

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

API 47-061-01896 County Monongalia District Clay  
Quad Blacksville Pad Name Yost Field/Pool Name \_\_\_\_\_  
Farm name Yost Heritage, Inc. Well Number Yost 14H  
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 4388296.1 Easting 567085.0  
Landing Point of Curve Northing 4388264.6 Easting 567511.0  
Bottom Hole Northing 4385528.3 Easting 569494.3

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 5/28/2022  
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

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Reviewed by:  
*Haynes J. Kraft*  
1/31/2024

**APPROVED**

02/23/2024

API 47- 061 - 01896 Farm name Yost Heritage, Inc. Well number Yost 14H

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"	1,471'	N	54.5	NA	Y, 5 bbl
Coal							
Intermediate 1	12-1/4"	9-5/8"	2,661'	N	40	NA	Y, 22 bbl
Intermediate 2							
Intermediate 3							
Production	8-3/4"	5-1/2"	19,791'	N	20	NA	Y
Tubing							
Packer type and depth set							

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

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor	4,500 PSI Grout					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	3615	14.5	1.16	4,185	2,260	48
Tubing							

Drillers TD (ft) 19,804' Loggers TD (ft) 19,774'  
 Deepest formation penetrated Marcellus Plug back to (ft) \_\_\_\_\_  
 Plug back procedure \_\_\_\_\_

Kick off depth (ft) 7,607'

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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**Yost 10H**  
Perforation Report

Stage Number	Report Date	Total Shots	Cluster 1 Top TD	Cluster 5 Bottom TD
1	7/28/2022	0	0	20,220
2	7/28/2022	40	20,181	20,042
3	7/28/2022	40	20,005	19,866
4	7/29/2022	40	19,829	19,690
5	7/29/2022	40	19,653	19,515
6	7/30/2022	40	19,477	19,339
7	7/30/2022	40	19,301	19,163
8	7/31/2022	40	19,126	18,987
9	7/31/2022	40	18,950	18,811
10	8/1/2022	40	18,774	18,635
11	8/1/2022	40	18,598	18,459
12	8/2/2022	40	18,422	18,283
13	8/2/2022	40	18,246	18,107
14	8/1/2022	40	18,070	17,931
15	8/3/2022	40	17,894	17,756
16	8/3/2022	40	17,718	17,580
17	8/4/2022	40	17,542	17,404
18	8/4/2022	40	17,367	17,228
19	8/4/2022	40	17,191	17,052
20	8/5/2022	40	17,015	16,876
21	8/5/2022	40	16,839	16,700
22	8/5/2022	40	16,663	16,524
23	8/6/2022	40	16,487	16,348
24	8/6/2022	40	16,311	16,172
25	8/6/2022	40	16,135	15,997
26	8/7/2022	40	15,959	15,821
27	8/7/2022	40	15,783	15,645
28	8/7/2022	40	15,608	15,469
29	8/8/2022	40	15,432	15,293
30	8/8/2022	40	15,256	15,117
31	8/8/2022	40	15,080	14,941
32	8/9/2022	40	14,904	14,765
33	8/9/2022	40	14,728	14,589
34	8/9/2022	40	14,552	14,413
35	8/10/2022	40	14,376	14,237
36	8/10/2022	40	14,200	14,062
37	8/10/2022	40	14,024	13,886
38	8/11/2022	40	13,849	13,710
39	8/11/2022	40	13,673	13,534
40	8/11/2022	40	13,497	13,358
41	8/12/2022	40	13,321	13,182
42	8/12/2022	40	13,145	13,006
43	8/13/2022	40	12,969	12,830
44	8/13/2022	40	12,793	12,654
45	8/13/2022	40	12,617	12,478
46	8/14/2022	40	12,441	12,303

