

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

API 47 - 061 - 01889 County Monongalia District Battelle
Quad Mannington Pad Name McClellan Field/Pool Name _____
Farm name McClellan Well Number 12H
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 4386007.3 Easting 561908.6
Landing Point of Curve Northing 4385365.3 Easting 561235.4
Bottom Hole Northing 4382889.3 Easting 562942.8

Elevation (ft) 1,412' 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 9/17/2021 Date drilling commenced 9/21/2021 Date drilling ceased 11/4/2021
Date completion activities began 3/28/2022 Date completion activities ceased 4/12/2022
Verbal plugging (Y/N) N Date permission granted NA Granted by NA

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

Freshwater depth(s) ft 726', 1105', 1135' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 2150', 2470' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 1095' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by:
10/06/2023

API 47-061 - 01889 Farm name McClellan Well number 12H

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	Y
Surface	17-1/2"	13-3/8"	1,455'	N	54.5	NA	Y, 48 bbl
Coal							
Intermediate 1	12-1/4"	9-5/8"	2,705'	N	36	NA	Y, 17 bbl
Intermediate 2							
Intermediate 3							
Production	8-3/4"	5-1/2"	19,008'	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	4500 psi ready mix					CTS	48
Surface	Class A	1,230	15.6	1.20	1,471	CTS	8
Coal							
Intermediate 1	Class A	890	15.6	1.19	1,057	CTS	8
Intermediate 2							
Intermediate 3							
Production	50:50 Poz	3,495	14.5	1.16	4,046	1,997	48
Tubing							

Drillers TD (ft) 19,008' Loggers TD (ft) 19,050'
 Deepest formation penetrated Marcellus Plug back to (ft) NA
 Plug back procedure NA

Kick off depth (ft) 7,439'

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 _____

McClellan 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	160	Sand/silt
silt/red shale	160	490	silt/red shale
siltstone/sandstone/limestone	490	520	siltstone/sandstone/limestone
limestone/siltstone/sandstone	520	576	siltstone
coal	576	580	coal
siltstone/limestone/shale	580	760	siltstone/shale
coal	760	992	siltstone/shale/limestone
siltstone/sandstone	992	998	coal
coal	998	1084	siltstone/shale/limestone
sandstone/siltstone/limestone	1084	1092	coal - Pittsburgh
coal-Pittsburgh	1092	1120	siltstone/shale/limestone
sandstone/limestone	1120	1150	sandstone
red shale/siltstone	1150	1480	siltstone/limestone/sand/red shale
Limestone/siltstone	1480	2050	siltstone/sandstone
sandstone	2050	2110	sandstone
sandstone/siltstone/red shale	2110	2260	siltstone/sandstone
siltstone/sandstone	2260	2470	siltstone/limestone
sandstone	2470	2500	Big Injun Sandstone
Upper Devonian Sands/silts	2500	3010	sandstone/siltstone
shale/siltstone	3010	3020	Gantz sandstone
Upper Devonian Sands/silts	3020	3560	Upper Devonian sandstones/siltstones
Devonian siltstones/shales	3560	7620	Devonian siltstones/shales
Middlesex shale/silt	7620	7790	Middlesex shale/silt
Burkett shale	7790	7816	Burkett Shale
Geneseo shale	7816	7845	Geneseo shale
Tully Limestone	7845	7898	Tully Limestone
Hamilton shale	7898	7996	Hamilton shale
Marcellus shale	7996	TD	Marcellus shale

