

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

API 47 - 061 - 01891 County Monongalia District Battelle  
Quad Wadestown Pad Name Phoenix Field/Pool Name \_\_\_\_\_  
Farm name Phoenix Well Number 10H  
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 4388196.3 Easting 562472.7  
Landing Point of Curve Northing 4388538.5 Easting 563246.7  
Bottom Hole Northing 4383691.5 Easting 566593.8

Elevation (ft) 1,503.5' 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 10/27/2021 Date drilling commenced 12/27/2021 Date drilling ceased 4/17/2022  
Date completion activities began 11/1/2022 Date completion activities ceased 1/27/2023  
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 1,240 Open mine(s) (Y/N) depths Y, Federal #2 @1,230  
Salt water depth(s) ft 2,760 Void(s) encountered (Y/N) depths N  
Coal depth(s) ft 1,230 Cavern(s) encountered (Y/N) depths N  
Is coal being mined in area (Y/N) N

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Reviewed by:

*Maegan J. King*  
1/31/24

02/23/2024

API 47- 061 - 01891 Farm name Phoenix Well number 10H

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"	1,531'	N	54.5	NA	N
Coal							
Intermediate 1	12-1/4"	9-5/8"	2,825'	N	36	NA	Y, 20 bbl
Intermediate 2							
Intermediate 3							
Production	8-3/4"	5-1/2"	28,003'	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	4500 psi ready mix						48
Surface	Class A	2,395	15.6	1.19	2,845	220, top job	8
Coal							
Intermediate 1	Class A	910	15.6	1.19	1,230	CTS	8
Intermediate 2							
Intermediate 3							
Production	50:50 poz	3695	14.5	1.16	6,750	1,043	48
Tubing							

Drillers TD (ft) 28,802' Loggers TD (ft) 28,772'  
 Deepest formation penetrated Marcellus Plug back to (ft) \_\_\_\_\_  
 Plug back procedure \_\_\_\_\_

Kick off depth (ft) 7,609'

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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## Phoenix 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	11/9/2022	5,275	10,324	9,512	79	1,910	8,601	306,000	467
2	11/10/2022	5,804	6,361	9,380	80	239	10,342	501,780	700
3	11/11/2022	5,859	6,301	9,483	82	349	11,156	499,930	699
4	11/11/2022	5,442	6,100	9,422	85	405	11,343	500,063	712
5	11/12/2022	5,702	6,825	9,548	79	27	10,875	501,800	705
6	11/12/2022	5,374	6,337	9,345	85	39	11,015	500,757	690
7	11/13/2022	5,634	6,938	9,432	81	19	10,810	501,020	686
8	11/13/2022	6,168	7,625	9,607	80	42	10,817	500,580	676
9	11/13/2022	5,260	7,184	9,690	86	28	10,838	500,720	693
10	11/13/2022	5,326	7,541	9,399	82	15	10,694	500,384	600
11	11/14/2022	5,927	7,444	9,544	86	86	10,811	499,256	638
12	11/14/2022	5,934	7,650	9,590	80	11	10,291	502,606	603
13	11/14/2022	5,856	7,958	9,522	82	13	10,698	500,000	608
14	11/14/2022	6,023	6,835	9,526	86	65	10,538	504,951	615
15	11/14/2022	6,178	6,649	9,576	87	34	10,600	499,694	609
16	11/15/2022	5,949	7,192	9,606	88	38	10,767	500,352	604
17	11/15/2022	5,475	6,217	9,568	88	91	10,695	498,138	628
18	11/16/2022	6,094	6,920	9,282	87	75	10,805	500,600	582
19	11/16/2022	5,745	5,037	9,601	92	121	10,793	500,000	565
20	11/16/2022	6,117	5,623	9,644	92	34	10,775	499,844	562
21	11/16/2022	5,964	8,044	9,419	88	45	9,790	456,485	568
22	11/17/2022	5,570	7,699	9,759	93	50	9,799	455,091	550
23	11/17/2022	5,590	7,942	9,582	89	34	9,938	455,000	549
24	11/17/2022	5,699	8,134	9,546	88	58	10,353	478,038	706
25	1/11/2023	5,500	5,834	8,555	75	43	10,019	456,730	539
26	1/11/2023	5,603	7,997	9,365	88	58	9,937	458,678	533
27	1/11/2023	5,084	7,161	9,498	86	42	10,072	456,219	525
28	1/11/2023	9,368	6,631	9,411	88	79	9,844	455,700	537
29	1/12/2023	5,858	5,548	9,470	86	64	10,259	455,280	552
30	1/12/2023	5,963	7,777	9,452	89	105	9,862	456,777	523
31	1/12/2023	5,503	7,981	9,486	87	92	9,787	454,026	569
32	1/13/2023	6,292	7,474	9,428	87	78	9,823	457,260	447
33	1/13/2023	5,728	6,892	9,507	86	61	9,935	454,073	547
34	1/13/2023	6,298	7,477	9,466	88	63	10,011	454,906	552
35	1/13/2023	6,061	6,146	9,263	87	97	9,704	456,440	495
36	1/14/2023	6,276	5,053	9,351	87	77	9,908	456,707	326
37	1/14/2023	5,683	8,052	9,379	88	32	10,035	455,445	458
38	1/14/2023	5,577	8,383	9,486	88	41	9,925	457,873	417
39	1/14/2023	5,818	6,433	9,219	87	58	9,717	455,680	481
40	1/15/2023	6,305	6,362	9,434	88	90	10,003	454,860	474
41	1/15/2023	5,559	6,832	9,461	89	101	10,019	460,374	512
42	1/15/2023	5,633	6,283	9,458	91	44	9,991	457,313	513
43	1/15/2023	6,359	6,626	9,348	89	43	9,770	457,025	512
44	1/15/2023	5,717	6,791	9,536	79	54	9,672	455,580	459
45	1/16/2023	5,469	7,160	9,798	81	28	9,737	455,880	462
46	1/16/2023	5,666	6,865	9,649	80	92	9,862	455,395	464

