

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

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API 47-061-01923 County Monongalia District Battelle
Quad Wadestown Pad Name Miracle Run Field/Pool Name _____
Farm name Byron Lane Rapp Well Number 4H
Operator (as registered with the OOG) Northeast Natural Energy
Address 707 Virginia St. E, Ste 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 4386822.2 Easting 558462.8
Landing Point of Curve Northing 4386729.0 Easting 558553.2
Bottom Hole Northing 4381471.7 Easting 562177.1

Elevation (ft) 1,521' 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)

M4-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 4/5/2023 Date drilling commenced 12/4/2023 Date drilling ceased 5/6/2024
Date completion activities began 12/23/2024 Date completion activities ceased 3/22/2025
Verbal plugging (Y/N) N 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 1,238' Open mine(s) (Y/N) depths _____
Salt water depth(s) ft 2,628' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 718', 1,228' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) Y

APPROVED

Reviewed by:
6/25/2025 MDK
09/19/2025

WR-35
Rev. 8/23/13

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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	32"	24"	100'	New	NA/78.9'	N/A	N
Surface	17 1/2"	13 3/8"	1,453'	New	J-55/54.5	164'	Y- 40 bbls to surface
Coal							
Intermediate 1	12 1/4"	9 5/8"	2760'	New	J-55/36	2469'	Y-49.4 bbls to surface
Intermediate 2							
Intermediate 3							
Production	8 1/2"	5 1/2"	29,500'	New	HP-P110/20.2	NA	N
Tubing							
Packer type and depth set							

Comment Details Casing depths based on KB elevation. Permit approved to set FW casing to cover Red Rock Formation.

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	Class A Common	246	15.6	1.18	290.3	CTS	>72
Surface	L/100% NCM-956	1370	15.6	1.14	1561.8	CTS	8
Coal							
Intermediate 1	L/100% NCM-956	1100	15.6	1.12	1232	CTS	8
Intermediate 2							
Intermediate 3							
Production	Class L 50/50 POZ	5510	14.5	1.16	6391.6	1802'	>72
Tubing							

Drillers TD (ft) 29,546' Loggers TD (ft) 29500'

Deepest formation penetrated Huntersville Chert Plug back to (ft) 4500'

Plug back procedure TIH with cement stinger to 8,206' and circulate and condition wellbore. Pump a series of three (3)- 1,000' cement filler plugs and circulate until clear of cement.

WOC. Pump one (1) - 750' kick-off plug to estimated TOC of 4,500'. Reason for plugback is Pilot well.

Kick off depth (ft) 7,319' MD/ 7,299' TVD

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: Shoe track & every 3rd joint to surface

Intermediate: shoe track & every 3rd joint to surface

Production: Rigid bow centralizers at shoe track & every other joint in the lateral to KOP. Bow springs from KOP to surface every third joint.

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 - 01923 Farm name Byron Lane Rapp Well number 4H

PERFORATION RECORD

[illegible]

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

[illegible]

Please insert additional pages as applicable.

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<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>		
Marcellus	8,114'	TVD	29,546'
			MD

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GAS TEST				☐ Build up	☐ Drawdown	☒ Open Flow	OIL TEST				☐ Flow	☐ Pump			
SHUT-IN PRESSURE		Surface	2360		psi	Bottom Hole		3099		psi	DURATION OF TEST		24		hrs
OPEN FLOW		Gas	Oil		NGL	Water		GAS MEASURED BY							
		2187	mcfpd	bpd	bpd	bpd		☐ Estimated ☐ Orifice ☐ Pilot							

[illegible]

Please insert additional pages as applicable.

Drilling Contractor Highlands Drilling an SDI Company & Nabors Drilling Technologies USA, Inc. 2500 Oregon St.,
Address 130 Meadow Ridge Rd, Ste 44 City Mt. Morris State PA Zip 15349
Odessa, TX 79764

Logging Company Baker Hughes
Address 1681 E. Main Street City Bridgeport State WV Zip 26330

Cementing Company NexTier
Address 3990 Rogerdale Rd City Houston State TX Zip 77042

Stimulating Company	ProFrac						
Address	800 Mountain View Dr.	City	Smithfield	State	PA	Zip	15478

Completed by Hollie Medley Telephone 304-212-0422
Signature Hollie Medley Title Regulatory Manager Date 5/03/05

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

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Miracle Run 4H Stimulation Report