McClellan 12H 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	3/31/2022	5,767	0	9,217	92	743	7,466	299,780	431
2	4/1/2022	5,587	6,056	9,286	91	53	10,261	501,904	424
3	4/1/2022	5,733	6,061	9,286	90	72		500,334	415
4	4/1/2022	5,939	6,793	9,331	89	27	10,205	500,201	333
5	4/1/2022	5,835	7,406	9,328	88	60	10,200	500,344	355
6	4/1/2022	9,761	6,975	9,559	91	23	9,964	499,928	401
7	4/2/2022	6,021	7,478	9,542	91	41	10,000	500,709	398
8	4/2/2022	5,800	7,095	9,388	91	49	10,109	500,235	388
9	4/2/2022	5,588	6,337	9,480	88	37	10,076	500,458	393
10	4/2/2022	5,775	7,635	9,692	88	50	10,117	498,000	393
11	4/3/2022	5,748	7,090	9,805	91	85	10,151	498,566	384
12	4/3/2022	5,667	7,630	9,545	86	49	10,134	500,124	619
13	4/3/2022	5,481	7,331	9,434	87	23	10,084	500,339	920
14	4/2/2022	6,021	6,701	9,470	90	26	9,971	500,443	366
15	4/4/2022	5,752	7,004	9,782	91	7	9,969	501,149	420
16	4/4/2022	5,453	7,546	9,663	91	30	10,093	500,248	352
17	4/4/2022	5,496	7,867	9,536	90	25	10,110	500,112	350
18	4/4/2022	5,677	7,509	9,579	90	56	10,031	500,132	357
19	4/4/2022	5,790	7,321	9,529	92	54	9,921	504,100	353
20	4/5/2022	5,419	7,168	9,663	92	51	9,944	500,550	354
21	4/5/2022	5,289	7,047	9,392	90	28	10,083	500,000	342
22	4/5/2022	5,434	6,959	9,506	89	20	11,080	500,000	316
23	4/5/2022	5,662	6,962	9,344	92	33	9,890	500,064	316
24	4/6/2022	5,827	6,780	9,272	89	16	9,917	500,985	324
25	4/6/2022	2,989	7,549	9,273	91	23	11,415	500,000	311
26	4/6/2022	5,457	7,417	9,283	91	18	9,877	503,120	360
27	4/7/2022	6,299	7,633	9,244	90	14	10,959	490,140	325
28	4/7/2022	5,540	7,337	9,289	92	31	9,934	500,000	300
29	4/7/2022	5,755	7,430	9,288	91	11	9,847	499,930	325
30	4/8/2022	5,681	7,461	9,363	92	59	9,898	499,120	292
31	4/8/2022	5,173	7,432	9,252	92	24	9,856	500,000	287
32	4/8/2022	5,228	7,566	9,093	92	28	9,873	500,000	283
33	4/8/2022	5,577	6,808	8,874	91	29	9,852	501,540	286
34	4/9/2022	5,477	8,392	8,959	92	17	9,850	504,440	270
35	4/9/2022	5,348	6,948	8,824	92	18	9,827	500,000	268
36	4/9/2022	5,451	6,790	8,376	92	48	10,153	500,000	263
37	4/9/2022	6,134	7,741	8,602	92	26	9,802	500,730	263
38	4/9/2022	5,409	7,238	8,525	92	38	9,856	499,672	261
39	4/10/2022	5,621	7,204	8,847	92	29	9,915	498,820	252
40	4/9/2022	5,020	7,311	8,811	93	38	9,845	500,000	245
41	4/10/2022	5,281	7,485	8,680	92	51	9,889	500,000	242
42	4/10/2022	5,839	7,380	8,617	92	26	9,809	500,220	236
43	4/11/2022	5,317	7,366	8,700	92	23	9,813	500,260	341
44	4/11/2022	5,121	7,297	8,720	92	70	9,809	500,000	228
45	4/11/2022	5,537	7,710	8,647	92	42	9,992	500,000	222
46	4/11/2022	5,765	7,865	8,605	92	61	9,842	499,550	217

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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)
47	4/11/2022	5,456	7,896	8,878	92	62	9,820	496,855	217
48	4/12/2022	5,775	7,855	8,757	92	55	10,271	500,000	210
49	4/12/2022	5,614	7,596	8,654	92	81	10,083	500,000	205
50	4/12/2022	5,493	7,740	9,147	92	59	9,805	500,000	205

10/06/2023

McClellan 12H
Perforation Report

Stage Number	Report Date	Total Shots	Cluster 1 Top TD	Cluster 5 Bottom TD
1	3/31/2022	40	0	18,896
2	4/1/2022	40	18,852	18,693
3	4/1/2022	40	18,651	18,492
4	4/1/2022	40	18,449	18,290
5	4/1/2022	40	18,248	18,089
6	4/1/2022	40	18,047	17,888
7	4/2/2022	40	17,846	17,687
8	4/2/2022	40	17,645	17,486
9	4/2/2022	40	17,443	17,284
10	4/2/2022	40	17,242	17,083
11	4/3/2022	40	17,041	16,882
12	4/3/2022	40	16,840	16,681
13	4/3/2022	40	16,639	16,480
14	4/2/2022	40	16,437	16,278
15	4/4/2022	40	16,236	16,077
16	4/4/2022	40	16,035	15,876
17	4/4/2022	40	15,834	15,675
18	4/4/2022	40	15,632	15,474
19	4/4/2022	40	15,431	15,272
20	4/5/2022	40	15,230	15,071
21	4/5/2022	40	15,029	14,870
22	4/5/2022	40	14,828	14,669
23	4/5/2022	40	14,626	14,467
24	4/6/2022	40	14,425	14,266
25	4/6/2022	40	14,224	14,065
26	4/6/2022	40	14,023	13,864
27	4/7/2022	40	13,822	13,663
28	4/7/2022	40	13,620	13,461
29	4/7/2022	40	13,419	13,260
30	4/8/2022	40	13,218	13,059
31	4/8/2022	40	13,017	12,858
32	4/8/2022	40	12,816	12,657
33	4/8/2022	40	12,614	12,455
34	4/9/2022	40	12,413	12,254
35	4/9/2022	40	12,212	12,053
36	4/9/2022	40	12,011	11,852
37	4/9/2022	40	11,810	11,651
38	4/9/2022	40	11,608	11,449
39	4/10/2022	40	11,407	11,248
40	4/9/2022	40	11,206	11,047
41	4/10/2022	40	11,005	10,846
42	4/10/2022	40	10,803	10,644
43	4/11/2022	40	10,602	10,443

