WR-35
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State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Well Operator's Report of Well Work

API 47 - 061 - 01894 County Monongalia District Clay
Quad Blacksville Pad Name Yost Field/Pool Name
Farm name Yost Heritage, Inc. Well Number Yost 6H
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 4388299.7 Easting 567082.1
Landing Point of Curve Northing 4387947.4 Easting 566990.1
Bottom Hole Northing 4384881.2 Easting 569211.6

Elevation (ft) 1,492' 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 12/1/2021 Date drilling commenced 3/1/2022 Date drilling ceased 6/11/2022
Date completion activities began 7/28/2022 Date completion activities ceased 8/20/2022
Verbal plugging (Y/N) N Date permission granted NA Granted by ___

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

Freshwater depth(s) ft 180', 480', 1,378' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 2,410' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 775', 930', 1,115' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by:

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API 47- 061 - 01894 Farm name Yost Heritage, Inc. Well number Yost 6H

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"	1,467'	N	54.5	NA	Y, 43 bbl
Coal							
Intermediate 1	12-1/4"	9-5/8"	2,678'	N	40	NA	Y, 53 bbl
Intermediate 2							
Intermediate 3							
Production	8-3/4"	5-1/2"	21,175'	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					CTS	48
Surface	Class A + 2%	1255	15.6	1.19	1,490	CTS	8
Coal							
Intermediate 1	Class A + 1%	890	15.6	1.18	1,053	CTS	8
Intermediate 2							
Intermediate 3							
Production	50:50 Class A + Additives	3,885	14.5	1.16	4,498	2,162	48
Tubing							

Drillers TD (ft) 21,182' Loggers TD (ft) 21,152'
Deepest formation penetrated Marcellus Plug back to (ft)
Plug back procedure

Kick off depth (ft) 7,451'

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

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API 47- 061 - 01894 Farm name Yost Heritage, Inc. Well number Yost 6H

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.

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API 47- 061 - 01894 Farm name Yost Heritage, Inc. Well number Yost 6H

PRODUCING FORMATION(S)	DEPTHS		
Marcellus	7,992' TVD	21,182' 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 2062 psi DURATION OF TEST 24 hrs

OPEN FLOW Gas 687 mcfpd Oil _____ bpd NGL _____ bpd Water _____ bpd GAS MEASURED BY □ Estimated ■ Orifice □ Pilot

LITHOLOGY/ FORMATION NAME	TOP DEPTH IN FT 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 Pro Frac
Address 800 Mountain View Dr 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 1/10/2024