Stage Number	Report Date	Wellhead Pressure (psi)	Bottom Hole 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	12/23/2024	5,384	8,537	9,582	76		9,023	300,001	655
2	12/23/2024	5,618	7,886	9,862	83	1,016	11,046	455,000	703
3	12/23/2024	5,035	5,953	9,725	85	122	9,449	386,544	673
4	2/23/2025	6,186	7,186	9,560	80	57	11,575	460,540	756
5	2/23/2025	5,442	7,133	9,497	80	29	10,124	457,500	655
6	2/23/2025	5,420	7,005	9,628	80	24	10,068	463,880	642
7	2/24/2025	5,438	7,229	9,467	85	17	9,775	465,740	643
8	2/24/2025	4,956	7,339	9,368	83	44	9,984	455,800	659
9	2/24/2025	5,520	7,254	9,393	84	43	10,197	455,280	651
10	2/25/2025	5,535	7,199	9,339	84	20	11,289	454,500	633
11	2/25/2025	5,283	7,019	9,523	83	13	9,751	457,380	640
12	2/25/2025	5,407	7,357	9,601	84	37	9,835	457,310	611
13	2/25/2025	5,458	7,285	9,495	83	56	9,833	454,600	560
14	2/26/2025	5,315	7,971	9,588	83	28	9,710	457,840	609
15	2/26/2025	5,415	7,374	9,653	87	17	9,554	455,000	576
16	2/27/2025	5,559	6,227	9,504	86	56	9,689	455,400	592
17	2/27/2025	5,574	7,440	9,474	86	29	10,183	457,250	600
18	2/27/2025	5,267	7,327	9,661	88	21	9,963	457,520	617
19	2/27/2025	5,416	7,378	9,572	85	46	9,680	454,780	585
20	2/28/2025	5,712	7,303	9,770	89	99	9,702	454,880	543
21	2/28/2025	5,104	5,846	9,691	85	35	9,898	457,470	574
22	2/28/2025	5,434	8,024	9,684	85	30	9,809	454,170	569
23	2/28/2025	5,282	5,481	9,755	84	71	9,921	455,780	525
24	3/1/2025	5,710	7,246	9,755	88	47	9,851	458,230	564
25	3/1/2025	5,363	7,554	9,439	92	22	9,844	455,500	560
26	3/1/2025	4,837	7,752	9,755	94	100	9,941	455,300	581
27	3/2/2025	4,983	7,645	9,743	93	53	9,595	455,940	578
28	3/2/2025	5,831	7,827	9,720	89	40	9,719	455,580	548
29	3/2/2025	4,972	7,078	9,797	91	62	9,813	455,720	544
30	3/3/2025	5,382	7,809	9,816	91	73	9,720	455,920	532
31	3/3/2025	5,608	7,497	9,733	93	30	9,847	459,070	537
32	3/3/2025	5,340	6,948	9,677	92	390	10,042	464,970	531
33	3/3/2025	5,487	7,433	9,794	91	101	9,561	454,380	513
34	3/4/2025	5,467	7,861	9,763	91	46	9,784	454,770	585
35	3/4/2025	5,442	7,194	9,645	94	38	9,459	457,780	535
36	3/4/2025	5,465	6,680	9,654	93	29	9,685	451,240	508
37	3/4/2025	5,162	7,388	9,677	94	109	10,240	455,580	651
38	3/5/2025	5,195	7,028	9,657	95	57	9,602	471,280	519
39	3/5/2025	5,414	6,594	9,580	94	71	9,861	454,260	503
40	3/5/2025	5,647	7,205	9,665	93	41	9,608	454,500	561
41	3/5/2025	6,195	6,915	9,741	94	77	9,744	455,440	619

