

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

API 47-061-01828 County Monongalia District Clay
Quad Blacksville Pad Name Cummins Field/Pool Name _____
Farm name Jerry L. Yost et al Well Number 2H
Operator (as registered with the OOG) Northeast Natural Energy LLC
Address 707 Virginia St. E, Suite 1200 City Charleston State WV

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25301
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WV Department of Environmental Protection

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4390555.1 Easting 570257.0
Landing Point of Curve Northing 4390459.8 Easting 570120.8
Bottom Hole Northing 4392528.5 Easting 568512.6

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 2/15/2019 Date drilling commenced 6/26/2019 Date drilling ceased 2/6/2021
Date completion activities began 3/16/2021 Date completion activities ceased 3/31/2021
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 Harris

08/13/2021

API 47-061 - 01828 Farm name Jerry L. Yost et al Well number 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	30"	24"	50'	N		NA	Y
Surface	17-1/2"	13-3/8"	1,341'	N	54.5	NA	Y, 31 bbl
Coal							
Intermediate 1	12-1/4"	9-5/8"	2,475'	N	40	NA	Y, 20 bbl
Intermediate 2							
Intermediate 3							
Production	8-3/4"	5-1/2"	17,133'	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 ³ /sks)	Volume (ft ³)	Cement Top (MD)	Did cement circulate (Y/N)
Conductor	4500 psi ready mix	36					48
Surface	Class A	984	15.6	1.18	1,162		8
Coal							
Intermediate 1	Class A	842	15.6	1.18	993		8
Intermediate 2							
Intermediate 3							
Production	50:50 Poz	3,115	14.5	1.16	3,612	1,940'	48
Tubing							

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Drillers TD (ft) 17,271' Loggers TD (ft) 17,237'
 Deepest formation penetrated Marcellus Plug back to (ft) TOC 3,595'
 Plug back procedure Tagged at 6,163', plug 1 @ 6100', plug 2 @ 5246', plug 3 @ 4395', TOC @ 3,595'

Kick off depth (ft) 7,404'

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 _____

Cummins 2H - Perforation Summary

Stage Number	Report Date	Cluster 5 Bottom TD	Cluster 1 Top TD	Total Shots
1	03/16/21	17162	0	0
2	03/17/21	16959	17118	40
3	03/17/21	16757	16916	40
4	03/17/21	16555	16715	40
5	03/18/21	16354	16513	40
6	03/18/21	16152	16311	40
7	03/18/21	15951	16110	40
8	03/19/21	15749	15908	40
9	03/19/21	15547	15707	40
10	03/19/21	15346	15505	40
11	03/20/21	15144	15304	40
12	03/20/21	14943	15102	40
13	03/21/21	14741	14900	40
14	03/21/21	14540	14699	40
15	03/21/21	14338	14497	40
16	03/22/21	14136	14296	40
17	03/22/21	13935	14094	40
18	03/22/21	13733	13893	40
19	03/23/21	13532	13691	40
20	03/23/21	13330	13489	40
21	03/23/21	13129	13288	40
22	03/24/21	12927	13086	40
23	03/24/21	12725	12885	40
24	03/24/21	12524	12683	40
25	03/25/21	12322	12481	40
26	03/25/21	12121	12280	40
27	03/25/21	11919	12078	40
28	03/25/21	11717	11877	40
29	03/26/21	11516	11675	40
30	03/26/21	11314	11474	40
31	03/26/21	11113	11272	40
32	03/27/21	10911	11070	40
33	03/27/21	10710	10869	40
34	03/27/21	10508	10667	40
35	03/28/21	10306	10466	40
36	03/28/21	10105	10264	40
37	03/29/21	9903	10062	40
38	03/29/21	9702	9861	40
39	03/30/21	9500	9659	40
40	03/30/21	9298	9458	40
41	03/30/21	9097	9256	40
42	03/31/21	8895	9055	40
43	03/31/21	8694	8853	40
44		8492	8651	40

