WR-35
Rev. 8/23/13

Page ___ of ___

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

API 47 - 061 - 01928 County Monongalia District Clay
Quad Grant Town Pad Name Sullivan Field/Pool Name
Farm name Alan Sullivan Well Number 3H-A
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 4385279.5 Easting 566678.0
Landing Point of Curve Northing 4385394.7 Easting 566880.5
Bottom Hole Northing 4388453.5 Easting 564772.4

Elevation (ft) 1,476' 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 7/26/2022 Date drilling commenced 5/1/2023 Date drilling ceased 5/18/2023
Date completion activities began 8/28/2023 Date completion activities ceased 10/4/2023
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 914' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 2,402' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 894' - 914' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by:

02/23/2024

WR-35
Rev. 8/23/13

Page ___ of ___

API 47- 061 - 01928 Farm name Alan Sullivan Well number 3H-A

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"	128'	N		NA	
Surface	17-1/2"	13-3/8"	990'	N	54.5	NA	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2,490'	N	36	NA	Y, 37 bbl
Intermediate 2							
Intermediate 3							
Production	8-3/4"	5-1/2"	20,755'	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)	WOC (hrs)
Conductor	4,500 PSI Grout						48
Surface	Class A + 2%	1,145	15.6	1.14	1,301	CTS	8
Coal							
Intermediate 1	Class A + 1%	900	15.6	1.13	1,060	CTS	8
Intermediate 2							
Intermediate 3							
Production	50:50 Class A + Additives	3,950	14.5	1.13	4,444	1,864'	48
Tubing							

Drillers TD (ft) 20,770' Loggers TD (ft) 20,740'

Deepest formation penetrated Marcellus Plug back to (ft) NA

Plug back procedure

Kick off depth (ft) 7,337'

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

02/23/2024

WR-35
Rev. 8/23/13

Page ___ of ___

API 47- 061 - 01928 Farm name Alan Sullivan Well number 3H-A

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.

02/23/2024

WR-35
Rev. 8/23/13

Page ___ of ___

API 47- 061 - 01928 Farm name Alan Sullivan Well number 3H-A

PRODUCING FORMATION(S)	DEPTHS		
Marcellus	8,184' TVD	20,770' MD	

Please insert additional pages as applicable.

GAS TEST □ Build up □ Drawdown ■ Open Flow OIL TEST □ Flow □ Pump

SHUT-IN PRESSURE Surface 2,445 psi Bottom Hole ____ psi DURATION OF TEST 24 hrs

OPEN FLOW Gas 2,755 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_2S, 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 Universal Pressure Pumping
Address 2198 University Dr. City Lemont Furnace State PA Zip 15456
Please insert additional pages as applicable.

Completed by Hollie Medley Telephone 304-212-0422
Signature Hollie Medley Title Regulatory Manager Date ____