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42	3/6/2025	5,262	7,565	9,724	95	100	9,627	455,600	510
43	3/6/2025	5,153	6,681	9,797	95	41	9,623	452,300	510
44	3/6/2025	5,528	6,752	9,780	94	32	9,779	453,880	491
45	3/6/2025	5,404	6,822	9,940	89	77	9,952	455,260	543
46	3/7/2025	5,551	6,832	9,869	91	77	9,726	454,900	642
47	3/7/2025	5,426	7,579	9,786	90	42	9,485	454,360	468
48	3/7/2025	5,686	7,378	9,768	92	28	9,745	454,680	466
49	3/7/2025	5,425	6,251	9,667	88	69	9,469	455,840	483
50	3/8/2025	5,914	6,855	9,689	94	49	9,405	455,180	476
51	3/8/2025	3,001	7,112	9,709	94	28	9,618	455,880	447
52	3/8/2025	6,067	710	9,277	95	31	9,972	462,280	455
53	3/8/2025	5,577	6,951	9,518	95	31	9,584	457,430	474
54	3/9/2025	5,734	7,135	9,393	95	56	9,718	457,780	469
55	3/9/2025	6,076	6,257	9,104	95	28	9,566	453,780	434
56	3/9/2025	5,777	5,829	9,227	95	24	9,566	456,090	431
57	3/9/2025	5,589	6,349	9,280	95	95	9,461	455,340	412
58	3/10/2025	5,661	7,182	9,463	95	59	9,619	454,340	416
59	3/10/2025	5,735	7,040	9,356	95	21	9,533	456,300	433
60	3/10/2025	5,745	6,881	9,150	94	21	9,893	454,420	414
61	3/10/2025	5,229	7,419	9,485	95	32	9,503	456,100	383
62	3/11/2025	5,332	7,530	9,326	96	61	9,718	462,880	408
63	3/11/2025	5,123	7,730	9,340	96	29	9,498	415,360	403
64	3/11/2025	5,472	7,378	9,118	96	25	9,674	454,400	380
65	3/11/2025	5,160	7,947	9,255	95	72	9,639	456,020	397
66	3/12/2025	5,608	7,500	9,219	95	32	9,534	454,560	364
67	3/12/2025	5,510	7,574	9,106	95	86	9,504	456,980	356
68	3/12/2025	5,392	7,806	9,052	95	39	9,624	455,160	373
69	3/13/2025	5,582	7,620	9,123	95	25	9,428	455,100	357
70	3/13/2025	5,361	7,515	9,321	95	33	9,398	454,240	347
71	3/13/2025	5,571	7,322	9,416	98	22	9,111	452,540	352
72	3/13/2025	5,492	7,763	9,524	91	41	9,429	455,060	351
73	3/14/2025	5,557	8,515	9,548	79	91	9,257	455,580	312
74	3/14/2025	5,548	7,616	9,392	96	28	9,554	451,740	332
75	3/14/2025	5,282	7,703	9,479	97	56	9,454	457,200	326
76	3/14/2025	5,341	7,267	9,418	95	42	9,625	455,260	334
77	3/15/2025	5,122	7,915	9,050	94	38	9,543	456,800	325
78	3/15/2025	5,207	5,481	9,169	98	33	9,417	460,340	182
79	3/15/2025	5,046	7,385	9,299	99	44	9,460	455,600	318
80	3/16/2025	5,417	7,839	9,196	99	42	9,415	455,600	303
81	3/16/2025	5,592	7,881	9,364	99	32	9,557	456,440	290
82	3/16/2025	5,440	7,565	9,211	98	43	9,375	458,020	302
83	3/16/2025	5,460	7,493	9,263	99	112	9,432	452,520	311
84	3/17/2025	5,273	7,308	9,091	99	46	9,912	455,880	299
85	3/17/2025	5,175	6,901	8,954	99	24	9,430	451,000	278
86	3/17/2025	5,621	7,142	8,892	99	24	9,464	455,560	268
87	3/17/2025	5,339	7,265	9,103	99	48	9,418	455,100	274
88	3/18/2025	5,269	7,766	9,083	99	49	9,346	454,300	289

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89	3/18/2025	5,252	7,224	9,215	99	35	9,341	456,940	266
90	3/18/2025	5,140	7,371	8,954	99	14	9,299	456,920	265
91	3/18/2025	5,085	7,118	9,097	100	48	9,613	454,850	402
92	3/19/2025	5,143	6,702	8,959	100	46	8,392	454,800	270
93	3/19/2025	5,351	7,403	8,629	99	23	9,454	452,780	246
94	3/19/2025	5,434	7,085	8,558	99	27	9,406	453,240	236
95	3/19/2025	5,049	7,249	8,810	100	48	8,234	455,050	252
96	3/20/2025	5,001	7,072	8,678	100	30	8,395	454,900	244
97	3/20/2025	5,331	7,138	8,665	99	21	9,408	455,980	227
98	3/20/2025	5,082	7,358	8,756	98	22	9,328	455,460	202
99	3/20/2025	5,338	7,810	8,649	98	59	8,116	454,900	233
100	3/21/2025	4,874	7,767	8,782	100	38	8,650	456,100	228
101	3/21/2025	5,493	6,979	8,434	99	29	9,546	454,560	216
102	3/21/2025	5,357	6,669	8,563	99	31	9,226	455,100	208
103	3/21/2025	5,219	7,124	8,522	100	34	8,486	454,600	210
104	3/22/2025	5,133	7,268	8,507	100	29	8,227	455,000	209
105	3/22/2025	4,910	7,112	8,658	100	19	8,883	467,730	199
106	3/22/2025	5,126	7,443	8,138	99	16	9,595	475,650	311

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Miracle Run 4H**Perforation Report**