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47	1/16/2023	5,512	8,636	9,469	80	71	10,290	457,641	594
48	1/16/2023	5,344	8,136	9,343	79	51	9,739	456,210	439
49	1/16/2023	5,431	6,802	9,513	83	84	9,803	455,580	432
50	1/17/2023	5,446	6,384	9,521	84	70	9,890	456,300	489
51	1/17/2023	5,738	6,608	9,267	84	125	9,737	454,800	472
52	1/17/2023	5,636	8,094	9,397	84	51	9,746	454,179	466
53	1/17/2023	5,354	5,502	9,285	86	91	9,782	454,200	386
54	1/18/2023	5,649	6,318	9,380	85	78	9,834	454,600	400
55	1/18/2023	6,155	8,367	9,181	81	58	9,952	456,035	430
56	1/18/2023	6,324	7,574	9,281	83	54	9,921	458,726	446
57	1/18/2023	5,474	8,264	9,584	84	46	9,626	455,540	395
58	1/18/2023	5,516	6,001	9,497	84	87	9,636	454,780	385
59	1/19/2023	5,613	6,088	9,131	83	31	9,707	455,680	439
60	1/19/2023	6,231	6,532	8,869	85	62	9,240	445,355	429
61	1/19/2023	5,543	7,086	8,951	85	71	9,913	453,800	425
62	1/19/2023	4,940	7,479	9,291	87	53	9,945	456,140	381
63	1/20/2023	5,122	5,397	8,875	90	64	9,662	455,120	376
64	1/20/2023	5,900	6,916	8,637	85	56	9,723	456,721	417
65	1/20/2023	5,236	7,533	9,174	87	51	10,033	455,240	369
66	1/21/2023	5,236	7,533	9,174	87	51	10,033	455,240	369
67	1/21/2023	5,272	6,634	9,362	87	79	9,747	456,506	401
68	1/21/2023	5,574	6,215	8,672	85	37	9,726	456,226	363
69	1/21/2023	5,521	5,236	8,865	84	91	9,779	455,682	390
70	1/21/2023	5,218	6,914	9,067	87	32	9,500	454,460	341
71	1/21/2023	5,426	7,806	9,123	87	53	10,200	456,760	307
72	1/22/2023	5,536	7,555	8,947	87	46	9,810	453,190	382
73	1/22/2023	5,655	8,098	8,901	86	50	10,612	454,153	378
74	1/22/2023	5,358	7,366	8,872	88	65	9,747	454,340	378
75	1/22/2023	5,236	7,721	9,046	87	28	9,825	455,620	348
76	1/23/2023	5,413	6,919	8,935	89	44	9,809	454,840	378
77	1/23/2023	5,921	7,381	8,855	87	49	9,783	455,476	378
78	1/23/2023	5,718	8,687	8,537	88	72	9,870	456,006	378
79	1/23/2023	5,719	7,371	8,780	87	37	9,502	454,540	379
80	1/23/2023	5,605	7,324	8,432	86	31	9,660	455,740	378
81	1/24/2023	6,145	6,579	8,670	89	31	10,190	455,530	338
82	1/24/2023	5,532	6,560	8,664	86	53	10,818	456,540	339
83	1/24/2023	5,994	7,547	8,773	90	73	9,604	458,540	329
84	1/24/2023	5,357	6,827	8,539	88	32	9,535	455,420	287
85	1/25/2023	5,347	6,725	8,787	89	24	9,629	455,360	272
86	1/25/2023	5,663	7,794	8,636	88	36	10,027	457,480	319
87	1/25/2023	5,875	6,864	8,717	88	84	9,543	454,280	316
88	1/25/2023	8,202	7,059	8,450	88	45	9,726	454,740	304
89	1/25/2023	5,133	7,232	8,344	90	27	9,703	455,920	271
90	1/25/2023	5,196	7,107	8,360	89	38	9,755	455,360	252
91	1/26/2023	5,733	7,021	8,326	89	31	9,631	457,560	303
92	1/26/2023	5,719	7,753	8,371	92	82	9,779	458,660	264
93	1/26/2023	5,367	6,978	8,152	89	83	9,579	455,540	240
94	1/26/2023	5,507	7,481	8,386	93	37	9,744	455,180	231
95	1/27/2023	5,309	7,908	8,326	93	37	9,726	455,200	211
96	1/27/2023	5,678	7,528	8,146	91	113	9,763	454,850	275
97	1/27/2023	5,829	7,741	8,120	91	111	9,274	421,228	262
98	1/27/2023	5,319	7,228	8,172	90	99	9,311	414,765	261