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Cummins 2H 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	03/16/21	5,689	8,203	9,089	81	1,175	9,299	302,020	388
2	03/17/21	6,310	6,747	10,068	88	11	7,008	356,580	379
3	03/17/21	5,752	6,793	10,090	89	12	6,990	356,240	379
4	03/17/21	5,578	6,707	9,872	83	832	7,033	355,660	370
5	03/18/21	6,034	7,275	9,897	89	898	7,074	357,320	370
6	03/18/21	5,604	6,506	9,511	79	5	8,980	465,000	364
7	03/18/21	6,128	7,045	9,476	88	5	9,510	454,920	365
8	03/19/21	6,052	6,915	9,654	85	28	9,080	416,660	354
9	03/19/21	6,192	7,333	9,480	80	7	9,230	454,920	348
10	03/19/21	5,633	7,220	9,528	86	28	9,051	456,800	343
11	03/20/21	6,016	7,188	9,262	85	4	8,690	456,200	339
12	03/20/21	5,984	7,183	9,207	86	269	9,510	455,380	334
13	03/21/21	6,098	7,174	9,171	89	20	9,249	459,040	334
14	03/21/21	6,167	6,929	9,251	88	3	8,307	456,200	328
15	03/21/21	6,202	6,995	9,246	89	8	9,153	457,980	322
16	03/22/21	6,368	7,257	9,150	90	29	9,134	462,320	327
17	03/22/21	6,566	7,248	9,074	90	15	8,258	466,160	311
18	03/22/21	6,166	6,268	8,943	88	10	8,780	466,520	308
19	03/23/21	5,553	6,970	8,812	89	25	8,120	463,380	303
20	03/23/21	5,653	6,861	8,816	88	20	7,994	455,860	304
21	03/23/21	5,757	7,271	8,802	90	7	7,973	454,880	295
22	03/24/21	6,040	7,492	8,701	89	28	7,963	453,800	290
23	03/24/21	5,597	6,628	8,336	80	20	7,239	455,420	287
24	03/24/21	5,971	6,952	8,860	89	20	8,097	458,440	281
25	03/25/21	6,039	5,667	9,106	90	18	8,120	454,360	276
26	03/25/21	5,640	6,379	8,945	89	7	8,416	457,120	272
27	03/25/21	5,899	7,025	8,970	90	14	8,438	468,280	267
28	03/25/21	6,689	7,595	8,732	89	15	9,983	450,930	263
29	03/26/21	5,899	7,022	8,737	90	4	8,283	453,740	258
30	03/26/21	5,659	7,155	8,751	89	13	8,296	456,220	258
31	03/26/21	5,820	7,550	8,717	91	24	8,288	453,600	249
32	03/27/21	5,303	7,378	8,607	90	15	8,394	459,140	245
33	03/27/21	5,638	7,205	8,620	88	13	8,333	458,200	241
34	03/27/21	5,952	6,895	8,744	89	19	8,430	451,640	236
35	03/28/21	5,875	7,205	8,578	90	13	8,408	454,440	232
36	03/28/21	6,337	6,707	8,634	89	50	8,382	458,200	227
37	03/29/21	6,063	7,096	8,586	90	25	8,253	462,180	223
38	03/29/21	6,411	7,991	8,549	91	6	8,316	457,260	218
39	03/30/21	6,537	6,736	8,526	90	20	8,102	449,180	214
40	03/30/21	6,411	7,281	8,351	89	4	8,274	465,720	209
41	03/30/21	6,424	6,580	8,279	90	37	8,463	456,180	205
42	03/31/21	5,755	7,486	8,312	88	37	8,059	456,900	200
43	03/31/21	5,880	7,517	8,183	90	4	3,935	-	196

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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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 10:59 AM
 Oil and Gas



Ticket #: 0

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

Job Times				
Date:	08/01/19	Job Start:	Job End:	Off Loc:
Time:	5:00am	9:11am		08/01/19

Customer and Well Information					
Customer: NORTHEAST		Well Name: CUMMINS		Well #: 2H	Well Type: GAS
County:	State: WV	AFE #/API #: 100412-602		PO #/Permit #:	Well Class:
Field:		Lease: CUMMINS		Rig Name/# : DECKER RIG 8	
Wellbore Information					
Bit Size (Inches): 17.5	Well MD (ft):	Well TVD (ft): 1383	BHST (F°):	BHCT (F°):	Deviation (°):
Drilling Fluid Type:	Drilling Fluid Density (ppg):		Packer Depth (ft):	Treating Down:	
Previous Casing/Liner					
Size (Inches): 24	Weight (lb/ft):	Thread:	Grade:	Total Footage (ft): 50	
Casing/Liner/Tubing					
Size (Inches): 13.375	Weight (lb/ft): 54.5	Thread:	Grade:	Total Footage (ft): 1341	
Job					
Job Type:		Connection to Well: YES		Top Plug: YES	
Lift Pressure (PSI): 453	Max Annulus Pressure (PSI):		Mix Water Temp (F°):	Bottom Plug: No	
Casing/Tubing Secured : YES		Pipe Rotated: No	Cement Return to Surface (bbl): 31	Top Job (bbl): no	
Pipe Reciprocated : No	Circulation Lost: No	Job Completed: YES			