Stage Number	Report Date	Total Shots	Cluster 1 Top TD	Cluster 5 Bottom TD
1	12/23/2024			29,391
2	12/23/2024	40	29,347	29,189
3	12/23/2024	40	29,146	28,988
4	2/23/2025	40	28,946	28,787
5	2/23/2025	40	28,745	28,586
6	2/23/2025	40	28,544	28,386
7	2/24/2025	40	28,344	28,185
8	2/24/2025	40	28,143	27,984
9	2/24/2025	40	27,942	27,784
10	2/25/2025	40	27,741	27,583
11	2/25/2025	40	27,541	27,382
12	2/25/2025	40	27,340	27,181
13	2/25/2025	40	27,139	26,981
14	2/26/2025	40	26,939	26,780
15	2/26/2025	40	26,738	26,579
16	2/27/2025	40	26,537	26,379
17	2/27/2025	40	26,336	26,178
18	2/27/2025	40	26,136	25,977
19	2/27/2025	40	25,935	25,776
20	2/28/2025	40	25,734	25,576
21	2/28/2025	40	25,533	25,375
22	2/28/2025	40	25,333	25,174
23	2/28/2025	40	25,132	24,973
24	3/1/2025	40	24,931	24,773
25	3/1/2025	40	24,731	24,572
26	3/1/2025	40	24,530	24,371
27	3/2/2025	40	24,329	24,171
28	3/2/2025	40	24,128	23,970
29	3/2/2025	40	23,928	23,769
30	3/3/2025	40	23,727	23,568
31	3/3/2025	40	23,526	23,368
32	3/3/2025	40	23,326	23,167
33	3/3/2025	40	23,125	22,966
34	3/4/2025	40	22,924	22,766
35	3/4/2025	40	22,723	22,565
36	3/4/2025	40	22,523	22,364
37	3/4/2025	40	22,322	22,163
38	3/5/2025	40	22,121	21,963
39	3/5/2025	40	21,921	21,762
40	3/5/2025	40	21,720	21,561
41	3/5/2025	40	21,519	21,361
42	3/6/2025	40	21,318	21,160

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43	3/6/2025	40	21,118	20,959
44	3/6/2025	40	20,917	20,758
45	3/6/2025	40	20,716	20,558
46	3/7/2025	40	20,515	20,357
47	3/7/2025	40	20,315	20,156
48	3/7/2025	40	20,114	19,955
49	3/7/2025	40	19,913	19,755
50	3/8/2025	40	19,713	19,554
51	3/8/2025	40	19,512	19,353
52	3/8/2025	40	19,311	19,153
53	3/8/2025	40	19,110	18,952
54	3/9/2025	40	18,910	18,751
55	3/9/2025	40	18,709	18,550
56	3/9/2025	40	18,508	18,350
57	3/9/2025	40	18,308	18,149
58	3/10/2025	40	18,107	17,948
59	3/10/2025	40	17,906	17,748
60	3/10/2025	40	17,705	17,547
61	3/10/2025	40	17,505	17,346
62	3/11/2025	40	17,304	17,145
63	3/11/2025	40	17,103	16,945
64	3/11/2025	40	16,903	16,744
65	3/11/2025	40	16,702	16,543
66	3/12/2025	40	16,501	16,342
67	3/12/2025	40	16,300	16,142
68	3/12/2025	40	16,100	15,941
69	3/13/2025	40	15,899	15,740
70	3/13/2025	40	15,698	15,540
71	3/13/2025	40	15,497	15,339
72	3/13/2025	40	15,297	15,138
73	3/14/2025	40	15,096	14,937
74	3/14/2025	40	14,895	14,737
75	3/14/2025	40	14,695	14,536
76	3/14/2025	40	14,494	14,335
77	3/15/2025	40	14,293	14,135
78	3/15/2025	40	14,092	13,934
79	3/15/2025	40	13,892	13,733
80	3/16/2025	40	13,691	13,532
81	3/16/2025	40	13,490	13,332
82	3/16/2025	40	13,290	13,131
83	3/16/2025	40	13,089	12,930
84	3/17/2025	40	12,888	12,730
85	3/17/2025	40	12,687	12,529
86	3/17/2025	40	12,487	12,328
87	3/17/2025	40	12,286	12,127
88	3/18/2025	40	12,085	11,927
89	3/18/2025	40	11,885	11,726

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90	3/18/2025	40	11,684	11,525
91	3/18/2025	40	11,483	11,324
92	3/19/2025	40	11,282	11,124
93	3/19/2025	40	11,082	10,923
94	3/19/2025	40	10,881	10,722
95	3/19/2025	40	10,680	10,522
96	3/20/2025	40	10,479	10,321
97	3/20/2025	40	10,279	10,120
98	3/20/2025	40	10,078	9,919
99	3/20/2025	40	9,877	9,719
100	3/21/2025	40	9,677	9,518
101	3/21/2025	40	9,476	9,317
102	3/21/2025	40	9,275	9,117
103	3/21/2025	40	9,074	8,916
104	3/22/2025	40	8,874	8,715
105	3/22/2025	40	8,673	8,514
106	3/22/2025	40	8,472	8,314