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

02/23/2024

Sullivan 3H
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	8/28/2023	4,941	94,444	9,753	94	615	7,684	300,146	481
2	8/29/2023	4,986	7,066	8,913	87	41	9,579	457,300	438
3	8/28/2023	5,465	8,049	9,287	93	435	10,008	455,000	559
4	8/30/2023	5,286	6,959	9,232	92	35	9,863	456,200	532
5	8/31/2023	5,388	5,107	9,324	95	247	9,715	456,700	455
6	8/31/2023	5,338	7,395	9,565	92	10	9,731	457,500	442
7	9/1/2023	5,218	7,036	9,328	94	67	9,687	456,200	447
8	9/2/2023	5,247	3,939	9,005	93	44	9,513	455,815	439
9	9/3/2023	5,501	5,125	9,187	93	22	9,455	455,800	416
10	9/3/2023	5,308	5,221	9,467	94	37	9,471	455,700	424
11	9/4/2023	5,390	7,001	9,215	92	25	9,490	455,700	418
12	9/5/2023	5,715	6,666	9,258	94	28	9,461	455,600	413
13	9/5/2023	5,357	7,180	9,783	94	16	9,516	455,400	412
14	9/6/2023	5,103	5,256	9,497	91	30	9,123	455,700	453
15	9/7/2023	5,544	6,657	9,434	94	8	9,297	456,200	402
16	9/8/2023	5,596	4,722	9,461	94	13	8,834	455,600	455
17	9/8/2023	6,177	7,064	9,369	93	34	9,537	456,200	395
18	9/9/2023	6,215	6,489	9,181	92	40	8,785	455,600	376
19	9/9/2023	6,161	7,276	9,471	93	33	8,270	454,900	2,034
20	9/10/2023	5,255	6,972	9,140	93	27	8,680	455,700	377
21	9/10/2023	5,595	6,804	9,347	94	20	9,050	454,700	379
22	9/11/2023	5,576	6,847	9,266	94	31	8,643	455,800	364
23	9/12/2023	5,622	7,183	9,338	94	11	8,461	455,100	424
24	9/12/2023	4,677	7,084	9,313	94	11	8,485	454,600	364
25	9/13/2023	5,432	6,752	9,003	94	24	8,270	458,000	359
26	9/14/2023	5,453	6,514	8,866	93	20	9,056	455,400	354
27	9/14/2023	5,716	6,145	8,949	93	5	7,655	455,857	434
28	9/15/2023	5,172	6,671	9,054	94	20	8,382	454,900	348
29	9/15/2023	5,890	5,928	8,905	93		8,540	455,800	383
30	9/15/2023	5,312	6,788	9,052	93	19	8,291	455,000	336
31	9/16/2023	5,436	6,164	8,883	93	6	8,476	455,500	346
32	9/17/2023	5,145	6,729	9,326	90	35	8,584	456,200	338
33	9/17/2023	5,207	7,266	8,951	94	20	8,343	454,900	387
34	9/18/2023	5,294	6,646	8,792	94	11	8,544	455,600	334
35	9/19/2023	5,288	6,726	8,821	94	14	9,228	455,000	315
36	9/19/2023	5,597	6,222	8,776	95	15	8,534	455,800	336
37	9/20/2023	5,671	6,941	9,087	95	35	8,506	455,000	306
38	9/20/2023	5,568	6,324	8,813	94	9	8,230	455,600	303
39	9/21/2023	5,387	6,018	8,850	94	15	8,403	455,200	313
40	9/22/2023	5,674	6,964	8,520	93	35	8,334	456,900	285
41	9/22/2023	4,955	7,035	8,568	94	16	8,100	449,200	287

02/23/2024

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	9/23/2023	5,003	5,194	7,961	94	65	8,316	455,900	294
43	9/23/2023	5,116	5,721	7,824	94	31	8,375	456,800	269
44	9/24/2023	5,220	6,310	7,831	94	2	8,545	415,388	317
45	9/25/2023	4,701	6,197	7,778	94	38	8,373	456,600	263
46	9/25/2023	4,675	4,158	8,212	94	25	8,204	455,500	233
47	9/26/2023	4,295	7,010	7,941	94	38	8,313	456,600	262
48	9/26/2023	4,533	4,964	7,962	94	23	8,284	456,500	243
49	9/27/2023	4,452	6,561	7,857	94	16	8,018	455,600	229
50	9/27/2023	5,048	6,838	7,791	94	37	8,208	456,700	236
51	9/28/2023	4,975	7,017	7,901	95	210	9,018	454,600	304
52	9/29/2023	4,825	7,243	7,794	95	21	8,121	456,700	231
53	9/29/2023	4,685	6,840	7,777	94	18	8,102	455,200	281
54	9/30/2023	4,897	6,884	7,676	94	20	8,225	456,500	217
55	9/30/2023	5,025	7,169	7,694	94	39	8,299	455,000	286
56	10/1/2023	4,968	6,956	7,553	95	25	8,162	455,900	216
57	10/1/2023	4,712	6,691	7,470	94	8	8,028	454,900	256
58	10/2/2023	5,200	6,613	7,354	92	20	8,152	456,600	149
59	10/2/2023	5,009	7,116	7,504	94	13	7,999	454,700	267
60	10/3/2023	5,111	6,596	7,263	94	24	8,152	456,700	191
61	10/3/2023	5,119	7,033	7,367	94	5	8,003	455,000	254
62	10/4/2023	5,231	7,156	7,197	94	26	8,178	456,600	185
63	10/4/2023	5,484	7,827	7,389	94	17	7,957	455,100	205