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

02/23/2024

Yost 6H

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	7/29/2022	4,574	0	9,213	91	558	7,254	300,550	605
2	7/30/2022	5,667	6,328	9,581	91	5	9,833	456,188	505
3	7/30/2022	5,510	6,396	9,328	91	33	9,424	456,000	507
4	7/31/2022	6,142	6,688	9,467	92	407	9,768	456,115	460
5	8/1/2022	5,438	8,025	9,467	91	26	9,387	459,290	502
6	8/1/2022	6,798	7,794	9,384	93	7	9,398	458,164	491
7	8/1/2022	5,160	7,746	9,073	92	12	9,266	456,680	478
8	8/2/2022	5,924	7,531	9,476	92	59	9,322	457,373	438
9	8/2/2022	5,901	8,135	9,451	92	42	9,354	456,263	437
10	8/3/2022	5,634	7,859	9,368	90	43	9,412	455,260	485
11	8/3/2022	5,882	8,181	9,458	92	53	9,232	456,931	430
12	8/3/2022	5,609	7,754	9,485	92	24	9,372	459,820	469
13	8/4/2022	5,443	7,367	9,207	91	43	9,347	455,760	465
14	8/4/2022	5,539	5,381	9,302	92	19	9,395	451,460	425
15	8/4/2022	5,343	7,093	9,092	88	25	10,144	454,060	436
16	8/5/2022	5,829	7,321	9,335	91	71	9,423	460,472	440
17	8/5/2022	5,505	6,663	9,352	92	49	9,094	456,306	410
18	8/5/2022	5,459	7,448	9,307	91	83	9,562	461,280	463
19	8/6/2022	5,632	6,901	9,242	91	39	9,248	457,600	441
20	8/6/2022	5,297	7,117	9,186	92	96	9,287	455,818	390
21	8/6/2022	5,270	7,121	9,127	91	155	9,196	457,580	477
22	8/7/2022	5,122	7,144	9,002	91	127	9,372	455,660	450
23	8/7/2022	5,596	7,400	9,027	92	140	9,475	456,318	400
24	8/8/2022	5,405	7,809	8,949	92	49	9,485	455,560	462
25	8/8/2022	5,237	7,857	9,018	91	20	9,377	455,997	459
26	8/8/2022	5,777	7,561	8,839	91	13	9,291	455,996	422
27	8/8/2022	5,790	7,176	9,035	92	15	9,039	456,360	434
28	8/9/2022	5,183	6,753	8,859	92	90	9,300	456,280	412
29	8/9/2022	5,398	4,964	8,864	92	36	9,233	455,090	346
30	8/9/2022	5,174	7,121	9,037	94	27	9,054	454,220	379
31	8/10/2022	5,242	7,367	8,823	94	72	9,250	456,840	388
32	8/10/2022	5,758	7,302	8,951	94	36	9,099	455,520	362
33	8/10/2022	4,937	7,826	8,936	94	58	9,139	454,960	375
34	8/11/2022	5,550	7,414	8,751	93	46	9,179	455,000	406
35	8/11/2022	5,538	8,046	8,734	94	37	8,997	456,760	394
36	8/12/2022	6,688	7,743	8,903	94	19	13,833	455,120	105
37	8/12/2022	5,438	7,368	8,938	94	74	9,140	458,520	364
38	8/13/2022	5,561	8,618	8,773	94	56	9,241	455,520	360
39	8/13/2022	5,568	7,600	8,779	94	36	9,350	455,680	434
40	8/13/2022	5,648	7,997	8,772	94	46	8,896	454,850	336
41	8/13/2022	4,969	7,560	8,171	86	9	9,910	453,920	352
42	8/14/2022	5,060	7,456	8,624	94	86	9,179	455,820	325
43	8/14/2022	5,338	7,175	8,514	94	88	9,130	455,730	322
44	8/14/2022	4,878	6,916	8,475	94	16	9,229	457,140	353

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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)
45	8/15/2022	4,812	7,650	8,275	92	24	9,149	455,160	344
46	8/15/2022	5,511	7,691	8,421	94	33	9,327	455,415	282
47	8/15/2022	5,858	7,563	8,434	94	37	9,056	451,580	274
48	8/15/2022	4,996	7,273	8,643	93	23	9,341	456,060	329
49	8/16/2022	5,631	7,619	8,482	94	49	9,230	456,780	288
50	8/16/2022	5,771	7,538	8,495	94	43	9,154	456,080	288
51	8/17/2022	5,321	7,556	8,571	94	25	9,134	459,031	303
52	8/16/2022	1	7,488	8,475	92	3,254	9,403	455,440	315
53	8/17/2022	5,694	7,349	8,195	93	41	9,163	456,900	270
54	8/17/2022	5,132	7,104	8,113	92	16	9,202	456,902	281
55	8/18/2022	4,901	6,679	7,910	94	12	9,134	455,709	325
56	8/18/2022	5,519	7,014	7,758	94	52	9,189	460,670	271
57	8/18/2022	4,576	7,350	8,009	94	41	9,173	454,800	243
58	8/18/2022	4,945	6,990	8,047	94	73	9,056	457,122	222
59	8/19/2022	5,620	7,119	8,168	93	36	9,138	457,290	243
60	8/18/2022	5,117	6,924	7,893	94	36	9,157	456,380	265
61	8/19/2022	5,045	6,994	7,960	94	50	8,872	459,240	344
62	8/19/2022	5,669	6,928	8,006	94	69	9,181	452,870	239
63	8/20/2022	5,212	7,243	8,448	94	10	9,106	456,924	248