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Stage Number	Report Date	Total Shots	Cluster 1 Top TD	Cluster 5 Bottom TD
47	8/14/2022	40	12,265	12,127
48	8/14/2022	40	12,090	11,951
49	8/15/2022	40	11,914	11,775
50	8/15/2022	40	11,738	11,599
51	8/15/2022	40	11,562	11,423
52	8/15/2022	40	11,386	11,247
53	8/16/2022	40	11,210	11,071
54	8/16/2022	40	11,034	10,895
55	8/16/2022	40	10,856	10,719
56	8/16/2022	40	10,682	10,544
57	8/17/2022	40	10,506	10,368
58	8/17/2022	40	10,331	10,192
59	8/17/2022	40	10,155	10,016
60	8/18/2022	40	9,979	9,840
61	8/18/2022	40	9,803	9,664
62	8/18/2022	40	9,627	9,488
63	8/18/2022	40	9,449	9,312
64	8/19/2022	40	9,275	9,136
65	8/18/2022	40	9,099	8,960
66	8/19/2022	40	8,923	8,785
67	8/19/2022	40	8,747	8,609

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## Yost 10H 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	7/28/2022	4,821	6,884	8,752	81	470	7,742	301,803	450
2	7/28/2022	5,725	5,979	9,630	91	68	8,213	391,144	450
3	5/8/2022	4,997	6,434	9,433	91	41	9,265	391,960	504
4	7/29/2022	5,728	6,119	9,124	92	74	8,158	390,313	432
5	7/29/2022	6,487	6,060	9,124	92	69	8,138	390,649	430
6	7/30/2022	5,310	5,472	9,004	91	41	8,059	390,060	491
7	7/30/2022	6,054	7,765	9,020	91	32	8,166	390,698	430
8	7/31/2022	5,297	7,747	9,190	91	5	8,112	392,540	472
9	7/31/2022	5,249	7,538	9,249	92	5	7,972	391,050	446
10	8/1/2022	5,543	7,243	9,134	92	28	8,012	388,819	445
11	8/1/2022	5,587	7,037	9,269	91	10	8,133	390,220	455
12	8/2/2022	5,580	7,187	9,367	91	9	8,021	391,840	447
13	8/2/2022	5,468	8,187	9,417	92	82	8,366	392,172	405
14	8/1/2022	5,548	7,141	9,345	91	7	8,063	387,740	460
15	8/3/2022	6,010	7,086	9,146	92	27	8,105	393,025	430
16	8/3/2022	6,354	6,712	9,258	92	80	8,026	392,937	400
17	8/4/2022	5,942	7,552	9,363	91	40	8,171	390,460	430
18	8/4/2022	5,743	5,549	9,184	92	42	7,958	391,932	400
19	8/4/2022	5,748	7,479	8,981	92	21	8,062	392,580	430
20	8/5/2022	5,849	7,178	9,137	92	41	8,211	391,880	419
21	8/5/2022	5,727	7,597	9,268	92	38	7,865	391,562	380
22	8/5/2022	6,277	7,618	9,210	93	49	7,892	393,420	371
23	8/6/2022	5,815	6,866	9,164	91	25	8,100	390,760	418
24	8/6/2022	5,238	7,544	9,260	92	54	7,937	391,534	375
25	8/6/2022	5,393	7,037	8,996	91	41	9,167	391,380	426
26	8/7/2022	5,210	7,083	9,010	92	13	7,993	391,840	442
27	8/7/2022	5,640	7,754	8,852	92	44	7,825	391,146	375
28	8/7/2022	5,525	6,644	8,935	92	395	8,403	391,020	415
29	8/8/2022	5,592	7,097	8,841	92	22	8,008	393,286	415
30	8/8/2022	5,624	7,587	8,789	91	14	7,982	390,590	416
31	8/8/2022	5,659	7,423	8,702	92	25	8,113	392,260	399
32	8/9/2022	5,506	7,069	8,812	92	16	7,781	391,160	403
33	8/9/2022	5,930	6,947	8,713	92	24	7,738	383,480	332
34	8/9/2022	5,612	7,474	8,905	93	37	8,765	389,600	367
35	8/10/2022	5,696	8,074	8,920	94	97	7,978	390,500	367
36	8/10/2022	6,124	9,751	8,909	92	34	7,865	392,300	340
37	8/10/2022	5,518	6,833	8,746	93	48	7,779	391,460	363
38	8/11/2022	5,685	7,148	8,720	94	19	7,821	394,720	373
39	8/11/2022	5,290	7,230	8,305	92	99	7,973	390,750	332
40	8/11/2022	5,701	7,527	8,495	94	16	7,795	391,980	368
41	8/12/2022	5,581	8,668	8,719	92	46	7,983	393,320	331
42	8/12/2022	5,711	7,808	8,760	94	21	7,916	390,680	343
43	8/13/2022	5,559	5,780	8,452	94	41	7,975	390,920	338
44	8/13/2022	6,261	7,187	8,432	92	42	7,772	390,600	326