02/23/2024

Sullivan 3H
Perforation Report

Stage Number	Report Date	Total Shots	Cluster 1 Top TD	Cluster 5 Bottom TD
1	8/28/2023	40		20,647
2	8/29/2023	40	20,603	20,445
3	8/28/2023	40	20,403	20,245
4	8/30/2023	40	20,203	20,046
5	8/31/2023	40	20,004	19,846
6	8/31/2023	40	19,804	19,646
7	9/1/2023	40	19,604	19,446
8	9/2/2023	40	19,404	19,246
9	9/3/2023	40	19,204	19,047
10	9/3/2023	40	19,005	18,847
11	9/4/2023	40	18,805	18,647
12	9/5/2023	40	18,605	18,447
13	9/5/2023	40	18,405	18,248
14	9/6/2023	40	18,206	18,048
15	9/7/2023	40	18,006	17,848
16	9/8/2023	40	17,806	17,648
17	9/8/2023	40	17,606	17,448
18	9/9/2023	40	17,406	17,249
19	9/9/2023	40	17,207	17,049
20	9/10/2023	40	17,007	16,849
21	9/10/2023	40	16,807	16,649
22	9/11/2023	40	16,607	16,449
23	9/12/2023	40	16,407	16,250
24	9/12/2023	40	16,208	16,050
25	9/13/2023	40	16,008	15,850
26	9/14/2023	40	15,808	15,650
27	9/14/2023	40	15,608	15,450
28	9/15/2023	40	15,408	15,251
29	9/15/2023	40	15,209	15,051
30	9/15/2023	40	15,009	14,851
31	9/16/2023	40	14,809	14,651
32	9/17/2023	40	14,609	14,451
33	9/17/2023	40	14,410	14,252
34	9/18/2023	40	14,210	14,052
35	9/19/2023	40	14,010	13,852
36	9/19/2023	40	13,810	13,652
37	9/20/2023	40	13,610	13,453
38	9/20/2023	40	13,411	13,253
39	9/21/2023	40	13,211	13,053
40	9/22/2023	40	13,011	12,853
41	9/22/2023	40	12,811	12,653
42	9/23/2023	40	12,611	12,454
43	9/23/2023	40	12,412	12,254
44	9/24/2023	40	12,212	12,054
45	9/25/2023	40	12,012	11,854
46	9/25/2023	40	11,812	11,654
47	9/26/2023	40	11,612	11,455

02/23/2024

Stage Number	Report Date	Total Shots	Cluster 1 Top TD	Cluster 5 Bottom TD
48	9/26/2023	40	11,413	11,255
49	9/27/2023	40	11,213	11,055
50	9/27/2023	40	11,013	10,855
51	9/28/2023	40	10,813	10,655
52	9/29/2023	40	10,614	10,456
53	9/29/2023	40	10,414	10,256
54	9/30/2023	40	10,214	10,056
55	9/30/2023	40	10,014	9,856
56	10/1/2023	40	9,814	9,657
57	10/1/2023	40	9,615	9,457
58	10/2/2023	40	9,415	9,257
59	10/2/2023	40	9,215	9,057
60	10/3/2023	40	9,015	8,857
61	10/3/2023	40	8,815	8,658
62	10/4/2023	40	8,616	8,458
63	10/4/2023	40	8,416	8,258

Sullivan 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	175	Sand/silt
Sand/red shale	175	280	sand with reddish shale
sandstone/shale	280	620	sandstone/shale
Washington coal	530	534	coal
siltstone/sandstone	534	607	
Waynesburg coal	607	614	Waynesburg coal
sandstone/limestone	614	680	sandstone/limestone
siltstone/sandstone	680	715	siltstone/sandstone
sandstone/siltstone	715	750	sandstone/siltstone
Limestone/sandstone/shale	750	767	Limestone/sandstone/shale
Sewickley coal	767	774	Sewickley coal
Limestone	774	893	Limestone
Pittsburgh coal	894	914	Pittsburgh coal
Limestone/siltstone	915	1220	Limestone/siltstone
sandstone/siltstone	1450	1960	sandstone/siltstone
Red Rock/silstone/limestone	1960	2100	Red Rock/silstone/limestone
Little Lime	2100	2156	Little Lime
Big Lime	2156	2280	Big Lime
Big Injun	2280	2410	Big Injun
Sand/silt	2410	2790	Sand/silt
Gantz	2790	2800	Gantz
Sand/shale	2800	3040	Sand/shale
Red Rock/silstone	3040	3135	Red Rock/silstone
siltstone/sandstone	3135	7393	siltstone/sandstone
Middlesex	7393	7610	Middlesex
Burkett	7610	7793	Burkett
Geneseo	7793	7846	Geneseo
Tully	7846	7905	Tully
Hamilton	7905	8035	Hamilton
Marcellus	8035	TD	Marcellus

