Didecyl dimethyl ammonium chloride	7173-51-5	3.00000	0.00058	
			Ethanol	64-17-5	1.50000	0.00029	
			2-Ethylhexanol	104-76-7	10.00000	0.00006	
			Methanol	67-56-1	10.00000	0.00006	
			Cocamide Diethanolamine	68603-42-9	5.00000	0.00003	
			Diethanolamine	111-42-2	1.00000	0.00001	

\* Total Water Volume sources may include fresh water, produced water, and/or recycled water

\*\* Information is based on the maximum potential for concentration and thus the total may be over 100%

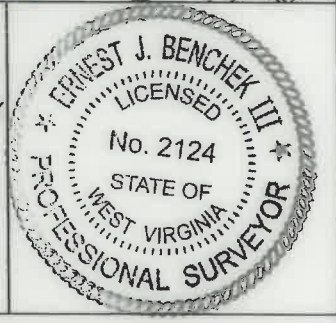
Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.  
Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

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 Environmental Protection  
 Department of



FILE #: NNE15  
 DRAWING #: 2946  
 SCALE: PLAT: 1" = 1600'  
TICK: 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY: 1/200  
 PROVEN SOURCE OF ELEVATION: SUBMETER MAPPING GRADE GPS

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 REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.  
 Signed:   
 L.L.S. #2124 : Ernest J. Benchek III



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
 WVDEP  
 OFFICE OF OIL & GAS  
 601 57TH STREET  
 CHARLESTON, WV 25304

Well Type:  Oil  Waste Diposal  Production  Deep  
 Gas  Liquid Injection  Storage  Shallow

WATERSHED: DUNKARD CREEK  
 COUNTY/DISTRICT: MONONGALIA / CLAY  
 SURFACE OWNER: JERRY L. YOST ET AL  
 OIL & GAS ROYALTY OWNER: NNE LLC, et al  
 LEASE NUMBERS: \_\_\_\_\_

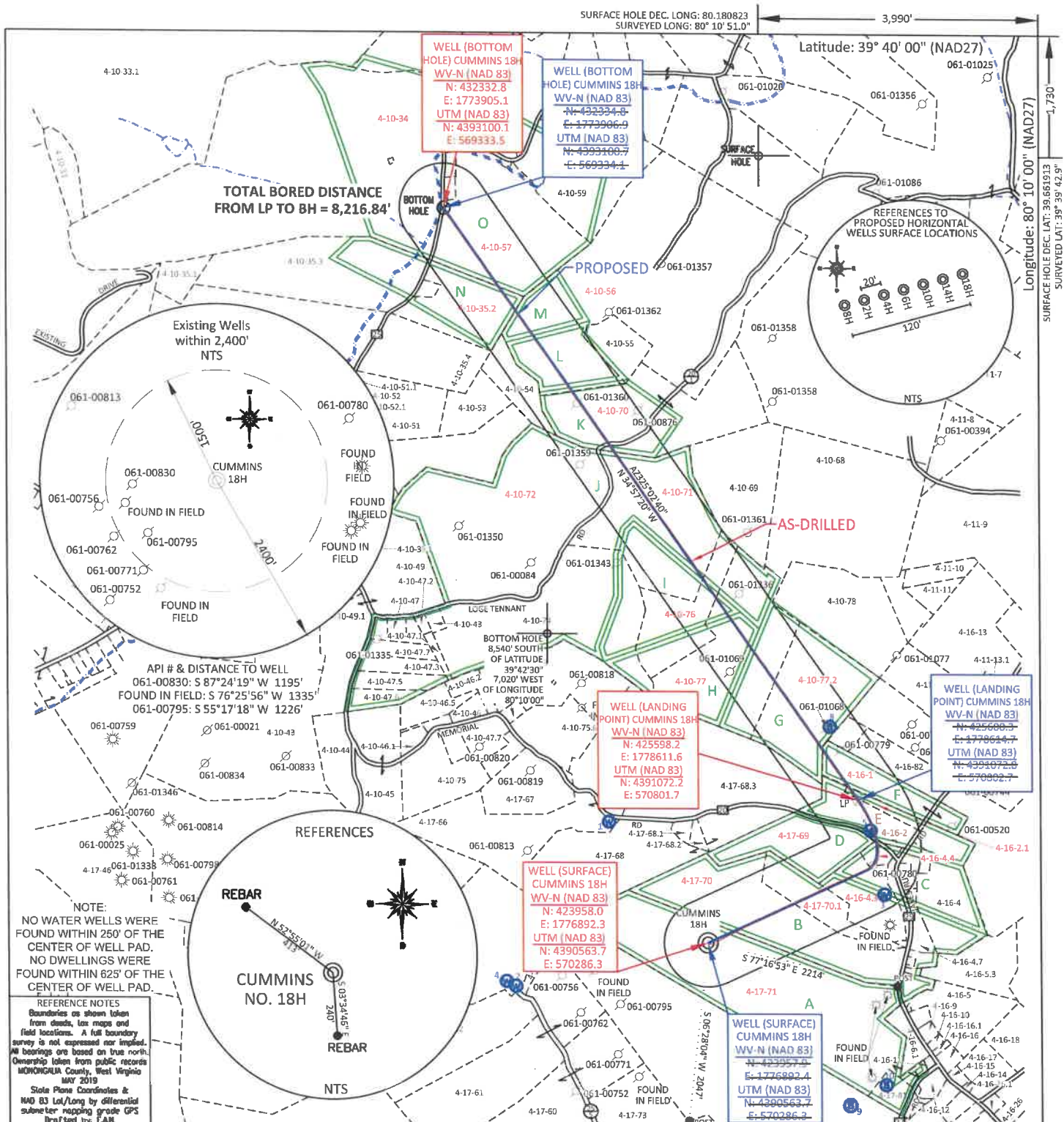
DATE: APRIL 15, 2021  
 OPERATOR'S WELL #: CUMMINS 18H AS-DRILLED  
 API WELL #: 47 61 01864  
 STATE COUNTY PERMIT  
 AS-BUILT ELEVATION: 1,358.80'  
 QUADRANGLE: BLACKSVILLE  
 ACREAGE: 81.472 +/-  
 ACREAGE: 693.423 +/-

DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE   
 PLUG OFF FORMATION  PERFORATE NEW FORMATION  PLUG & ABANDON   
 CLEAN OUT & REPLUG  OTHER CHANGE  (SPECIFY): \_\_\_\_\_

TARGET FORMATION: MARCELLUS  
 WELL OPERATOR: NORTHEAST NATURAL ENERGY LLC  
 ADDRESS: 707 VIRGINIA STREET EAST, SUITE 1200  
 CITY: CHARLESTON STATE: WV ZIP CODE: 25301

DRILLED DEPTH: TVD: 8,191' TMD: 17,314'  
 DESIGNATED AGENT: JOHN ADAMS  
 ADDRESS: 707 VIRGINIA STREET EAST, SUITE 1200  
 CITY: CHARLESTON STATE: WV ZIP CODE: 25301

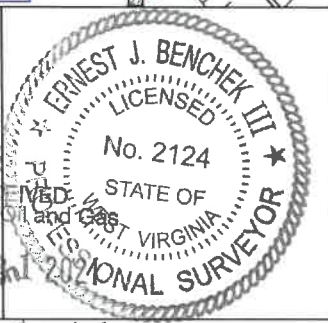
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4-17-69	M RODGER & DONNA S OZBURN
4-16-4.3	J. TODD & CARLENE S. MOORE
4-16-4.4	ARTHUR D. & WILMA J. PARKER
4-16-2.1	TERRI R. PRITCHARD & DOYLE W. PETERS
4-16-2	RICHARD E. & BONNIE LEE WILSON
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4-10-77.2	LISA & BRYAN RABER
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4-10-76	LEONARD N. WILSON, RICHARD E. PANRELL SR. & NORMA R. PANRELL
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4-10-72	NOUMENON CORPORATION & MARK V EDDY
4-10-56	CNX LAND LLC
4-10-57	FREDDIE W. TENNANT
4-10-35.2	RANDY PARRISH
4-10-70	CNX LAND LLC
4-10-34	MARY LOU VERBOSKY

LEASE INDEX			
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B	WV-061-004599-060	J	WV-061-003693-002
C	WV-061-004584-102	K	WV-061-005332-001
D	WV-061-004367-015	L	WV-061-004875-020
E	WV-061-004367-015	M	WV-061-004875-020
F	WV-061-004758-006	N	WV-061-003886-005
G	WV-061-003278-005	O	WV-061-003278-005
H	WV-061-003693-002		

08/13/2021

FILE #: NEE14

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F	WV-061-004758-006	N	WV-061-003886-005
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