**Phoenix 10H**  
Perforation Report

Stage Number	Report Date	Total Shots	Cluster 1 Top TD	Cluster 5 Bottom TD
1	11/9/2022	40		28,695
2	11/10/2022	40	28,651	28,493
3	11/11/2022	40	28,451	28,293
4	11/11/2022	40	28,251	28,094
5	11/12/2022	40	28,052	27,894
6	11/12/2022	40	27,852	27,694
7	11/13/2022	40	27,652	27,494
8	11/13/2022	40	27,452	27,294
9	11/13/2022	40	27,252	27,095
10	11/13/2022	40	27,053	26,895
11	11/14/2022	40	26,853	26,695
12	11/14/2022	40	26,653	26,495
13	11/14/2022	40	26,453	26,295
14	11/14/2022	40	26,253	26,096
15	11/14/2022	40	26,054	25,896
16	11/15/2022	40	25,854	25,696
17	11/15/2022	40	25,654	25,496
18	11/16/2022	40	25,454	25,296
19	11/16/2022	40	25,254	25,097
20	11/16/2022	40	25,055	24,897
21	11/16/2022	40	24,855	24,697
22	11/17/2022	40	24,655	24,497
23	11/17/2022	40	24,455	24,297
24	11/17/2022	40	24,255	24,098
25	1/11/2023	40	24,056	23,898
26	1/11/2023	40	23,856	23,698
27	1/11/2023	40	23,656	23,498
28	1/11/2023	40	23,456	23,298
29	1/12/2023	40	23,256	23,099
30	1/12/2023	40	23,057	22,899
31	1/12/2023	40	22,857	22,699
32	1/13/2023	40	22,657	22,499
33	1/13/2023	40	22,457	22,299
34	1/13/2023	40	22,257	22,100
35	1/13/2023	40	22,058	21,900
36	1/14/2023	40	21,858	21,700
37	1/14/2023	40	21,658	21,500
38	1/14/2023	40	21,458	21,300
39	1/14/2023	40	21,258	21,101
40	1/15/2023	40	21,059	20,901
41	1/15/2023	40	20,859	20,701
42	1/15/2023	40	20,659	20,501
43	1/15/2023	40	20,459	20,301
44	1/15/2023	40	20,259	20,102
45	1/16/2023	40	20,060	19,902
46	1/16/2023	40	19,860	19,702
47	1/16/2023	40	19,660	19,502