02/23/2024

Cement Job Log

NEXTIER

NexTier Completion Solutions
3990 Rogerdale Rd., Houston, TX 77042
(713)325-6000

Customer:	NORTHEAST NATURAL ENERGY LLC	Date:	18-May-23	Serv. Supervisor:	Michael Franco
Cust. Rep.:		Ticket #:	BPA-2305-0038	Serv. Center	Black Lick - 1571
Well Name:	Sullivan 3H-A	API Well #:	47-061-01928	County: Monongalia	State: WV
Well Type:		Rig:	Patterson 277	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)	Fluid Volume (cuft)	Mix Water (bbls)
13.5 lb/gal PureScrub Spacer w/ Surfactant	+7.0 PPB NFP-703+5.0 PPB NSU-888+2.0 PPB NRT-221		13.5		5.65	26.44	80.00	-	
14.5 lb/gal Cement	50 % NCM-956+50 % NPZ-010 +0.2 % NFP-703+0.1 % NAS-504+0.25 % NRT-213+0.2 % NFL-549+0.2 % NTC-405	3950	14.5		1.13	4.65	791.54	4,444.47	437
Sugar Water Displacement	+5.0 PPB NRT-215					-	20.00	-	
Fresh Water Displacement						-	441.21	-	
						-		-	
						-		-	
						-		-	
						-		-	
						-		-	

Displacement Chemicals:

OPEN HOLE DATA

8.75 in. O.H. 2,490 to 7,300 ft
8.5 in. O.H. 7,300 to 20,800 ft

Ambient Tmp.	Bulk Tmp.	Slurry 1 Tmp.	Slurry 2 Tmp.	Slurry 3 Tmp.	Slurry 4 Tmp.
67.0 °F		73.0 °F			

TUBULAR DATA

5.5 in. 20#, (0 to 20,800 ft)

SIZE WEIGHT	THRD	DEPTH (ft)	GRADE	ID (in)	BURST (psi)	COLLAPSE (psi)
5.5 20#	BTC	20755	P-110	4.778	12640	11080

PREVIOUS CASING DATA

9.625 in. 36# (0 to 2,490 ft)

PERFORATED INTERVAL DATA

TOP	BTM	SPF	SIZE

CASING EQUIPMENT DEPTHS

SHOE	FLOAT	STAGE	ACP
20755			

WELL FLUID TYPE	WELL FLUID DENSITY	DISPLACEMENT FLUID VOLUME	DISPLACEMENT FLUID TYPE	DISPLACEMENT FLUID DENSITY	DIFF PRESS (psi)	CSG LIFT (psi)	MAX PRESS (psi)	Mix H2O Chlorides (ppm)	Mix H2O pH	Mix H2O Temp	WATER ON LOC (bbl)
OBM	13.6 ppg	458.7 bbl	Brine	9.6 ppg	2255	13901		2	7	61.0 °F	1500

Bumped Plug	Final Differential (psi)	Floats Held (Y/N)	PSI Left 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	2,600.00	Y	-	-	1,864	Yes		No	-	No	15

Comments/Additional Details:

Michael Franco — Service Supervisor

18-May-23 — Date

02/23/2024

LIGHTNING ENERGY SERVICES

104 Heliport Loop Rd
Bridgeport Wv 26330
Office 304-933-3544

DETAILED TREATMENT LOG

COMPANY NAME:	NorthEast Natural	SUPERVISOR:	Jason Starcher
FIELD:	Sullivan 3HA	PUMP NUMBER:	CPTK04
WELL #:		COMPANY REP:	

DATE:	Saturday, May 6, 2023	TYPE OF JOB:	Intermediate 9 5/8

TIME (Hr:Min)	PRESSURE (PSI)	Wellhead Pressure	RATE (BPM)	FLUID TYPE	STAGE BBLS	COMMENTS:
1630						Arrived on site
1630						Rig Running casing
2000						Spot truck
2015						rig in
2130						safety meeting
2140						psi test lines
2200	200		5	water	211	pump processed water ahead
2305	200		5	gel	25	pump gel
2320	200		5	water	10	pump water spacer
2330	400		4.5	cement	188	pump cement @ 15.6
1215						release plug
1216	900		5.5	water	189	pump displacement
0115	1500					plug land
0120						release pressure, float held 1/2 bbl back
0123	1000					pressure up to 1000 psi & hold for 15 minutes
0140						release pressure
0200						wash up stack
0230						rig down
0330						leave location
						900 sks Class A 1% Calcium .25 Flake
						yield 1.18 water 5.24 Density 15.6
						37 bbl cement returns to surface