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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:
	08/03/19			08/03/19
Time:	6:00am	10:27am	12:59pm	2:00pm

Customer and Well Information					
Customer: NORTHEAST		Well Name: CUMMINS		Well #: 2H	Well Type: GAS
County:	State: WV	AFE #/API #: 100412-602	PO #/Permit #:	Well Class:	
Field:		Lease: CUMMINS	Rig Name/# : DECKER RIG 8		
Wellbore Information					
Bit Size (Inches): 12.25	Well MD (ft):	Well TVD (ft): 2526	BHST (F°):	BHCT (F°):	Deviation (°):
Drilling Fluid Type:	Drilling Fluid Density (ppg):	Packer Depth (ft):	Treating Down:		
Previous Casing/Liner					
Size (Inches): 13.375	Weight (lb/ft): 54.5	Thread:	Grade:	Total Footage (ft): 1341	
Casing/Liner/Tubing					
Size (Inches): 9.625	Weight (lb/ft): 40	Thread:	Grade:	Total Footage (ft): 2475	
Job					
Job Type:		Connection to Well: YES		Top Plug: YES	
Lift Pressure (PSI): 1416	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): no		
Pipe Reciprocated : No	Circulation Lost: No	Job Completed: YES			

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Cement Job Log



Customer:	NORTHEAST NATURAL ENERGY LLC	Date:	6-Feb-21	Serv. Supervisor:	Steven Long
Cust. Rep.:	TROY	Ticket #:	BPA-2102-0018	Serv. Center:	Black Lick - 1571
Well Name:	Cummins 2H	API Well #:	47-061-018282	County:	Monongalia
Well Type:	GAS	Rig:	PATTERSON 277	State:	WV
				Type of Job:	CM-PROD. CASING

Materials Furnished by NexTier

Plugs	Casing Hardware	Physical Slurry Properties						
		Sacks of Cement	Fluid Density (lb/gal)	Excess	Yield (cuft/sk)	Mix Water (gal/sk)	Fluid Volume (bbls)	Mix Water (bbls)
13.5 lb/gal PureScrub Spacer w/Surfactant	+7.0 PPB NFP-701+1.0 GPB NTC-880+0.2 GPB NSU-883L	100	13.5		6.61	26.31	110.00	63
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	3115	14.5		1.16	4.89	641.76	363
Fresh Water Displacement			8.33		-	-	379.69	
0					-	-		
					-	-		
					-	-		
					-	-		
					-	-		
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					-	-		

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Displacement Chemicals:

OPEN HOLE DATA

TUBULAR DATA

8.75 in. O.H. 2,491 to 7,317 ft		5.5 in. 20#, (0 to 17,133 ft)		SIZE WEIGHT	THRD	DEPTH (ft)	GRADE	ID (in)	BURST (psi)	COLLAPSE (psi)
Mix Cem. Temperature °F	Lead Temp.	Middle Temp.	Tail Temp.	5.5 20#	BTC	17267	P-110	4.778	12640	11080
51.2 °F										

PREVIOUS CASING DATA

PERFORATED INTERVAL DATA

CASING EQUIPMENT DEPTHS

9.625 in. 36# (0 to 2,491 ft)		TOP	BTM	SPF	SIZE	SHOE	FLOAT	STAGE	ACP
						17267	17264		

WELL FLUID

DISPLACEMENT FLUID

DMF PRESS

CSG LIFT

MAX PRESS

Total Number of Runs

WATER ON LOG (bbl)

TYPE	DENSITY	VOLUME	TYPE	DENSITY	(psi)	(psi)	(psi)		
OBM	12.5 ppg	383.3 bbl	H2O	8.3 ppg	3100		6000	1	1600

Bumped Plug	Final Differential (psi)	Floets Held (Y/N)	PSI Left on Casing	Cement to Surface (bbl)	Top of Cement (ft)	Full Circ. Curing Job (Y/N)	Max Pump Pressure (psi)	Casing Rotation	Additional Hrs Charged (hrs)	Casing Reciprocation	Rathole Length (ft)
Yes	3,700.00	Y	-	-	1,940	Yes	4,700.00	No	-	No	

Comments/Special Customer Instructions:

Steven Long 6-Feb-21
 Service Supervisor Date

08/13/2021

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	3/16/2021
Job End Date:	3/31/2021
State:	West Virginia
County:	Monongalia
API Number:	47-061-01828-00-00
Operator Name:	Northeast Natural Energy LLC
Well Name and Number:	Cummins 2H
Latitude:	39.66191850
Longitude:	-80.18096030
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	8,178
Total Base Water Volume (gal):	14,982,492
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	86.55778	None
Sand (Proppant)	Producers Service Corp	Proppant	Silica Substrate	14808-60-7	100.00000	13.09741	None
			StimSTREAM SC 405	Producers Service Corp	Scale Inhibitor	Non-hazardous substances	Proprietary
			Diethylenetriamine penta (methylene phosphonic acid) (DTPMP)	15827-60-8	10.00000	0.00302	None
			2-Phosphono-1,2,4-butanetricarboxylic acid (PBTC)	37971-36-1	10.00000	0.00302	None
			Citric Acid	77-92-9	10.00000	0.00302	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
			Quaternary Ammonium Compounds	68424-85-1	3.00000	0.00058	None
			Didecyl dimethyl ammonium chloride	7173-51-5	3.00000	0.00058	None

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7.5% HCL	Producers Service Corp	Acidizing	Ethanol	64-17-5	1.50000	0.00029	None
			Hydrochloric Acid	7647-01-0	7.50000	0.01785	None
StimSTREAM FR 2800	Producers Service Corp	Friction Reducer					
			Petroleum Distillate	64742-47-8	25.00000	0.01423	None
			Alcohols, C11-14, ethoxylated	78330-21-9	5.00000	0.00285	None
4-N-1	Producers Service Corp	Inhibitor					
			Acetic acid	64-19-7	90.00000	0.00041	None
			2-Ethylhexanol	104-76-7	10.00000	0.00005	None
			Methanol	67-56-1	10.00000	0.00005	None
			Cocamide Diethanolamine	68603-42-9	5.00000	0.00002	None
			Diethanolamine	111-42-2	1.00000	0.00000	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	
			Diethylenetriamine penta (methylene phosphonic acid) (DTPMP)	15827-60-8	10.00000	0.00302	
			2-Phosphono-1,2,4-butanetricarboxylic acid (PBTC)	37971-36-1	10.00000	0.00302	
			Citric Acid	77-92-9	10.00000	0.00302	
			Alcohols, C11-14, ethoxylated	78330-21-9	5.00000	0.00285	
			Didecyl dimethyl ammonium chloride	7173-51-5	3.00000	0.00058	
			Quaternary Ammonium Compounds	68424-85-1	3.00000	0.00058	
			Ethanol	64-17-5	1.50000	0.00029	
			2-Ethylhexanol	104-76-7	10.00000	0.00005	
			Methanol	67-56-1	10.00000	0.00005	
			Cocamide Diethanolamine	68603-42-9	5.00000	0.00002	
			Diethanolamine	111-42-2	1.00000	0.00000	