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48	1/16/2023	40	19,460	19,302
49	1/16/2023	40	19,260	19,103
50	1/17/2023	40	19,061	18,903
51	1/17/2023	40	18,861	18,703
52	1/17/2023	40	18,661	18,503
53	1/17/2023	40	18,461	18,303
54	1/18/2023	40	18,261	18,104
55	1/18/2023	40	18,062	17,904
56	1/18/2023	40	17,862	17,704
57	1/18/2023	40	17,662	17,504
58	1/18/2023	40	17,462	17,304
59	1/19/2023	40	17,262	17,105
60	1/19/2023	40	17,063	16,905
61	1/19/2023	40	16,863	16,705
62	1/19/2023	40	16,663	16,505
63	1/20/2023	40	16,463	16,305
64	1/20/2023	40	16,263	16,106
65	1/20/2023	40	16,064	15,906
66	1/21/2023	40	15,864	15,706
67	1/21/2023	40	15,664	15,506
68	1/21/2023	40	15,464	15,306
69	1/21/2023	40	15,264	15,107
70	1/21/2023	40	15,065	14,907
71	1/21/2023	40	14,865	14,707
72	1/22/2023	40	14,665	14,507
73	1/22/2023	40	14,465	14,307
74	1/22/2023	40	14,265	14,108
75	1/22/2023	40	14,066	13,908
76	1/23/2023	40	13,866	13,708
77	1/23/2023	40	13,666	13,508
78	1/23/2023	40	13,466	13,308
79	1/23/2023	40	13,266	13,109
80	1/23/2023	40	13,067	12,909
81	1/24/2023	40	12,867	12,709
82	1/24/2023	40	12,667	12,509
83	1/24/2023	40	12,467	12,309
84	1/24/2023	40	12,267	12,110
85	1/25/2023	40	12,068	11,910
86	1/25/2023	40	11,868	11,710
87	1/25/2023	40	11,668	11,510
88	1/25/2023	40	11,468	11,310
89	1/25/2023	40	11,268	11,111
90	1/25/2023	40	11,069	10,911
91	1/26/2023	40	10,869	10,711
92	1/26/2023	40	10,669	10,511
93	1/26/2023	40	10,469	10,311
94	1/26/2023	40	10,269	10,112
95	1/27/2023	40	10,070	9,912
96	1/27/2023	40	9,870	9,712
97	1/27/2023	40	9,670	9,512
98	1/27/2023	40	9,470	9,312

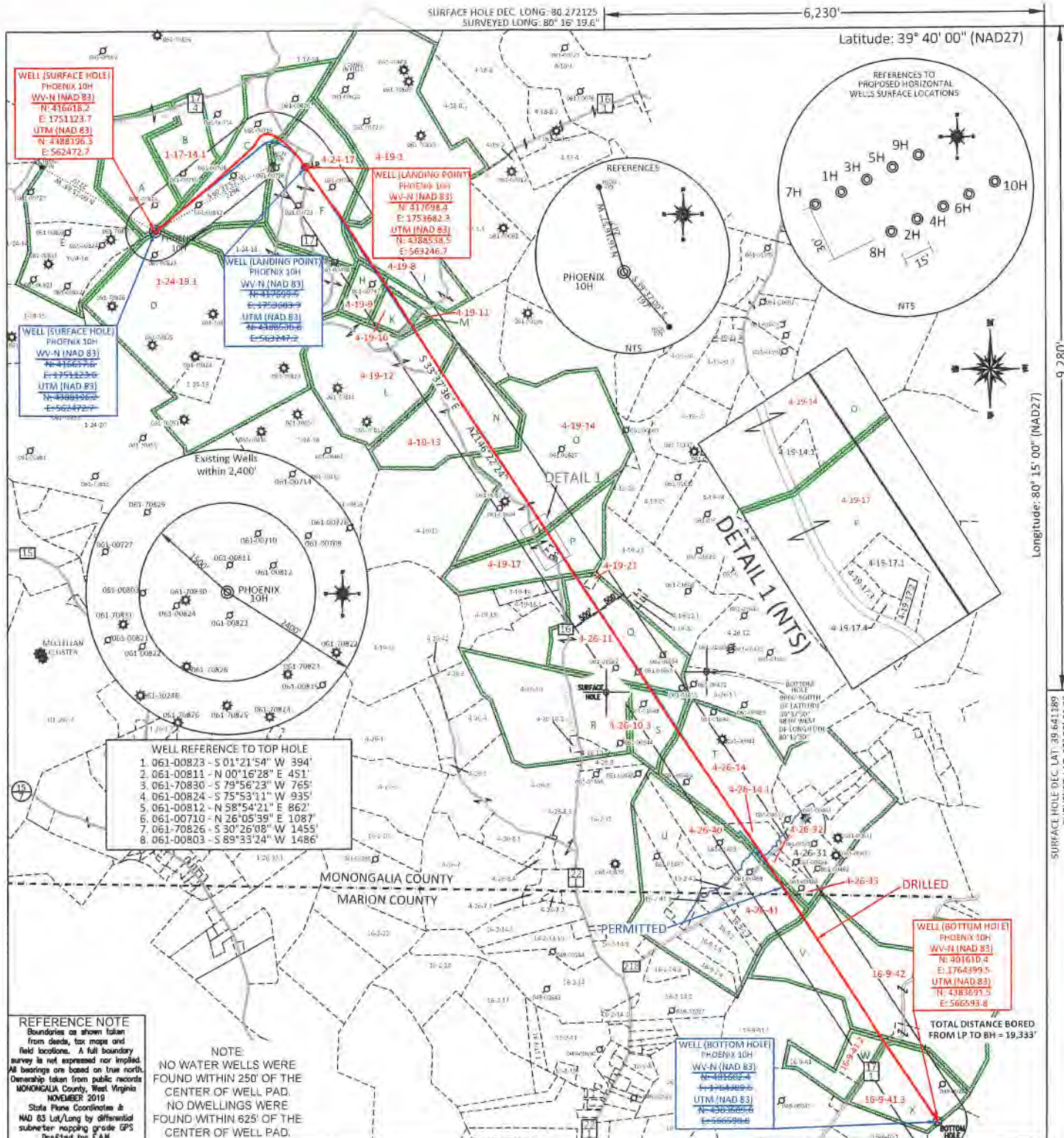
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**WELL REFERENCE TO TOP HOLE**