02/23/2024

Cement Job Log

NEXTIER

NexTier Completion Solutions
3990 Rogerdale Rd., Houston, TX 77042
(713)325-6000

Customer:	NORTHEAST NATURAL ENERGY LLC	Date:	4-May-23	Serv. Supervisor:	Michael Franco		
Cust. Rep.:		Ticket #:	BPA-2305-0004	Serv. Center	Black Lick - 1571		
Well Name:	Sullivan 3H-A	API Well #:		County:	Monongalia	State:	WV
Well Type:		Rig:	Patterson 277	Type of Job:	CM-MINE 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)	Fluid Volume (cuft)	Mix Water (bbls)
6% Gel Spacer		+20.0 PPB NEX-020		8.7		4.62	33.66	25.00	-	
Mine 15.6 lb/gal Cement - 900' - 1050'		100 % NCM-956 +1.5 % NAC-110+0.25 PPS NLM-600	205	15.6	50%	1.14	4.79	41.48	232.89	23
Fresh Water Displacement				8.33			-	156.14	-	
Packer 15.6 lb/gal Cement - 0' - 500'		100 % NCM-956 +1.5 % NAC-110+0.25 PPS NLM-600	940	15.6	30%	1.14	4.79	190.19	1,067.89	107
							-		-	
							-		-	
							-		-	
							-		-	
							-		-	
Displacement Chemicals:										

OPEN HOLE DATA			TUBULAR DATA								
22 in. O.H. 100 to 925 ft 17.5 in. O.H. 925 to 1,100 ft			13.375 in. 54.5#, (0 to 1,050 ft)			SIZE WEIGHT	THRD	DEPTH (ft)	GRADE	ID (in)	BURST (psi)	COLLAPSE (psi)
Ambient Tmp.	Bulk Tmp.	Slurry 1 Tmp.	Slurry 2 Tmp.	Slurry 3 Tmp.	Slurry 4 Tmp.							
54.0 °F		69.0 °F	67.0 °F			13.375 54.5#	BTC	991'	J-55	12.615	2730	1130

PREVIOUS CASING DATA	PERFORATED INTERVAL DATA				CASING EQUIPMENT DEPTHS			
	TOP	BTM	SPF	SIZE	SHOE	FLOAT	STAGE	ACP
24 in. 97.4# (0 to 100 ft)					988	945		

WELL FLUID			DISPLACEMENT FLUID		DIFF PRESS (psi)	CSG LIFT (psi)	MAX PRESS (psi)	Mix H2O Chlorides (ppm)	Mix H2O pH	Mix H2O Temp	WATER ON LOC (bbl)
TYPE	DENSITY	VOLUME	TYPE	DENSITY							
H20	8.3 ppg	146 bbl	H20	8.3 ppg	300	334	800	3	7	51.0 °F	1000

Bumped Plug	Final Differential (psi)	Floats Held (Y/N)	PSI Left 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	100.00	Y	-		-	No	800.00	No	8.00	No	50

Comments/Additional Details:
Packer set @ 534'

Michael Franco — Service Supervisor
4-May-23 — Date

02/23/2024

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	08/28/2023
Job End Date:	10/04/2023
State:	West Virginia
County:	Monongalia
API Number:	47-061-01901-00-00
Operator Name:	Northeast Natural Energy LLC
Well Name and Number:	Sullivan 3H-A
Latitude:	39.614675
Longitude:	-80.223212
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	8224.88679389313
Total Base Water Volume (gal)*:	23368128
Total Base Non Water Volume:	0

FracFocus Chemical Disclosure Registry

Water Source	Percent
Groundwater, < 1000TDS	100.00%

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
CIA-12	Universal Pressure Pumping	Acid corrision inhibitor					
Clearal 268	Chemstream	Biocide					
Hydrochloric Acid (7.5%)	Universal Pressure Pumping	Acidizing					
Sand (100 Mesh Proppant)	Universal Pressure Pumping	Proppant					
Sand (40/70 White Proppant)	Universal Pressure Pumping	Proppant					
StimStream FR 9800	Chemstream	Friction Reducer					
StimStream SC 405	Chemstream	Scale Control					
Water	Operator	Carrier Fluid					

Items above are Trade Names. Items below are the individual ingredients.