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110836

Miracle Run 4H (Pilot Well) 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	425	Sand/silt
Sand/red shale	425	610	Sand/red shale
sandstone/siltstone/red silt	610	715	sandstone/siltstone/red silt
Washington coal	715	720	coal
siltstone/sandstone/limestone	720	880	carbonaceous silt/sandstone
Waynesburg coal	880	885	Waynesburg coal
sandstone/limestone	885	960	sandstone/limestone
Limestone/siltstone	960	1120	Limestone/siltstone
Limestone/siltstone/red beds	1120	1228	Limestone/siltstone/red beds
Pittsburgh coal	1228	1235	Pittsburgh coal
Limestone/siltstone	1235	1280	Limestone/siltstone
Red Rock/siltstone/limestone	1280	1790	Red Rock/siltstone/limestone
siltstone/sandstone	1790	2305	siltstone/sandstone
Red Rock/siltstone/limestone	2305	2446	Red Rock/siltstone/limestone
Little Lime	2446	2488	Little Lime
Big Lime	2488	2628	Big Lime
Big Injun	2628	2700	Big Injun
Sand/silt	2700	3124	Sand/silt
Gantz	3124	3135	Gantz
Sand/shale	3135	3404	Sand/shale
Gordon	3404	3508	Gordon
Fourth Sand	3508	3540	red sandstone and siltstone
siltstone/sandstone	3540	6820	siltstone/sandstone
Gray shale/siltstone	6820	7488	Gray shale/siltstone
Middlesex	7488	7652	Middlesex
Burkett	7652	7858	Burkett
Genesee	7858	7908	Genesee
Tully	7908	7963	Tully
Hamilton	7963	8081	Hamilton
Marcellus	8081	8167	Marcellus
Onondaga	8167	8180	Onondaga
Huntersville	8180	8229	Huntersville

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Cement Job Log

158636

NEXTier				NexTier Completion Solutions 3990 Rogerdale Rd., Houston, TX 77042 (713)325-6000								
Customer:	NORTHEAST NATURAL ENERGY LLC			Date:	4-May-24		Serv. Supervisor:	Anthony Barbara				
Cust. Rep.:	Josh			Ticket #:	BPA-2405-0003		Serv. Center:	Black Lick - 1571				
Well Name:	Miracle Run 4H			API Well #:	47-061-01923		County:	Monongalia				
Well Type:				Rtg:	Nabors X06		State:	WV				
				Type of Job:	CM-PROD. CASING							
Materials Furnished by NexTier												
Plugs		Casing Hardware		Physical Slurry Properties								
				Sacks of Cement	Fluid Density (lb/gal)	Excess	Yield (cuft/sk)	Mix Water (gal/sk)	Fluid Volume (bbls)	Fluid Volume (cuft)	Mix Water (bbls)	
13.5 lb/gal PureScrub Spacer w/ Surfactant	+3.5 PPB NTC-776+5.0 PPB NSU-888+2.0 PPB NRT-221				13.5		5.63	26.54	80.00			
14.5 lb/gal Cement	50 % NCM-956+50 % NPZ-010 +0.1 % NTC-776+0.1 % NAS-S04+0.3 % NRT-213+0.2 % NFL-549+0.2 % NTC-405			5510	14.5		1.16	5.08	1,136.37	6,380.69	686	
Sugar Water Displacement	+5.0 PPB NRT-215				8.33			-	20.00	-		
Fresh Water Displacement					8.33			-	640.65	-		
								-	-	-		
								-	-	-		
								-	-	-		
								-	-	-		
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								-	-	-		
								-	-	-		
Displacement Chemicals:												
OPEN HOLE DATA				TUBULAR DATA								
8.75 in. O.H. 2,733 to 4,500 ft 8.5 in. O.H. 4,500 to 29,793 ft				5.5 in. 20#, (0 to 29,793 ft)		SIZE WEIGHT	THRD	DEPTH (ft)	GRADE	ID (in)	BURST (psi)	COLLAPSE (psi)
Ambient Temp.	Bulk Temp.	Slurry 1 Temp.	Slurry 2 Temp.	Slurry 3 Temp.	Slurry 4 Temp.							
63.0 °F	63.0 °F	88.0 °F	91.0 °F			5.5" 20#	BTC	29510	P-110	4.778	12640	11080
PREVIOUS CASING DATA				PERFORATED INTERVAL DATA				CASING EQUIPMENT DEPTHS				
9.625 in. 36# (0 to 2,733 ft)				TOP	BTM	SPF	SIZE	SHOE	FLOAT	STAGE	ACP	
								29500	29498			
WELL FLUID		DISPLACEMENT FLUID		DIFF PRESS	CSG LIFT	MAX PRESS	Mix H2O Chlorides (ppm)	Mix H2O pH	Mix H2O Temp	WATER ON LOC (bbls)		
TYPE	DENSITY	VOLUME	TYPE	DENSITY	(psi)	(psi)	(psi)					
OBM	13.2 ppg	655 bbl	H2O	8.3 ppg	4653		7800	<200	7	88.0 °F	1900	
Bumped Plug	Final Differential (psi)	Floater 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	3,030.00	Y			1,802	Yes	4,800.00	No	1.00	No	48	
Comments/Additional Details:												
							Anthony Barbara Service Supervisor					
							4-May-24 Date					

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	02/22/2025
Job End Date:	03/22/2025
State:	West Virginia
County:	Monongalia
API Number:	47-061-01923-00-00
Operator Name:	Northeast Natural Energy LLC
Well Name and Number:	Miracle Run 4H
Latitude:	39.629173
Longitude:	-80.31878
Datum:	NAD27
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	8135
Total Base Water Volume (gal)*:	42961296
Total Base Non Water Volume:	0