8/23/2024

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)
45	8/13/2022	5,738	7,861	8,376	92	59	8,039	387,620	415
46	8/14/2022	5,468	7,755	8,440	94	11	7,883	391,820	309
47	8/14/2022	5,791	7,035	8,260	91	38	8,997	390,660	321
48	8/14/2022	5,123	7,186	8,229	92	57	7,755	390,040	350
49	8/15/2022	5,268	6,853	8,186	94	41	7,861	391,140	343
50	8/15/2022	5,313	7,475	8,143	92	38	7,706	390,210	273
51	8/15/2022	6,298	7,639	8,317	93	34	7,818	391,360	266
52	8/15/2022	5,159	7,494	8,572	92	5	7,769	389,240	316
53	8/16/2022	5,253	7,802	8,407	94	8	7,791	389,740	309
54	8/16/2022	5,556	7,443	8,291	92	33	7,702	390,360	277
55	8/16/2022	5,380	7,869	8,468	93	22	7,852	392,586	300
56	8/16/2022	5,966	7,735	8,518	94	13	8,219	390,860	295
57	8/17/2022	6,762	7,746	8,324	91	38	7,700	366,900	285
58	8/17/2022	5,480	7,439	8,094	92	55	8,035	390,009	367
59	8/17/2022	5,783	7,440	8,157	94	33	8,020	391,228	618
60	8/18/2022	5,770	7,597	8,023	94	23	7,805	390,929	362
61	8/18/2022	5,857	7,430	7,965	92	48	7,788	390,850	239
62	8/18/2022	5,426	7,496	7,850	93	52	7,947	391,040	229
63	8/18/2022	5,133	7,555	8,194	94	10	7,466	356,734	480
64	8/19/2022	6,001	7,298	7,915	94	17	7,886	391,294	206
65	8/18/2022	6,150	7,343	7,837	94	31	7,971	391,420	443
66	8/19/2022	6,245	6,718	7,801	94	207	8,225	388,740	256
67	8/19/2022	5,691	7,527	7,927	94	13	7,888	391,149	640