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Stage Number	Report Date	Total Shots	Cluster 1 Top TD	Cluster 5 Bottom TD
44	4/11/2022	40	10,401	10,242
45	4/11/2022	40	10,200	10,041
46	4/11/2022	40	9,999	9,840
47	4/11/2022	40	9,797	9,638
48	4/12/2022	40	9,596	9,437
49	4/12/2022	40	9,395	9,236
50	4/12/2022	40	9,194	9,035

10/06/2023

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	3/31/2022
Job End Date:	4/12/2022
State:	West Virginia
County:	Monongalia
API Number:	47-061-01889-00-00
Operator Name:	Northeast Natural Energy LLC
Well Name and Number:	McClellan 12H
Latitude:	39.62159800
Longitude:	-80.27870500
Datum:	NAD27
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	8,051
Total Base Water Volume (gal):	20,902,980
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					
Sand (100 Mesh Proppant)	ProFrac	Proppant	Water	7732-18-5	100.00000	87.29374	None
Sand (40/70 White Proppant)	ProFrac	Proppant	Silica Substrate	14808-60-7	100.00000	8.70447	None
Hydrochloric Acid (7.5%)	CNR	Acidizing	Silica Substrate	14808-60-7	100.00000	3.70457	None
StimSTREAM SC 405	Chemstream	Scale Control	Water	7732-18-5	85.00000	0.15326	None
			Hydrochloric Acid (Hydrogen Chloride)	7647-01-0	37.00000	0.06671	None
			Non-Hazardous Substances	Proprietary	70.00000	0.02651	None
			Diethylenetriamine penta (methylene phosphonic acid) (DTPMP)	15827-60-8	10.00000	0.00379	None
			2-Phosphono-1,2,4-butanetricarboxylic acid (PBTC)	37971-36-1	10.00000	0.00379	None
			Citric Acid	77-92-9	10.00000	0.00379	None