Water Source	Percent
Other, > 1000TDS	100.00%

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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	Operator	Carrier/Base Fluid					
			Water	7732-18-5	100.00000	88.24587	None
Sand (100 Mesh Proppant)	ProFrac	Proppant					
			Crystalline Silica (quartz)	14808-60-7	100.00000	10.39291	None
Sand (40/70 White Proppant)	ProFrac	Proppant					
			Crystalline Silica (quartz)	14808-60-7	100.00000	1.15841	None
Other Chemical(s)	Listed Above	See Trade Name(s) List					
			Water	7732-18-5	92.50000	0.11391	None
			ALKANES, C12-26-BRANCHED AND LINEAR	90622-53-0	40.00000	0.03017	None
			ALKANES, C12-26-BRANCHED AND LINEAR	90622-53-0	40.00000	0.03017	None

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			Water	7732-18-5	80.00000	0.01422	None
			Water	7732-18-5	80.00000	0.01422	None
			WATER	7732-18-5	15.00000	0.01131	None
			WATER	7732-18-5	15.00000	0.01131	None
			ETHOXYLATED ALCOHOLS (C12-16)	68551-12-2	5.00000	0.00377	None
			ETHOXYLATED ALCOHOLS (C12-16)	68551-12-2	5.00000	0.00377	None
			AA/Maleic Anhydride Co- polymer	9003-04-7	5.00000	0.00246	None
			AA/Maleic Anhydride Co- polymer	9003-04-7	5.00000	0.00246	None
			Quaternary Ammonium Compounds	68424-85-1	3.00000	0.00053	None
			Quaternary Ammonium Compounds	68424-85-1	3.00000	0.00053	None
			Didecyl dimethyl ammonium chloride	7173-51-5	3.00000	0.00053	None
			Didecyl dimethyl ammonium chloride	7173-51-5	3.00000	0.00053	None
			Ethanol	64-17-5	1.50000	0.00027	None
			Ethanol	64-17-5	1.50000	0.00027	None
			Ethylene glycol	107-21-1	42.00000	0.00023	None
			Pyridinium, 1-(phenylmethyl)-, Et Me derivs, chloride	68909-18-2	25.00000	0.00014	None
			Ciric Acid	77-92-9	10.00000	0.00005	None
			Alcohols, C12 - 14 secondary, ethoxylated	84133-50-6	8.00000	0.00004	None
			Water	7732-18-5	5.00000	0.00003	None
			2-Propenal, 3-phenyl	104-55-2	4.00000	0.00002	None
			Methanol	67-56-1	2.00000	0.00001	None
			Methyl 9-decenoate	25601-41-6	1.00000	0.00001	None
			Methyl 9-dedecenoate	39202-17-0	1.00000	0.00001	None
			Sodium xylene sulfonate	1300-72-7	0.30000	0.00000	None
Hydrochloric Acid (7.5%)	Cooper Natural	Acidizing					
			Water	7732-18-5	92.50000	0.11391	None
			Hydrochloric Acid	7647-01-0	7.50000	0.00924	None
StimSTREAM FR 9800	Chemstream	Friction Reducer					
			ACRYLAMIDE-CHLORIDE SALT OF TRIMETHYLAMMONIO-	69418-26-4	40.00000	0.03017	None

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			ETHYL ACRYLATE COPOLYMER				
			ALKANES, C12-26- BRANCHED AND LINEAR	90622-53-0	40.00000	0.03017	None
			WATER	7732-18-5	15.00000	0.01131	None
			ETHOXYLATED ALCOHOLS (C12-16)	68551-12-2	5.00000	0.00377	None
StimSTREAM FR 9800	Chemstream	Friction Reducer					
			ACRYLAMIDE-CHLORIDE SALT OF TRIMETHYLAMMONIO- ETHYL ACRYLATE COPOLYMER	69418-26-4	40.00000	0.03017	None
			ALKANES, C12-26- BRANCHED AND LINEAR	90622-53-0	40.00000	0.03017	None
			WATER	7732-18-5	15.00000	0.01131	None
			ETHOXYLATED ALCOHOLS (C12-16)	68551-12-2	5.00000	0.00377	None
Clearal 268A	Chemstream	Biocide					
			Water	7732-18-5	80.00000	0.01422	None
			Glutaraldehyde	111-30-8	20.00000	0.00356	None
			Quaternary Ammonium Compounds	68424-85-1	3.00000	0.00053	None
			Didecyl dimethyl ammonium chloride	7173-51-5	3.00000	0.00053	None
			Ethanol	64-17-5	1.50000	0.00027	None
Clearal 268A	Chemstream	Biocide					
			Water	7732-18-5	80.00000	0.01422	None
			Glutaraldehyde	111-30-8	20.00000	0.00356	None
			Quaternary Ammonium Compounds	68424-85-1	3.00000	0.00053	None
			Didecyl dimethyl ammonium chloride	7173-51-5	3.00000	0.00053	None
			Ethanol	64-17-5	1.50000	0.00027	None
StimSTREAM SC 405	Chemstream	Scale Inhibitor					
			AA/Maleic Anhydride Co- polymer	9003-04-7	5.00000	0.00246	None
			AA/ATBS Co-polymer	9003-05-8	5.00000	0.00246	None
StimSTREAM SC 405	Chemstream	Scale Inhibitor					
			AA/Maleic Anhydride Co- polymer	9003-04-7	5.00000	0.00246	None
			AA/ATBS Co-polymer	9003-05-8	5.00000	0.00246	None