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Yost 6H
Perforation Report

Stage Number	Report Date	Total Shots	Cluster 1 Top TD	Cluster 5 Bottom TD
1	7/29/2022	0	21,161	0
2	7/30/2022	40	21,024	20,865
3	7/30/2022	40	20,823	20,664
4	7/31/2022	40	20,622	20,463
5	8/1/2022	40	20,421	20,262
6	8/1/2022	40	20,219	20,060
7	8/1/2022	40	20,018	19,859
8	8/2/2022	40	19,817	19,658
9	8/2/2022	40	19,616	19,457
10	8/3/2022	40	19,414	19,255
11	8/3/2022	40	19,213	19,054
12	8/3/2022	40	19,012	18,853
13	8/4/2022	40	18,811	18,652
14	8/4/2022	40	18,609	18,451
15	8/4/2022	40	18,408	18,249
16	8/5/2022	40	18,207	18,048
17	8/5/2022	40	18,006	17,847
18	8/5/2022	40	17,805	17,646
19	8/6/2022	40	17,603	17,444
20	8/6/2022	40	17,402	17,243
21	8/6/2022	40	17,201	17,042
22	8/7/2022	40	17,000	16,841
23	8/7/2022	40	16,798	16,639
24	8/8/2022	40	16,597	16,438
25	8/8/2022	40	16,396	16,237
26	8/8/2022	40	16,195	16,036
27	8/8/2022	40	15,994	15,835
28	8/9/2022	40	15,792	15,633
29	8/9/2022	40	15,591	15,432
30	8/9/2022	40	15,390	15,231
31	8/10/2022	40	15,189	15,030
32	8/10/2022	40	14,987	14,828
33	8/10/2022	40	14,786	14,627
34	8/11/2022	40	14,585	14,426
35	8/11/2022	40	14,384	14,225
36	8/12/2022	40	14,182	14,023
37	8/12/2022	40	13,981	13,822
38	8/13/2022	40	13,780	13,621
39	8/13/2022	40	13,579	13,420
40	8/13/2022	40	13,378	13,219
41	8/13/2022	40	13,176	13,017
42	8/14/2022	40	12,975	12,816
43	8/14/2022	40	12,774	12,615
44	8/14/2022	40	12,573	12,414
45	8/15/2022	40	12,371	12,212
46	8/15/2022	40	12,170	12,011

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Stage Number	Report Date	Total Shots	Cluster 1 Top TD	Cluster 5 Bottom TD
47	8/15/2022	40	11,969	11,810
48	8/15/2022	40	11,768	11,609
49	8/16/2022	40	11,566	11,407
50	8/16/2022	40	11,365	11,206
51	8/17/2022	40	11,164	11,005
52	8/16/2022	40	10,963	10,804
53	8/17/2022	40	10,762	10,603
54	8/17/2022	40	10,560	10,401
55	8/18/2022	40	10,359	10,200
56	8/18/2022	40	10,158	9,999
57	8/18/2022	40	9,957	9,798
58	8/18/2022	40	9,755	9,596
59	8/19/2022	40	9,554	9,395
60	8/18/2022	40	9,353	9,194
61	8/19/2022	40	9,152	8,993
62	8/19/2022	40	8,950	8,791
63	8/20/2022	40	8,749	8,590