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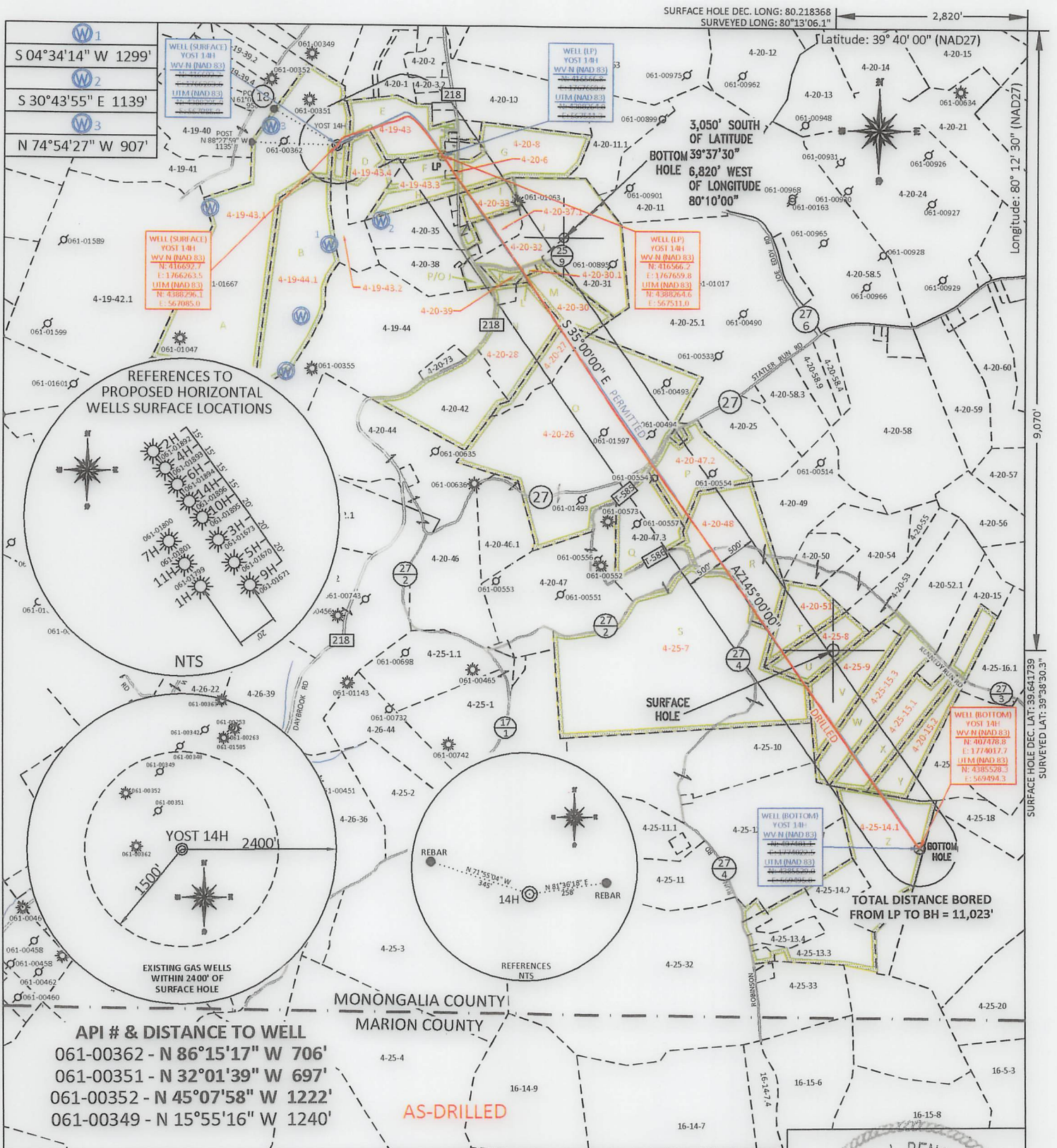
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02/23/2024



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/siltstone/lime	1680	2310	sandstone/siltstone/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
siltstone/shale/gray shale	6000	6450	siltstone/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

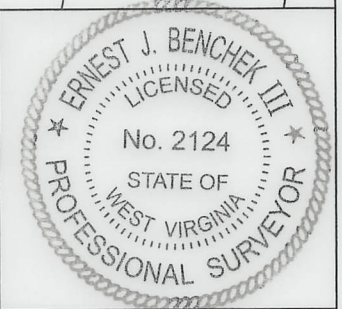
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FILE #: NEE14  
 DRAWING #: 3039  
 SCALE: PLAT: 1" = 1800'  
 TICK MARK: 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY: 1/200  
 PROVEN SOURCE: SUBMETER MAPPING  
 OF ELEVATION: GRADE GPS