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Acid Pack Pro LT	ProFrac	Acid Inhibitor					
			Ethylene glycol	107-21-1	42.00000	0.00023	None
			Pyridinium, 1-(phenylmethyl)-, Et Me derivs, chloride	68909-18-2	25.00000	0.00014	None
			Ciric Acid	77-92-9	10.00000	0.00005	None
			Alcohols, C12 - 14 secondary, ethoxylated	84133-50-6	8.00000	0.00004	None
			Water	7732-18-5	5.00000	0.00003	None
			2-Propenal, 3-phenyl	104-55-2	4.00000	0.00002	None
			Methanol	67-56-1	2.00000	0.00001	None
			Isotridecanol, ethoxylated	69011-36-5	1.80000	0.00001	None
			Methyl 9-decenoate	25601-41-6	1.00000	0.00001	None
			Methyl 9-dedecenoate	39202-17-0	1.00000	0.00001	None
			Sodium xylene sulfonate	1300-72-7	0.30000	0.00000	None

Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS

* Total Water Volume sources may include various types of water including fresh water, produced water, and recycled water

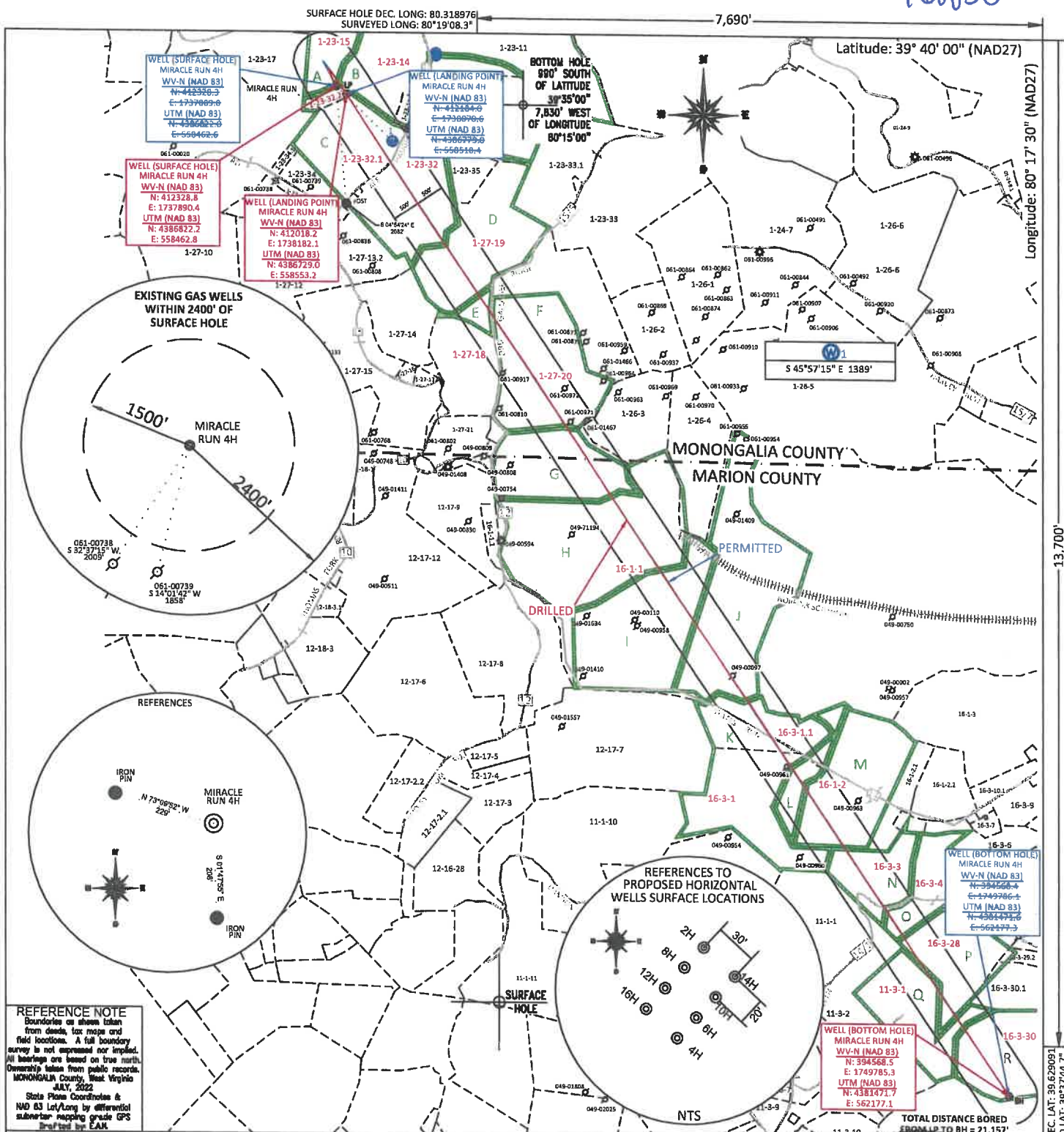
** Information is based on the maximum potential for concentration and thus the total may be over 100%