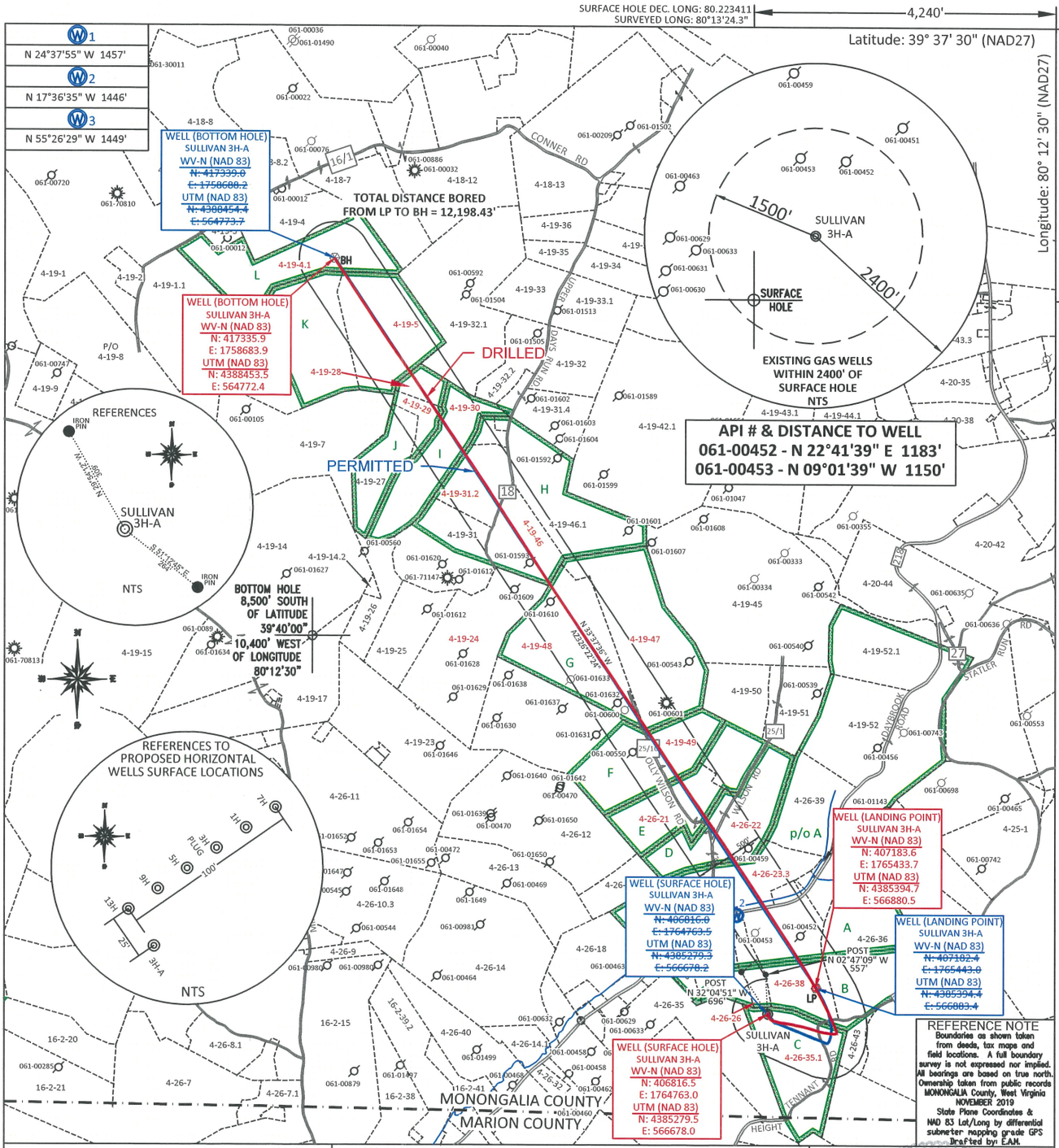
02/23/2024

			Water	7732-18-5	100.00000	87.18728	None
			Crystalline silica, quartz	14808-60-7	100.00000	11.33608	None
			Crystalline silica, quartz	14808-60-7	100.00000	1.22623	None
			Hydrochloric acid	7647-01-0	15.00000	0.02370	None
			Water	7732-18-5	80.00000	0.01738	
			Water	7732-18-5	70.00000	0.01510	
			Butene Homopolymer	9003-29-6	25.00000	0.01224	
			Alkanes, C16-20-iso-	90622-59-6	25.00000	0.01224	None
			Glutaraldehyde	111-30-8	20.00000	0.00435	None
			Diethylenetriamine penta (methylene phosphonic acid) (DTPMP)	15827-60-8	10.00000	0.00216	
			2 Phosphobutane 1,2,4 tricarboxylic acid	37971-36-1	10.00000	0.00216	None
			Citric Acid	77-92-9	10.00000	0.00216	
			alcohols, C12-18, ethoxylated	68213-23-0	3.00000	0.00147	
			Quaternary Ammonium Compounds	68424-85-1	3.00000	0.00065	
			Didecyl dimethyl ammonium chloride	7173-51-5	3.00000	0.00065	
			Ethanol	64-17-5	1.50000	0.00033	
			Ethylene glycol	107-21-1	45.00000	0.00007	None
			Glycol Ether EB	111-76-2	45.00000	0.00007	
			N,N-Dimethylformamide	68-12-2	20.00000	0.00003	
			Tar bases,quinoline derivs.,benzyl chloride-quaternized	72480-70-7	20.00000	0.00003	
			Water	7732-18-5	15.00000	0.00002	
			Cinnamaldehyde	104-55-2	10.00000	0.00002	
			Nonylphenol ethoxylated	127087-87-0	10.00000	0.00002	
			Alcohols, C6-12	68603-15-6	10.00000	0.00002	

* 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%

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)

02/23/2024



FILE #: NNE20

DRAWING #: 3045

SCALE: PLAT: 1" = 2000' 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

ERNEST J. BENCHEK, III LICENSED No. 2124 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