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

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: YOST HERITAGE INC

OIL & GAS ROYALTY OWNER:

LEASE NUMBERS:

DATE: OCTOBER 26, 2022

OPERATOR'S WELL #: YOST 14H

API WELL #: 47 61 01896  
 STATE COUNTY PERMIT

AS-BUILT ELEVATION: 1,494.93'

QUADRANGLE: BLACKSVILLE, WV

ACREAGE: 93.08 **02/23/2024**

ACREAGE: 790.949 +/-

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: 8,308' TMD: 19,804'

DESIGNATED AGENT: JOHN ADAMS

ADDRESS: 707 VIRGINIA STREET EAST, SUITE 1200

CITY: CHARLESTON STATE: WV ZIP CODE: 25301



PROPERTY OWNER INDEX	
4-19-43.1	YOST HERITAGE INC
4-19-44.1	YOST HERITAGE INC
4-19-43.4	YOST HERITAGE INC
4-19-43	4 BROTHERS LLC
4-19-43.3	DONALD LEE & ROGER KEITH WILLIAMS ET AL
4-20-8	JANICE WILSON
4-20-6	DONALD LEE & ROGER KEITH WILLIAMS ET AL
4-20-33	TOMMY EDDY SR & CAROL EDDY
4-20-37.1	TOMMY JARVIS & CAROL EDDY
4-20-30.1	MICHAEL KONOSKY & JR & CHRISTIAN KONOSKY
4-20-30	ERIC LEROY AMMONS
4-20-39	KEVIN S OWENS
4-20-28	BRANDEN L NUTTER
4-20-27	BRUCE ARNETT
4-20-26	RANDY D & VICKY S AMMONS (LIFE DELBERT E & LOLA HARTLEY)
4-20-47.2	DARRELL E & ALMEADA J EDDY
4-20-47.3	GLENN GILBERT & NINA K EDDY
4-20-48	DORIS E SNYDER
4-25-7	EVA V, ROGER A & RONALD T TULANOWSKI II
4-20-51	ROBERT W & KAREN S GUMINEY
4-25-8	ROBERT W & KAREN S GUMINEY
4-25-9	DOROTHY WEST ESTATE ET AL
4-25-15.3	JOSEPH JOHN
4-25-15.1	ZACHARY B & DELLA M JOHNSON
4-25-15.2	ZACHARY B & DELLA M JOHNSON
4-25-14.1	AARON & DEBBIE CLEVENGER