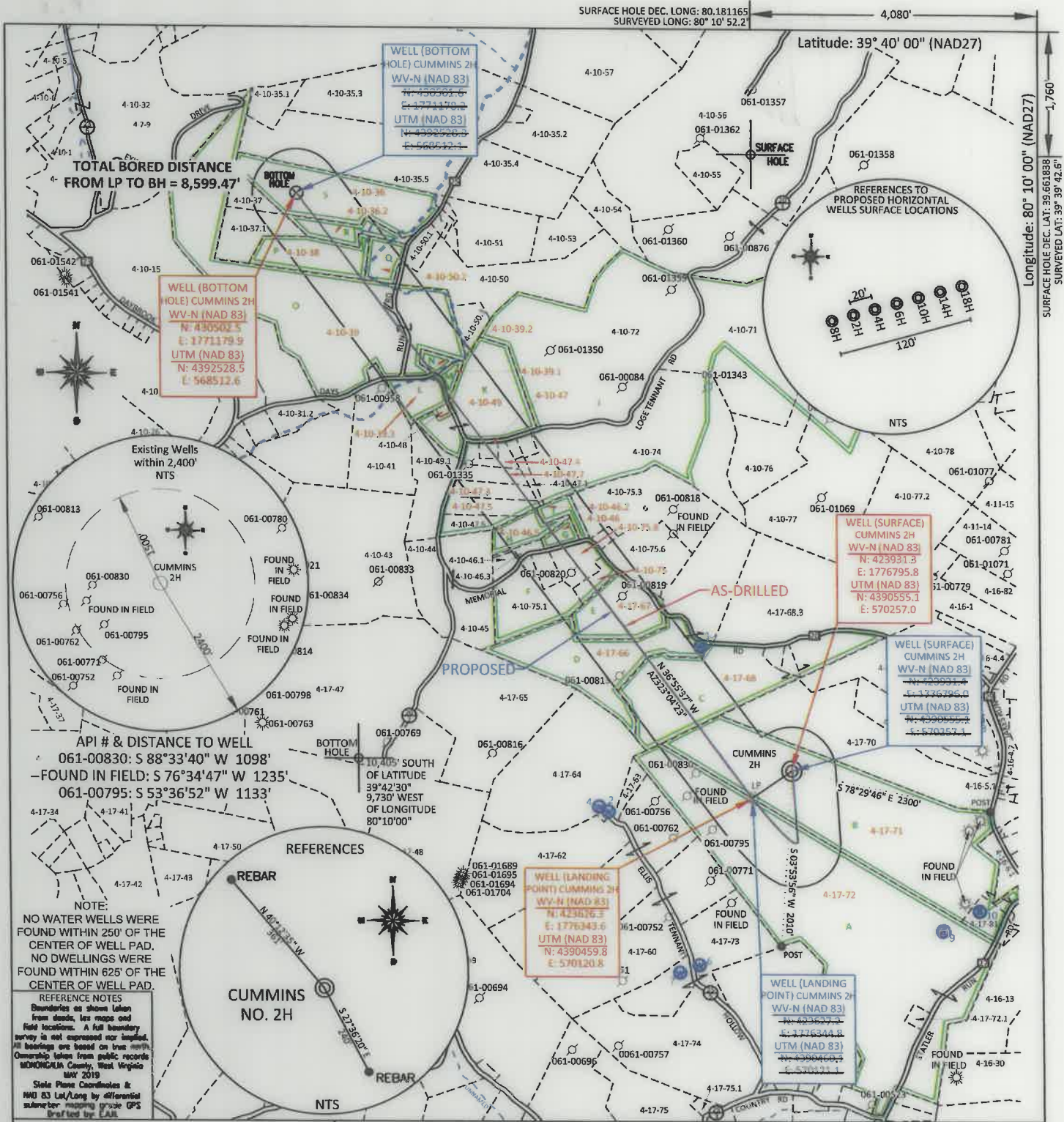
* Total Water Volume sources may include fresh water, produced water, and/or recycled water

** 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)

RECEIVED
 Office of Oil and Gas
 Department of
 Environmental Protection
 JUL 21 2021



TOTAL BORED DISTANCE FROM LP TO BH = 8,599.47'

WELL (BOTTOM HOLE) CUMMINS 2H WV-N (NAD 83)
 N: 439502.5
 E: 1771179.9
 UTM (NAD 83)
 N: 4392528.5
 E: 568512.6

REFERENCES TO PROPOSED HORIZONTAL WELLS SURFACE LOCATIONS

WELL (SURFACE) CUMMINS 2H WV-N (NAD 83)
 N: 423931.3
 E: 1776795.8
 UTM (NAD 83)
 N: 4390555.1
 E: 570257.0

WELL (SURFACE) CUMMINS 2H WV-N (NAD 83)
 N: 4390555.1
 E: 570257.0

WELL (LANDING POINT) CUMMINS 2H WV-N (NAD 83)
 N: 423676.6
 E: 1776343.6
 UTM (NAD 83)
 N: 4390459.8
 E: 570120.8

NOTE:
 NO WATER WELLS WERE FOUND WITHIN 250' OF THE CENTER OF WELL PAD.
 NO DWELLINGS WERE FOUND WITHIN 625' OF THE CENTER OF WELL PAD.