WVDEP
OFFICE OF OIL & GAS
601 57TH STREET
CHARLESTON, WV 25304

DATE: FEBRUARY 6, 2024

OPERATOR'S WELL #: SULLIVAN 3H-A AS-DRILLED

API WELL #: 47 (STATE) 61 (COUNTY) 01928 (PERMIT)

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

WATERSHED: UPPER MONONGAHELA RIVER

AS-BUILT ELEVATION: 1,476'

COUNTY/DISTRICT: MONONGALIA / CLAY

QUADRANGLE: GRANT TOWN

SURFACE OWNER: ALAN SULLIVAN

ACREAGE: 836.154 +/-

OIL & GAS ROYALTY OWNER: ALAN SULLIVAN

ACREAGE: 25.870

LEASE NUMBERS:

02/23/2024

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

DRILLED DEPTH: TVD: 8,184' TMD: 20,745'

WELL OPERATOR: NORTHEAST NATURAL ENERGY LLC

DESIGNATED AGENT: JOHN ADAMS

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

4-26-38	ADAM CLAY DARRAH
4-26-22	LINDA KAY FOGT
4-26-35.1	ALAN SULLIVAN
4-26-26	NNE MIDSTREAM LLC
4-19-47	JAMES & LINDA A KARUS
4-19-49	MICHAEL J LATOCHA
4-26-23.3	ADAM CLAY DARRAH (LIFE- KERRY L DARRAH)
4-19-48	JAMES & LINDA A KARUS
4-26-21	MARVIN L WILSON II
4-19-4.1	KEMBLE D TATE
4-19-5	JIMMY R & PAMELA K TENNANT; BILLY RAY & ROXANA CAHILL
4-19-28	CAROLYN S PAYTON
4-19-29	JAMES TENNANT
4-19-30	BILLIE & JEFFERSON PRICE
4-19-31.2	ROXANNA D CAHILL
4-19-46	ARLYN W PERKEY
4-19-24	EDITH L DARRAH

	LEASE INDEX		
A	WV-061-000160-001-ACT	G	WV-061-001851-0014
B	WV-061-000160-001-ACT	H	WV-061-006350-001
C	WV-061-005448-002	I	WV-061-003931-011
D	WV-061-000160-001-ACT	J	WV-061-003931-011
E	WV-061-000160-001-ACT	K	WV-061-005906-004
F	WV-061-000160-001-ACT	L	WV-061-005876-002

02/23/2024

FILE #: NEE20

DRAWING #: 3045

SCALE: N/A

DATE: FEBRUARY 5, 2024

OPERATOR'S WELL #: SULLIVAN 3H-A AS-DRILLED

API WELL #: 47 (STATE) 61 (COUNTY) _____ (PERMIT)