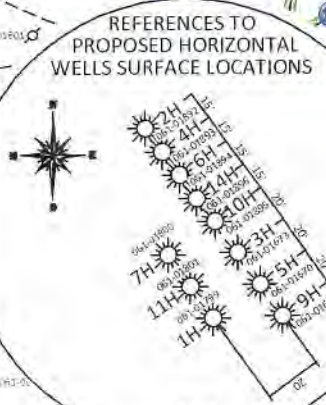
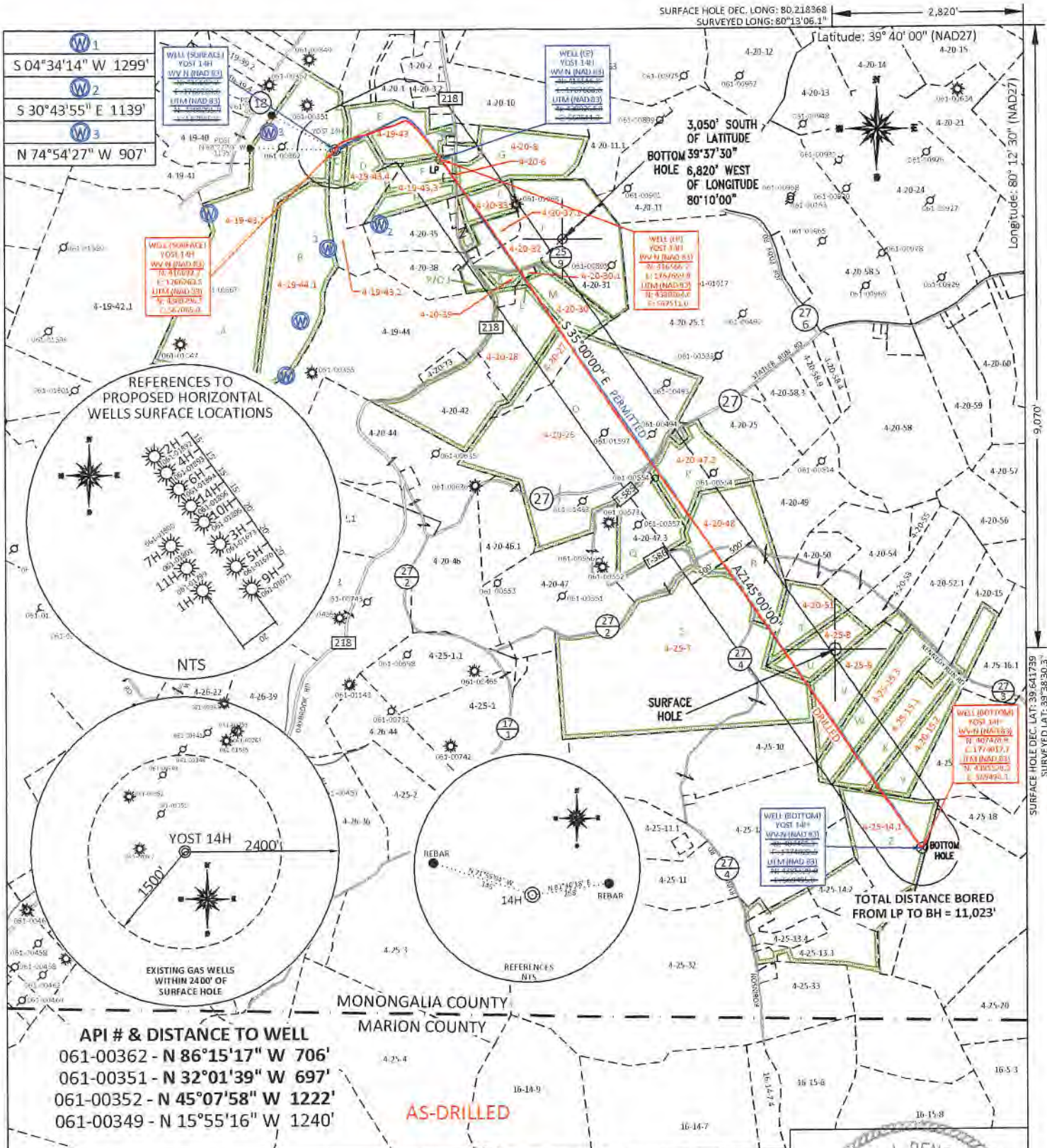
LEASE INDEX			
A	WV-061-001043-002	N	WV-061-000173-065
B	WV-061-001043-002	O	WV-061-002303-006
C	WV-061-001043-002	P	WV-061-005854-001
D	WV-061-003452-000	Q	WV-061-005854-001
E	WV-061-001043-002	R	WV-061-001940-006
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J	WV-061-003862-004	W	WV-061-005757-001
K	WV-061-003862-004	X	WV-061-004504-001
L	WV-061-003862-004	Y	WV-061-004504-001
M	WV-061-003862-004	Z	WV-061-005851-001