- 061-00823 - S 01°21'54" W 394'
- 061-00811 - N 00°16'28" E 451'
- 061-70830 - S 79°56'23" W 765'
- 061-00824 - S 75°53'11" W 935'
- 061-00812 - N 58°54'21" E 862'
- 061-00710 - N 26°05'39" E 1087'
- 061-70826 - S 30°26'08" W 1455'
- 061-00803 - S 89°33'24" W 1486'

**REFERENCE NOTE**  
Boundaries as shown taken from deeds, tax 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 NOVEMBER 2019  
State Plane Coordinates & NAD 83 Lat/Long by differential submeter mapping grade GPS Drafted by EAM

**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.

FILE #: NNE16  
DRAWING #: 2961  
SCALE: PLAT: 1" = 2400'  
TICK: 1" = 2000'  
MINIMUM DEGREE OF ACCURACY: 1/200  
PROVEN SOURCE OF ELEVATION: SUBMETER MAPPING GRADE GPS

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

WV Department of Environmental Protection  
Well Type:  Oil  Waste Disposal  Production  Deep  Gas  Liquid Injection  Storage  Shallow

WATERSHED: DUNKARD CREEK AS-BUILT ELEVATION: 1,503.5'

COUNTY/DISTRICT: MONONGALIA / BATTELLE QUADRANGLE: WADESTOWN

SURFACE OWNER: CHARLES WENDELL MOORE & FRANK M. CHISLER ACREAGE: 466.30 +/-