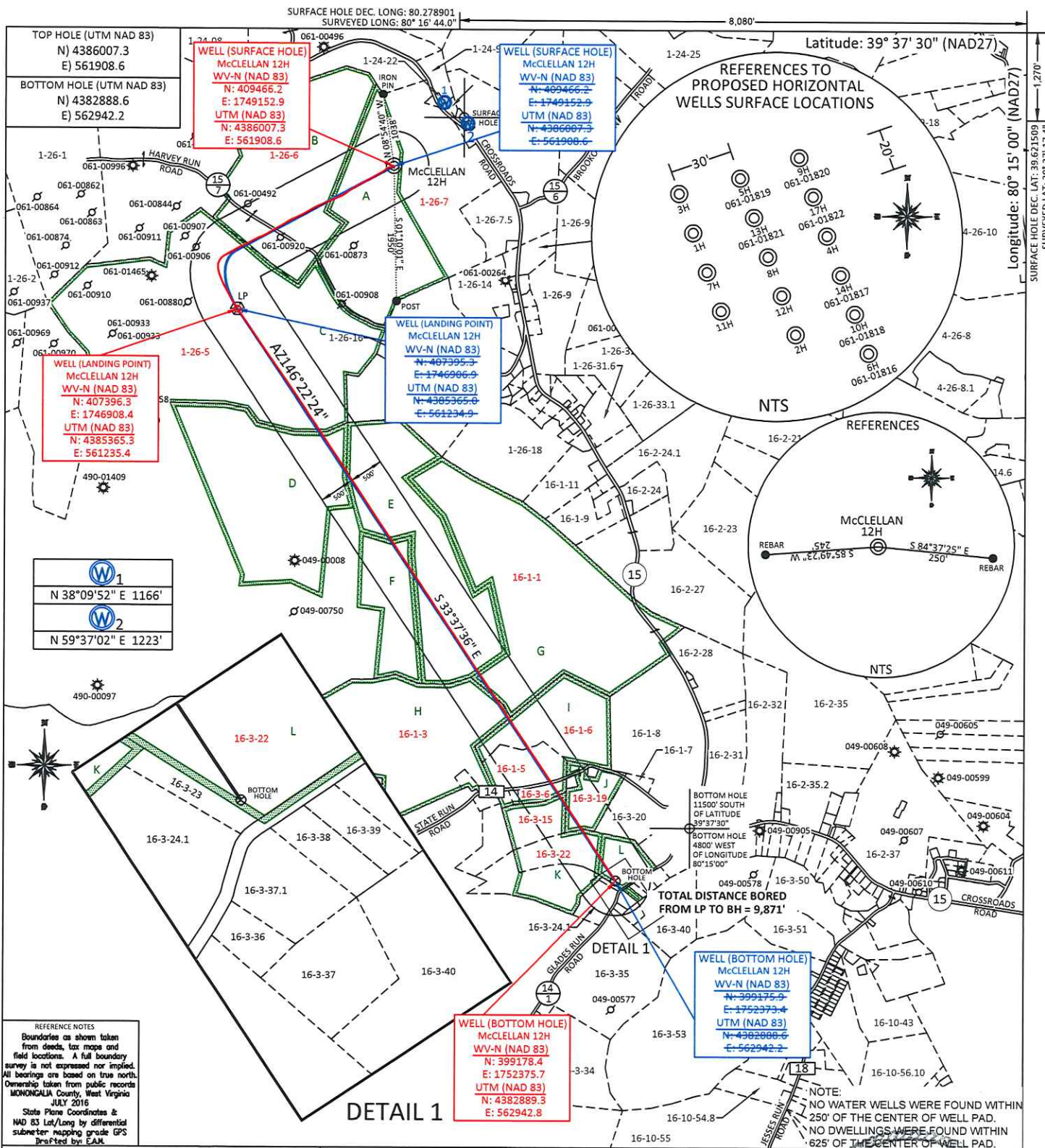
10/06/2023

	Acetic Acid	64-19-7	5.00000	0.00003
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* Total Water Volume sources may include fresh water, produced water, and/or recycled water

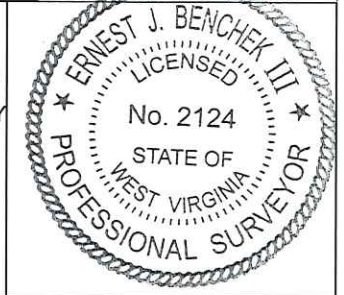
** Information is based on the maximum potential for concentration and thus the total may be over 100%

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)



FILE #: NNE14
DRAWING #: 2968
SCALE: PLAT: 1" = 2000'
TICK: 1" = 2000'
MINIMUM DEGREE OF ACCURACY: 1/200
PROVEN SOURCE OF ELEVATION: SUBMETER MAPPING GRADE GPS

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.
Signed: *[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: UPPER MONONGAHELA
COUNTY/DISTRICT: MONONGALIA / BATTELLE
SURFACE OWNER: KLONDIKE REAL ESTATE PARTNERSHIP
OIL & GAS ROYALTY OWNER: Barbara June Sutton, et al
LEASE NUMBERS:

DATE: SEPTEMBER 28, 2023
OPERATOR'S WELL #: McCLELLAN 12H AS-DRILLED
API WELL #: 47 61
STATE COUNTY PERMIT
AS-BUILT ELEVATION: 1,411.7'

QUADRANGLE: MANNINGTON
ACREAGE: 961.30 +/-
ACREAGE: 129.4 +/-

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
PLUG OFF FORMATION PERFORATE NEW FORMATION PLUG & ABANDON
CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY):

TARGET FORMATION: MARCELLUS
DRILLED DEPTH: TVD: 8,064' TMD: 19,050'
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 OWNER INDEX	
1-26-7	KLONDIKE REAL ESTATE PARTNERSHIP
1-26-6	RUTH E. SANTEE ET AL
1-26-5	CONSOL MINING COMPANY LLC
16-1-1	CONSOLIDATION COAL COMPANY
16-1-3	MICHAEL A. DEMARY
16-1-6	IVA M. TUTTLE
16-1-5	DOUGLAS W. SHRIVER
16-3-19	AARON L. SKINNER
16-3-15	MARJORIE & FRANCIS ROSE
16-3-22	PROPERTY OWNER NOT AVAILABLE
16-3-6	JUDITH A & RONNIE E PRICE

LEASE INDEX			
A	WV-061-004172-011	G	WV-049-004839-001
B	WV-061-004173-066	H	WV-049-005194-050
C	WV-061-005769-001	I	WV-061-000146-001
D	WV-049-004244-001	J	WV-049-005151-006
E	WV-049-004839-001	K	WV-061-000146-001
F	WV-061-005699-001	L	WV-049-005618-001

10/06/2023

FILE #: NEE14

DRAWING #: 2968

SCALE: N/A

DATE: SEPTEMBER 28, 2023

OPERATOR'S WELL #: McCLELLAN 12H

API WELL #: 47 61
STATE COUNTY PERMIT