REFERENCE NOTES
 Boundaries as shown taken from deeds, less maps and field locations. A full boundary survey is not expressed nor implied. All bearings are based on true north. Ownership taken from public records MONONGALIA County, West Virginia MAY 2019
 State Plane Coordinates & NAD 83 Lat/Long by differential submeter mapping using GPS Drafted by EAM

FILE #:	NNE15
DRAWING #:	2943
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: *[Signature]*
 L.L.S. #2124 : Ernest J. Benchek III



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WVDEP	DATE: APRIL 15, 2021
OFFICE OF OIL & GAS 601 57TH STREET CHARLESTON, WV 25304	OPERATOR'S WELL #: CUMMINS 2H AS-DRILLED
Well Type: <input type="checkbox"/> Oil <input type="checkbox"/> Waste Diposal <input type="checkbox"/> Production <input type="checkbox"/> Deep <input checked="" type="checkbox"/> Gas <input type="checkbox"/> Liquid Injection <input type="checkbox"/> Storage <input checked="" type="checkbox"/> Shallow	API WELL #: 47 61 01828 STATE COUNTY PERMIT
WATERSHED: DUNKARD CREEK	AS-BUILT ELEVATION: 1,358.80'
COUNTY/DISTRICT: MONONGALIA / CLAY	QUADRANGLE: BLACKSVILLE
SURFACE OWNER: JERRY L. YOST ET AL	ACREAGE: 81.472 +/-
OIL & GAS ROYALTY OWNER: NNE LLC, et al	ACREAGE: 674.928 +/-
LEASE NUMBERS:	08/13/2021
DRILL <input checked="" type="checkbox"/> CONVERT <input type="checkbox"/> DRILL DEEPER <input type="checkbox"/> REDRILL <input type="checkbox"/> FRACTURE OR STIMULATE <input checked="" type="checkbox"/> PLUG OFF FORMATION <input type="checkbox"/> PERFORATE NEW FORMATION <input type="checkbox"/> PLUG & ABANDON <input type="checkbox"/> CLEAN OUT & REPLUG <input type="checkbox"/> OTHER CHANGE <input type="checkbox"/> (SPECIFY):	DRILLED DEPTH: TVD: 8,177' TMD: 17,271'
TARGET FORMATION: MARCELLUS	DESIGNATED AGENT: JOHN ADAMS
WELL OPERATOR: NORTHEAST NATURAL ENERGY LLC	ADDRESS: 707 VIRGINIA STREET EAST, SUITE 1200
ADDRESS: 707 VIRGINIA STREET EAST, SUITE 1200	CITY: CHARLESTON STATE: WV ZIP CODE: 25301
CITY: CHARLESTON STATE: WV ZIP CODE: 25301	

PROPERTY OWNER INDEX	
4-17-71	JERRY L. YOST ET AL
4-17-72	JERRY L YOST
4-17-68	LEONARD MICHAEL YOHO
4-17-66	MELVIN LUTHER EDDY ET AL
4-17-67	LISA D & STEVEN E WHITE
4-10-75	RICKY N & DOUGLAS N WILSON
4-10-75.8	DOUGLAS N WILSON
4-10-46.5	EDWARD & AVA MARIE TENNANT
4-10-46.2	EDWARD & AVA MARIE TENNANT
4-10-46	JOHN BELL & STEPHANIE WILSON
4-10-47.5	ROBERT JOE TENNANT
4-10-47.3	ROBERT JOE TENNANT
4-10-47.7	WILLIAM G & MARY L TENNANT
4-10-47.4	WILLIAM G & MARY L TENNANT
4-10-49	BILLY JO & JANET EDDY
4-10-39.3	JOSHUA BLAINE & NOAH BLAINE LEMLEY
4-10-47	ROBERT JOE TENNANT
4-10-39.1	WILLIE B & WENDY LEMLEY
4-10-39	MARY LOU VERBOSKY
4-10-38	JASON G STOUT
4-10-50.2	JASON G STOUT
4-10-39.2	ERIC & SARA VERBOSKY
4-10-36.2	JASON G STOUT
4-10-36	JASON G STOUT

LEASE INDEX			
A	WV-061-003499-001	J	WV-061-003693-002
B	WV-061-004599-060	K	WV-061-003693-002
C	WV-061-00127-001-LA	L	WV-061-004387-087
D	WV-061-003023-014	M	WV-061-004387-092
E	WV-061-001620-008	N	WV-061-004387-092
F	WV-061-003837-008	O	WV-061-004387-087
G	WV-061-003255-001	P	WV-061-005332-001
H	WV-061-003255-001	Q	WV-061-005332-001
I	WV-061-003255-001	R	WV-061-005332-001
		S	WV-061-005332-001

08/13/2021

FILE #: NEE15
DRAWING #: 2943
SCALE: N/A

DATE: APRIL 15, 2021
OPERATOR'S WELL #: CUMMINS 2H
API WELL #: 47 61
STATE COUNTY PERMIT

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G	WV-061-003255-001	P	WV-061-005332-001
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I	WV-061-003255-001	R	WV-061-005332-001
		S	WV-061-005332-001

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