OIL & GAS ROYALTY OWNER: Pat L. Park, et al ACREAGE: 1865.89 +/-

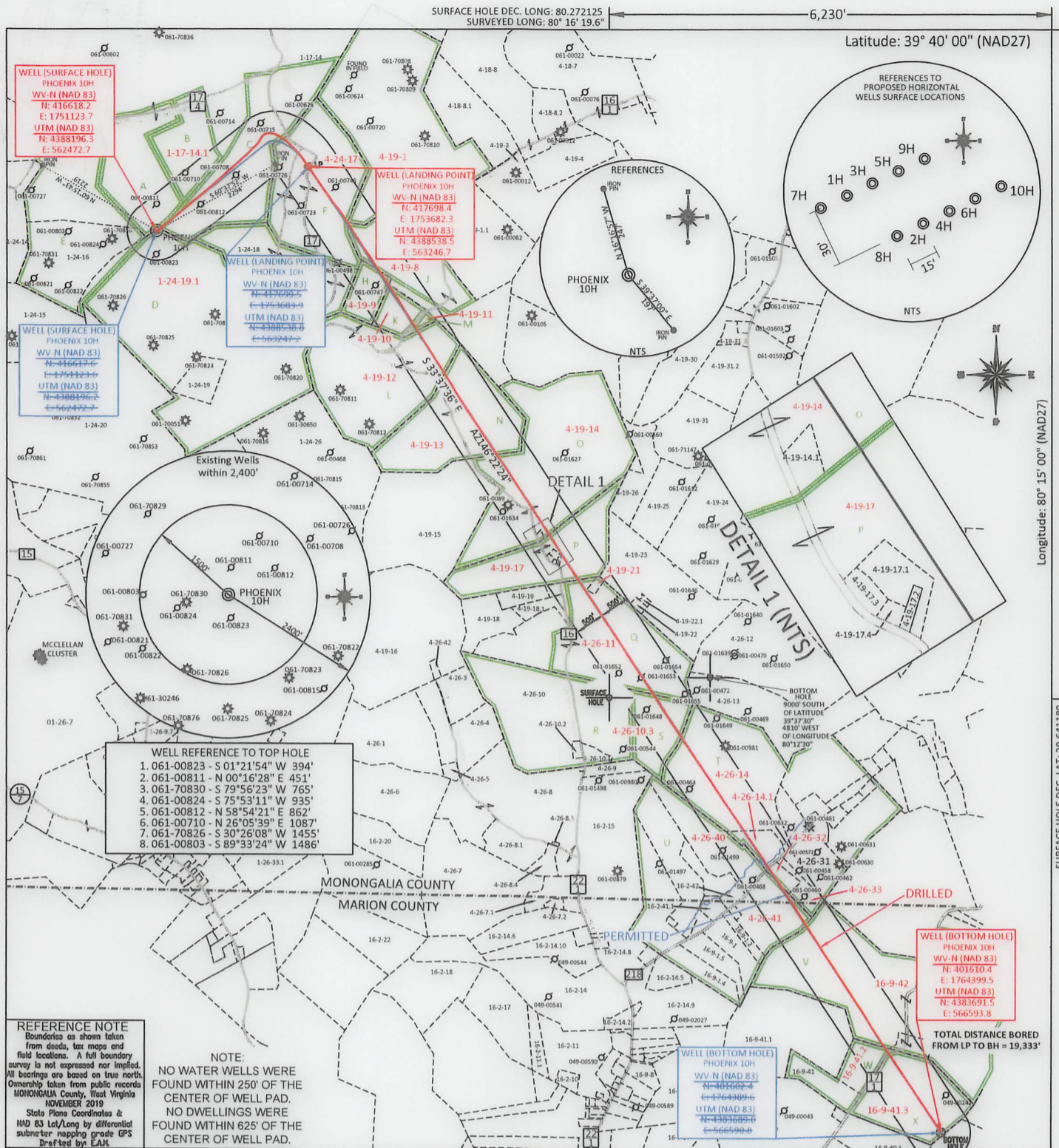
LEASE NUMBERS: SEE PAGE 2

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: 7,989' TMD: 28,827'

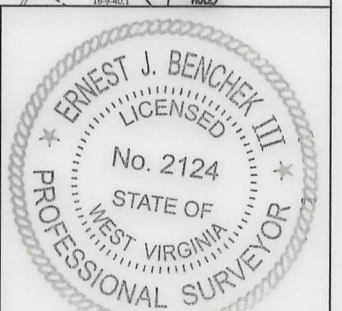
WELL OPERATOR: NORTHEAST NATURAL ENERGY LLC DESIGNATED AGENT: JOHN ADAMS  
ADDRESS: 707 VIRGINIA STREET EAST, SUITE 1200 ADDRESS: 707 VIRGINIA STREET EAST, SUITE 1200  
CITY: CHARLESTON STATE: WV ZIP CODE: 25301 CITY: CHARLESTON STATE: WV ZIP CODE: 25301

RECEIVED  
Office of Oil and Gas DATE: MAY 30, 2023  
JAN 16 2024 OPERATOR'S WELL #: PHOENIX 10H AS-DRILLED  
STATE COUNTY PERMIT: 47 61 01891  
02/23/2024



FILE #: NNE16  
 DRAWING #: 2961  
 SCALE: PLAT: 1" = 2400'  
 TICK: 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY: 1/200  
 PROVEN SOURCE OF ELEVATION: SUBMETER MAPPING GRADE GPS

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 / BATTELLE  
 SURFACE OWNER: CHARLES WENDELL MOORE & FRANK M. CHISLER  
 OIL & GAS ROYALTY OWNER: Pat L. Park, et al  
 LEASE NUMBERS: SEE PAGE 2