02/23/2024

FILE #: NEE14  
DRAWING #: 2980  
SCALE: N/A

DATE: OCTOBER 26, 2022  
OPERATOR'S WELL #: YOST 14H  
API WELL #: 47 61 01896  
STATE COUNTY PERMIT





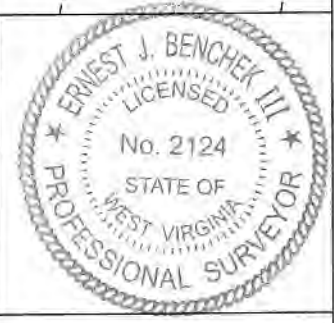
**API # & DISTANCE TO WELL**  
 061-00362 - N 86°15'17" W 706'  
 061-00351 - N 32°01'39" W 697'  
 061-00352 - N 45°07'58" W 1222'  
 061-00349 - N 15°55'16" W 1240'

**AS-DRILLED**

**TOTAL DISTANCE BORED FROM LP TO BH = 11,023'**

FILE #: NEE14  
 DRAWING #: 3039  
 SCALE: 1" = 1800'  
 TICK MARK: 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  
 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: YOST HERITAGE INC  
 OIL & GAS ROYALTY OWNER:  
 LEASE NUMBERS:

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DATE: OCTOBER 26, 2022  
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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: 8,308' TMD: 19,804'  
 DESIGNATED AGENT: JOHN ADAMS  
 ADDRESS: 707 VIRGINIA STREET EAST, SUITE 1200  
 CITY: CHARLESTON STATE: WV ZIP CODE: 25301

AS-BUILT ELEVATION: 1,494.93'  
 QUADRANGLE: BLACKSVILLE, WV  
 ACREAGE: 93.08 02/23/2024  
 ACREAGE: 790.949 +/-



PROPERTY OWNER INDEX	
4-19-43.1	YOST HERITAGE INC
4-19-44.1	YOST HERITAGE INC
4-19-43.4	YOST HERITAGE INC
4-19-43	4 BROTHERS LLC
4-19-43.3	DONALD LEE & ROGER KEITH WILLIAMS ET AL
4-20-8	JANICE WILSON
4-20-6	DONALD LEE & ROGER KEITH WILLIAMS ET AL
4-20-33	TOMMY EDDY SR & CAROL EDDY
4-20-37.1	TOMMY JARVIS & CAROL EDDY
4-20-30.1	MICHAEL KONOSKY & JR & CHRISTIAN KONOSKY
4-20-30	ERIC LEROY AMMONS
4-20-39	KEVIN S OWENS
4-20-28	BRANDEN L NUTTER
4-20-27	BRUCE ARNETT
4-20-26	RANDY D & VICKY S AMMONS (LIFE DELBERT E & LOLA HARTLEY)
4-20-47.2	DARRELL E & ALMEADA J EDDY
4-20-47.3	GLENN GILBERT & NINA K EDDY
4-20-48	DORIS E SNYDER
4-25-7	EVA V, ROGER A & RONALD T TULANOWSKI II
4-20-51	ROBERT W & KAREN S GUMINEY
4-25-8	ROBERT W & KAREN S GUMINEY
4-25-9	DOROTHY WEST ESTATE ET AL
4-25-15.3	JOSEPH JOHN
4-25-15.1	ZACHARY B & DELLA M JOHNSON
4-25-15.2	ZACHARY B & DELLA M JOHNSON
4-25-14.1	AARON & DEBBIE CLEVINGER

LEASE INDEX			
A	WV-061-001043-002	N	WV-061-000173-065
B	WV-061-001043-002	O	WV-061-002303-006
C	WV-061-001043-002	P	WV-061-005854-001
D	WV-061-003452-000	Q	WV-061-005854-001
E	WV-061-001043-002	R	WV-061-001940-006
F	WV-061-003451-001	S	WV-061-005853-001
G	WV-061-001050-002	T	WV-061-005852-001
H	WV-061-003451-001	U	WV-061-005852-001
I	WV-061-005663-001	V	WV-061-004555-004
J	WV-061-003862-004	W	WV-061-005757-001
K	WV-061-003862-004	X	WV-061-004504-001
L	WV-061-003862-004	Y	WV-061-004504-001
M	WV-061-003862-004	Z	WV-061-005851-001