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)
Shale/Sand	0	120	Shale/Sand
Shale/sand/silt	120	390	Shale/sand/silt with water @ 180'
sand/shale	390	510	sand/shale with water @ 480'
sandstone/siltstone	510	775	sandstone/siltstone
coal	775	780	coal
sandstone/limestone	780	930	sandstone/limestone
coal	930	940	coal
sandstone/limestone	940	1020	sandstone/limestone
Limestone	1020	1050	Limestone
Limestone/siltstone	1050	1110	Limestone/siltstone
coal	1110	1115	coal
Limestone	1115	1140	Limestone
Limestone/sandstone/shale	1114	1260	Limestone/sandstone/shale
red shale/siltstone	1260	1440	red shale/siltstone with water @ 1378 '
sandstone/siltstone	1440	1680	sandstone/siltstone
sandstone/silstone/lime	1680	2310	sandstone/silstone/lime
Big Lime	2310	2400	Big Lime
Big Injun	2400	2580	Big Injun
siltstone	2580	2620	siltstone
Gantz	2620	2680	Gantz
siltstone	2680	3050	siltstone
Sandstone	3050	3180	Sandstone
Upper Devonian undifferentiated	3180	6000	Upper Devonian undifferentiated
silstone/shale/gray shale	6000	6450	silstone/shale/gray shale
Devonian silt/sand/shale	6450	7550	Devonian silt/sand/shale
Middlesex	7550	7770	Middlesex
Burkett	7770	7960	Burkett
Geneseo	7960	8011	Geneseo
Tully	8011	8062	Tully
Hamilton	8062	8176	Hamilton
Marcellus	8176	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:	31-May-22	Serv. Supervisor:	Steven Long
Cust. Rep.:	TROY	Ticket #:	BPA-2205-0038	Serv. Center	Black Lick - 1571
Well Name:	Yost 6HI	API Well #:	47-061-01884	County: Monongalia	State: WV
Well Type:		Rig:	PATTERSON 277	Type of Job:	CM-SURFACE 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	-	
15.6 lb/gal Cement	100 % NCM-910 +1.0 % NAC-110+0.25 PPS NLM-600	1255	15.6	30%	1.19	5.21	265.50	1,490.81	156
Fresh Water Displacement			8.33			-	219.52	-	
0						-		-	
						-		-	
						-		-	
						-		-	
						-		-	
						-		-	

Displacement Chemicals:

OPEN HOLE DATA			TUBULAR DATA									
17.5 in. O.H. 128 to 1,460 ft			13.375 in. 54.5#, (0 to 1,460 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.	13.375 54.5#	BTC	1467.8	J-55	12.615	2730	1130
82.0 °F		83.0 °F										

PREVIOUS CASING DATA	PERFORATED INTERVAL DATA				CASING EQUIPMENT DEPTHS			
	TOP	BTM	SPF	SIZE	SHOE	FLOAT	STAGE	ACP
24 in. 97.4# (0 to 128 ft)					1467.8	1421.9		

WELL FLUID		DISPLACEMENT FLUID			DIFF PRESS	CSG LIFT	MAX PRESS	Mix H2O Chlorides (ppm)	Mix H2O pH	Mix H2O Temp	WATER ON LOC (bbl)
TYPE	DENSITY	VOLUME	TYPE	DENSITY	(psi)	(psi)	(psi)				
H2O	8.4 ppg	219.8 bbl	H2O	8.4 ppg			2200	< 200	7	70.0 °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	700.00	Y	-	43.00	-	No	1,200.00	No	1.00	No	52

Comments/Additional Details:

Steven Long — Service Supervisor

31-May-22 — Date

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:	2-Jun-22	Serv. Supervisor:	Tim Monoskey
Cust. Rep.:	TROY	Ticket #:	BPA-2206-0001	Serv. Center	Black Lick - 1571
Well Name:	Yost 6H	API Well #:	47-061-01894	County: Monongalia	State: PA
Well Type:		Rig:	PATTERSON 277	Type of Job:	CM-INTER. 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)
CUSTOMER SUPPLIED	NEXTIER 9 5/8 PLUG CONTAINER								
TOP PLUG									
6% Gel Spacer	+20.0 PPB NEX-020		8.7		4.62	33.66	25.00	-	
15.6 lb/gal Cement	100 % NCM-910 +0.5 % NAC-110	890	15.6	30%	1.18	5.23	187.62	1,053.46	111
Fresh Water Displacement			8.33			-	200.23	-	
0						-		-	
						-		-	
						-		-	
						-		-	
						-		-	
						-		-	