DATE: MAY 30, 2023  
 OPERATOR'S WELL #: PHOENIX 10H AS-DRILLED  
 API WELL #: 47 61 01891  
 STATE COUNTY PERMIT

AS-BUILT ELEVATION: 1,503.5'  
 QUADRANGLE: WADESTOWN  
 ACREAGE: 466.30 +/-  
 ACREAGE: 1865.894 +/-

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: 7,989' TMD: 28,827'  
 WELL OPERATOR: NORTHEAST NATURAL ENERGY LLC  
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PROPERTY OWNER INDEX	
1-17-14.1	FRANK M. CHISLER
4-24-17	DAVID A POLING
4-19-12	EDITH L DARRAH
4-19-14	PENNY S QUICKLE
4-19-9	M BRITTON M EST
4-19-8	CHARLES W MOORE, JASON & KIRSTON (LIFE)
4-19-11	EVA, AARON & ALLISON MOORE (LIFE - KENDALL L MOORE)
4-19-14	PENNY S QUICKLE
4-26-11	CAROLYN S PAYTON
4-19-13	DOUGLAS L & DEBRA DARRAH
4-19-17	LEWIS M MAXWELL II & SHERRY E MAXWELL
1-24-19.1	CHARLES WENDEL MOORE
4-19-21	TUTTLE CEMETERY
4-26-10.3	WILLIAM R & KATHY L ICE
4-26-14	ELLEN M CURFMAN
4-19-10	ARTHUR EUGENE BRITTON
4-26-14.1	DAVID BRANDON & CHASITY NICOLE WILLIAMS
4-26-40	LUELLA R CONAWAY
4-26-32	ERNEST E & HILERI GORBEBY
4-26-33	ERNEST E & HILERI D GORBEBY
4-26-41	THOMAS ALLEN KEANE JR & JUDITH LOUISE KEANE
4-19-1	SCOTTIE GLEN & KATHLEEN WILSON TRUST
16-9-42	JAMES P & URSULA A MCDONALD
16-9-41.2	JEFFREY J & SANDRA J MOORE
16-9-41.3	ROYAL E & ELIZABETH J MOORE

LEASE INDEX			
A	WV-061-004079-001	M	WV-061-005330-002
B	WV-061-004079-001	N	WV-061-001941-031
C	WV-061-003767-004	O	WV-061-000146-001-LOI
D	WV-061-004463-001	P	WV-061-001422-002
E	WV-061-004076-010	Q	WV-061-004846-030
F	WV-061-005687-001	R	WV-061-005699-002
G	WV-061-005687-001	S	WV-061-000146-001-LOI
H	WV-061-004565-023	T	WV-061-000146-001-LOI
I	WV-061-005607-002	U	WV-061-000146-001-LOI
J	WV-061-002965-006	V	WV-061-000146-001-LOI
K	WV-061-005770-001	W	WV-061-000146-001-LOI
L	WV-061-001730-004	X	WV-061-000146-001-LOI

02/23/2024

FILE #: NEE14

DRAWING #: 2961

SCALE: N/A

DATE: MAY 30, 2023

OPERATOR'S WELL #: PHOENIX 10H AS-DRILLED

API WELL #: 47 61 01891  
STATE COUNTY PERMIT





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

### DETAILED TREATMENT LOG

COMPANY NAME: **Northeast**      SUPERVISOR: **Jason starcher**  
FIELD: **Blacksville**      PUMP NUMBER: **Pump 05**  
WELL #: **Phoenix 10H**      COMPANY REP: **Troy**

DATE: **Saturday, April 2, 2022**      TYPE OF JOB: **Intermediate 9 5/8**

TIME (Hr:Min)	PRESSURE (PSI)	Wellhead Pressure	RATE (BPM)	FLUID TYPE	STAGE BBLs	COMMENTS:
13:20	2000					Pressure test lines
13:25	400	400	6	Production Water	210	Production water ahead to load hole
14:00	400	400	4.5	Fresh Water	30	Fresh water spacer
14:08	400	400	5	Gel	25	Gel spacer
14:15	450	450	5	Fresh Water	10	Fresh water spacer
14:17	800	800	7	Cement	225	Cement @ 15.6 PPG
15:05						Shutdown release plug
15:06	800-1000	800-1000	7	Production Water	208	Displacement
16:05	1500	1500				Plug Landed, Release pressure, floats held, 1 bbl back
16:08	950	950	0.5	Production Water		CIT Test
16:23						Release pressure, rig down cement head to wash up stack
16:24						20 bbl Cement returns back to surface
17:00						Wash up stack
17:30	0	0	.5 - 1	Cement	14	Grout 13" to surface
18:15						Wash up pump truck