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WV Department of  
Environmental Protection

02/23/2024

FILE #: NEE14

DRAWING #: 2980

SCALE: N/A

DATE: OCTOBER 26, 2022

OPERATOR'S WELL #: YOST 14H

API WELL #: 47 61 01896  
STATE COUNTY PERMIT















# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	7/28/2022
Job End Date:	8/19/2022
State:	West Virginia
County:	Monongalia
API Number:	47-061-01895-00-00
Operator Name:	Northeast Natural Energy LLC
Well Name and Number:	Yost 10H
Latitude:	39.64179500
Longitude:	-80.21813500
Datum:	NAD27
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	8,134
Total Base Water Volume (gal):	22,572,480
Total Base Non Water Volume:	0

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## 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	87.59143	None
Sand (100 Mesh Proppant)	ProFrac	Proppant	Silica Substrate	14808-60-7	100.00000	9.72304	None
Sand (40/70 White Proppant)	ProFrac	Proppant	Silica Substrate	14808-60-7	100.00000	2.38893	None
Hydrochloric Acid (7.5%)	CNR	Acidizing	Water	7732-18-5	85.00000	0.16813	None
			Hydrochloric Acid (Hydrogen Chloride)	7647-01-0	37.00000	0.07319	None
Clearal 268	Chemstream	Biocide	Non-hazardous substances	Proprietary	80.00000	0.02115	None
			Glutaraldehyde	111-30-8	20.00000	0.00529	None
			Didecyl dimethyl ammonium chloride	7173-51-5	3.00000	0.00079	None
			Quaternary Ammonium Compounds	68424-85-1	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	0.01266	None
			Butene, homopolymer	9003-29-6	25.00000	0.01266	None
			Ethoxylated alcohols (C12-18)	68213-23-0	3.00000	0.00152	None
StimSTREAM SC 405	Chemstream	Scale Control					
			Non-Hazardous Substances	Proprietary	70.00000	0.01446	None
			Citric Acid	77-92-9	10.00000	0.00207	None
			2-Phosphono-1,2,4-butane-tricarboxylic acid (PBTC)	37971-36-1	10.00000	0.00207	None
			Diethylenetriamine penta (methylene phosphonic acid) (DTPMP)	15827-60-8	10.00000	0.00207	None
ProHib 100	CNR	Acid Inhibitor					
			2-Butoxyethanol	111-76-2	60.00000	0.00035	None
			Proprietary material	Proprietary	30.00000	0.00018	None
			Proprietary non-ionic surfactant	Proprietary	20.00000	0.00012	None
			Proprietary ethoxylated alcohol	Proprietary	10.00000	0.00006	None
			Proprietary corrosion inhibitor	Proprietary	10.00000	0.00006	None
ProFE 105	CNR	Iron Control					
			Citric Acid	77-92-9	20.00000	0.00010	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	0.16813	
			Non-hazardous substances	Proprietary	80.00000	0.02115	
			Non-Hazardous Substances	Proprietary	70.00000	0.01446	
			Butene, homopolymer	9003-29-6	25.00000	0.01266	
			Citric Acid	77-92-9	10.00000	0.00207	
			Diethylenetriamine penta (methylene phosphonic acid) (DTPMP)	15827-60-8	10.00000	0.00207	
			Ethoxylated alcohols (C12-18)	68213-23-0	3.00000	0.00152	
			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	0.00018	
			Proprietary non-ionic surfactant	Proprietary	20.00000	0.00012	
			Proprietary corrosion inhibitor	Proprietary	10.00000	0.00006	
			Proprietary ethoxylated alcohol	Proprietary	10.00000	0.00006	
			Acetic Acid	64-19-7	5.00000	0.00002	

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