Displacement Chemicals:	N/A	

OPEN HOLE DATA						TUBULAR DATA						
12.375 in. O.H. 1,460 to 2,630 ft			9.625 in. 36#, (0 to 2,630 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.	9.625" 36#	BTC	2678	J-55	8.921	3520	2020
70.0 °F	70.0 °F	70.0 °F	79.0 °F									

PREVIOUS CASING DATA	PERFORATED INTERVAL DATA				CASING EQUIPMENT DEPTHS			
	TOP	BTM	SPF	SIZE	SHOE	FLOAT	STAGE	ACP
13.375 in. 54.5# (0 to 1,460 ft)					2678	2630.8		

WELL FLUID		DISPLACEMENT FLUID			DIFF PRESS	CSG LIFT	MAX PRESS	Mix H2O Chlorides (ppm)	Mix H2O pH	Mix H2O Temp	WATER ON LOC (bbl)
TYPE	DENSITY	VOLUME	TYPE	DENSITY	(psi)	(psi)	(psi)				
H2O	8.4 ppg	203.4 bbl	REC.	8.4 ppg	993.6	1009	3500	<300	7	66.0 °F	1600

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	1,200.00	Y	-	53.00	-	No	3,500.00	No	-	No	49

Comments/Additional Details:

Tim Monoskey — Service Supervisor

2-Jun-22 — Date

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:	11-Jun-22	Serv. Supervisor:	Ron Stephenson		
Cust. Rep.:	TROY	Ticket #:	BPA-2206-0014	Serv. Center	Black Lick - 1571		
Well Name:	Yost 6H	API Well #:	47-061-01894	County:	Monongalia	State:	WV
Well Type:		Rig:	PATTERSON 227	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		13.5		5.65	26.46	80.00	-	
14.5 lb/gal Cement	50 % NCM-910+50 % NPZ-010 +0.2 % NFP-703+0.15 % NAS-504+0.25 % NRT-213+0.2 % NFL-549+0.1 % NTC-405	3885	14.5		1.16	4.90	801.20	4,498.73	453
Sugar Water Displacement	+5.0 PPB NRT-215					-	20.00	-	
Fresh Water Displacement						-	449.51	-	
						-		-	
						-		-	
						-		-	
						-		-	
						-		-	
Displacement Chemicals:									

OPEN HOLE DATA			TUBULAR DATA								
8.75 in. O.H. 2,630 to 7,460 ft 8.5 in. O.H. 7,460 to 21,174 ft			5.5 in. 20#, (0 to 21,174 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.							
70.0 °F		69.0 °F				5.5 / 20	BTC	21175.5	HP P-110	4'7789	12640	11080

PREVIOUS CASING DATA	PERFORATED INTERVAL DATA				CASING EQUIPMENT DEPTHS			
	TOP	BTM	SPF	SIZE	SHOE	FLOAT	STAGE	ACP
9.625 in. 36# (0 to 2,630 ft)					21147.5	21132.7		

WELL FLUID		DISPLACEMENT FLUID			DIFF PRESS	CSG LIFT	MAX PRESS	Mix H2O Chlorides (ppm)	Mix H2O pH	Mix H2O Temp	WATER ON LOC (bbl)
TYPE	DENSITY	VOLUME	TYPE	DENSITY	(psi)	(psi)	(psi)				
OBM	12.5 ppg	470 bbl	H2O	8.3 ppg	2513		5200	,200	8	67.0 °F	1520

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	3,500.00	Y			2,162	Yes	5,200.00	No	-	No	31.5

Comments/Additional Details:

Ron Stephenson — Service Supervisor

11-Jun-22 — Date

02/23/2024

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	7/29/2022
Job End Date:	8/19/2022
State:	West Virginia
County:	Monongalia
API Number:	47-061-01894-00-00
Operator Name:	Northeast Natural Energy LLC
Well Name and Number:	Yost 6H
Latitude:	39.64186100
Longitude:	-80.21820000
Datum:	NAD27
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	8,129
Total Base Water Volume (gal):	24,657,402
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	87.57043	None
Sand (100 Mesh Proppant)	ProFrac	Proppant					
			Silica Substrate	14808-60-7	100.00000	9.41466	None
Sand (40/70 White Proppant)	ProFrac	Proppant					
			Silica Substrate	14808-60-7	100.00000	2.75371	None
Hydrochloric Acid (7.5%)	CNR	Acidizing					
			Water	7732-18-5	85.00000	0.13983	None
			Hydrochloric Acid (Hydrogen Chloride)	7647-01-0	37.00000	0.06087	None
Clearal 268	Chemstream	Biocide					
			Non-hazardous substances	Proprietary	80.00000	0.02113	None
			Glutaraldehyde	111-30-8	20.00000	0.00528	None
			Quaternary Ammonium Compounds	68424-85-1	3.00000	0.00079	None
			Didecyl dimethyl ammonium chloride	7173-51-5	3.00000	0.00079	None

			Ethanol	64-17-5	1.50000	0.00040	None
StimSTREAM FR 9800	Chemstream	Friction Reducer					
			alkanes, C16-20-iso-	90622-59-6	25.00000	0.01299	None
			Butene, homopolymer	9003-29-6	25.00000	0.01299	None
			Ethoxylated alcohols (C12-18)	68213-23-0	3.00000	0.00156	None
StimSTREAM SC 405	Chemstream	Scale Control					
			Non-Hazardous Substances	Proprietary	70.00000	0.01225	None
			Citric Acid	77-92-9	10.00000	0.00175	None
			Diethylenetriamine penta (methylene phosphonic acid) (DTPMP)	15827-60-8	10.00000	0.00175	None
			2-Phosphono-1,2,4-butanetricarboxylic acid (PBTC)	37971-36-1	10.00000	0.00175	None
ProHib 100	CNR	Acid Inhibitor					
			2-Butoxyethanol	111-76-2	60.00000	0.00027	None
			Proprietary material	Proprietary	30.00000	0.00013	None
			Proprietary non-ionic surfactant	Proprietary	20.00000	0.00009	None
			Proprietary ethoxylated alcohol	Proprietary	10.00000	0.00004	None
			Proprietary corrosion inhibitor	Proprietary	10.00000	0.00004	None
ProFE 105	CNR	Iron Control					
			Citric Acid	77-92-9	20.00000	0.00008	None
			Acetic Acid	64-19-7	5.00000	0.00002	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	0.13983	
			Non-hazardous substances	Proprietary	80.00000	0.02113	
			Butene, homopolymer	9003-29-6	25.00000	0.01299	
			Non-Hazardous Substances	Proprietary	70.00000	0.01225	
			Diethylenetriamine penta (methylene phosphonic acid) (DTPMP)	15827-60-8	10.00000	0.00175	
			Citric Acid	77-92-9	10.00000	0.00175	
			Ethoxylated alcohols (C12-18)	68213-23-0	3.00000	0.00156	
			Didecyl dimethyl ammonium chloride	7173-51-5	3.00000	0.00079	
			Quaternary Ammonium Compounds	68424-85-1	3.00000	0.00079	
			Ethanol	64-17-5	1.50000	0.00040	
			Proprietary material	Proprietary	30.00000	0.00013	
			Proprietary non-ionic surfactant	Proprietary	20.00000	0.00009	
			Proprietary corrosion inhibitor	Proprietary	10.00000	0.00004	
			Proprietary ethoxylated alcohol	Proprietary	10.00000	0.00004	
			Acetic Acid	64-19-7	5.00000	0.00002	