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April 10 2024  
WV Department of Environmental Protection

# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	11/9/2022
Job End Date:	1/27/2023
State:	West Virginia
County:	Monongalia
API Number:	47-061-01891-00-00
Operator Name:	Northeast Natural Energy LLC
Well Name and Number:	Phoenix 10H
Latitude:	39.64127800
Longitude:	-80.27192700
Datum:	NAD27
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	8,193
Total Base Water Volume (gal):	41,150,046
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	88.14233	None
Sand (100 Mesh Proppant)	ProFrac	Proppant	Silica Substrate	14808-60-7	100.00000	10.42124	None
Sand (40/70 White Proppant)	ProFrac	Proppant	Silica Substrate	14808-60-7	100.00000	1.15640	None
Hydrochloric Acid (7.5%)	CNR	Acidizing	Water	7732-18-5	85.00000	0.14208	None
			Hydrochloric Acid (Hydrogen Chloride)	7647-01-0	37.00000	0.06185	None
StimSTREAM FR 2800	Chemstream	Friction Reducer	Non-Hazardous Substances	Proprietary	70.00000	0.02207	None
			Petroleum Distillates, Hydrotreated Light	64742-47-8	25.00000	0.00785	None
			Ethoxylated alcohols (C11-14)	78330-21-9	5.00000	0.00158	None
StimSTREAM FR 9800	Chemstream	Friction Reducer	Butene, homopolymer	9003-29-6	25.00000	0.01044	None

			alkanes, C16-20-iso-	90622-59-6	25.00000	0.01044	None
			Ethoxylated alcohols (C12-18)	68213-23-0	3.00000	0.00125	None
Clearal 268	Chemstream	Biocide					
			Non-hazardous substances	Proprietary	80.00000	0.01602	None
			Glutaraldehyde	111-30-8	20.00000	0.00401	None
			Quaternary Ammonium Compounds	68424-85-1	3.00000	0.00060	None
			Didecyl dimethyl ammonium chloride	7173-51-5	3.00000	0.00060	None
			Ethanol	64-17-5	1.50000	0.00030	None
StimSTREAM SC 405	Chemstream	Scale Control					
			Non-Hazardous Substances	Proprietary	70.00000	0.01303	None
			Citric Acid	77-92-9	10.00000	0.00186	None
			Diethylenetriamine penta (methylene phosphonic acid) (DTPMP)	15827-60-8	10.00000	0.00186	None
			2-Phosphono-1,2,4-butanetricarboxylic acid (PBTC)	37971-36-1	10.00000	0.00186	None
ProHib 100	CNR	Acid Inhibitor					
			2-Butoxyethanol	111-76-2	60.00000	0.00032	None
			Proprietary material	Proprietary	30.00000	0.00016	None
			Proprietary non-ionic surfactant	Proprietary	20.00000	0.00011	None
			Proprietary ethoxylated alcohol	Proprietary	10.00000	0.00005	None
			Proprietary corrosion inhibitor	Proprietary	10.00000	0.00005	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(j) 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	0.14208	
			Non-Hazardous Substances	Proprietary	70.00000	0.02207	
			Non-hazardous substances	Proprietary	80.00000	0.01602	
			Non-Hazardous Substances	Proprietary	70.00000	0.01303	
			Butene, homopolymer	9003-29-6	25.00000	0.01044	
			Citric Acid	77-92-9	10.00000	0.00186	
			Diethylenetriamine penta (methylene phosphonic acid) (DTPMP)	15827-60-8	10.00000	0.00186	
			Ethoxylated alcohols (C11-14)	78330-21-9	5.00000	0.00158	
			Ethoxylated alcohols (C12-18)	68213-23-0	3.00000	0.00125	
			Didecyl dimethyl ammonium chloride	7173-51-5	3.00000	0.00060	
			Quaternary Ammonium Compounds	68424-85-1	3.00000	0.00060	
			Ethanol	64-17-5	1.50000	0.00030	
			Proprietary material	Proprietary	30.00000	0.00016	
			Proprietary non-ionic surfactant	Proprietary	20.00000	0.00011	
			Proprietary ethoxylated alcohol	Proprietary	10.00000	0.00005	

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		Proprietary corrosion inhibitor	Proprietary	10.00000	0.00005
		Acetic Acid	64-19-7	5.00000	0.00002

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

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

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

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