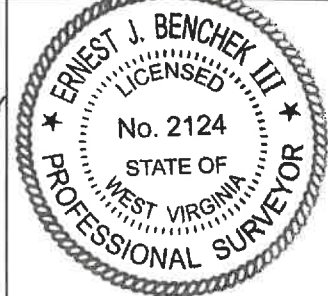
Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

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

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FILE #:	NNE20	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	
DRAWING #:	3092		
SCALE:	PLAT: 1" = 2500' TICK: 1" = 2000'		
MINIMUM DEGREE OF ACCURACY:	1/200		
PROVEN SOURCE OF ELEVATION:	SUBMETER MAPPING GRADE GPS		

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WVDEP OFFICE OF OIL & GAS 601 57TH STREET CHARLESTON, WV 25304		DATE: MAY 12, 2025
Well Type: ☐ Oil ☐ Waste Diposal ☐ Production ☐ Deep ☒ Gas ☐ Liquid Injection ☐ Storage ☒ Shallow		OPERATOR'S WELL #: MIRACLE RUN 4H (AS-DRILLED)
WATERSHED: DUNKARD CREEK		API WELL #: 47 61 01923
COUNTY/DISTRICT: MONONGALIA / BATTELLE		STATE COUNTY PERMIT
SURFACE OWNER: BYRON LANE RAPP		AS-BUILT ELEVATION: 1,521.56'
OIL & GAS ROYALTY OWNER:		QUADRANGLE: WADESTOWN
LEASE NUMBERS:		ACREAGE: 1524.57 +/-
DRILL ☒ CONVERT ☐ DRILL DEEPER ☐ REDRILL ☐ FRACTURE OR STIMULATE ☒ PLUG OFF FORMATION ☐ PERFORATE NEW FORMATION ☐ PLUG & ABANDON ☐ CLEAN OUT & REPLUG ☐ OTHER CHANGE ☐ (SPECIFY):		ACREAGE: 56.46 09/19/2025
TARGET FORMATION: MARCELLUS		DRILLED DEPTH: PILOT TVD: 8,229' TVD: 8,114' TMD: 29,546'
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

PROPERTY INDEX	
1-23-14	CLAUDE S & JONI L ANDERSON
1-23-15	CLAUDE S & JONI L ANDERSON
1-23-32	BYRON LANE RAPP
1-23-32.2	NORTHEAST NATURAL ENERGY LLC
1-27-19	CNX LAND LLC
1-27-18	SHIRLEY S WALKER
1-27-20	CONSOL MINING COMPANY LLC
16-1-1	MARION COUNTY COAL RESOURCES INC
16-3-1.1	DAVE L & DIANA L MCDOUGAL
16-1-2	JAMES A TENNANT & KIM M DENSON
16-3-1	DAVID P & LINDA M AINSWORTH
16-3-3	RALPH & ZORA SHRIVER
16-3-4	WACO OIL & GAS
16-3-28	CHARLES L & SUSAN L UNDERWOOD ETAL
11-3-1	DENZIL L PARKER; EMMA L & ALLEN L PARKER
16-3-30	CHARLES L & SUSAN L UNDERWOOD ETAL

LEASE INDEX			
A	WV-061-003830-005	J	WV-061-006503-001
B	WV-061-003828-007	K	WV-049-086187-001
C	WV-061-005463-023	L	WV-049-086187-001
D	WV-061-006519-001	M	WV-049-086168-003
E	WV-061-006233-001	N	WV-061-000198-001-LOI
F	WV-061-004692-002	O	WV-049-086145-001
G	WV-049-104625-002	P	WV-049-106192-001
H	WV-061-000198-001-LOI	Q	WV-049-086214-001
I	WV-049-004839-001; WV-049-004839-002	R	WV-049-106399-001

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FILE #: NEE20
DRAWING #: 3092
SCALE: N/A

DATE: MAY 12, 2025
OPERATOR’S WELL #: MIRACLE RUN 4H
API WELL #: 47 61 01923
STATE COUNTY PERMIT