

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

API 47-061-01821 County Monongalia District Battelle  
Quad Mannington Pad Name McClellan Field/Pool Name \_\_\_\_\_  
Farm name McClellan Well Number 13H  
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 4386018.7 Easting 561904.4  
Landing Point of Curve Northing 4386531.4 Easting 562396.0  
Bottom Hole Northing 4389887.4 Easting 560075.6

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 1/16/2019 Date drilling commenced 6/25/2019 Date drilling ceased 3/19/2020  
Date completion activities began 5/29/2020 Date completion activities ceased \_\_\_\_\_  
Verbal plugging (Y/N) N Date permission granted NA Granted by NA

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

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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:  
*Dwight Harris*

API 47-061 - 01821 Farm name McClellan Well number 13H

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"	55'	N		NA	CTS
Surface	17.5"	13.375"	1,250'	N	54.5	NA	Y, 30 bbl
Coal							
Intermediate 1	12.25"	9.625"	2,695'	N	40	NA	Y, 21 bbl
Intermediate 2							
Intermediate 3							
Production	8.5"	5.5"	22,803'	N	20	NA	Y, 6.5 bbl
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					CTS	48
Surface	Class A	1,085	15.6	1.18	1,223	CTS	8
Coal							
Intermediate 1	Class A	1,185	15.2	1.13	1,049	CTS	8
Intermediate 2							
Intermediate 3							
Production	Class A	4,155	14.5	1.16	4,806	2,165'	8
Tubing							

Drillers TD (ft) 22,838' Loggers TD (ft) 22,808'

Deepest formation penetrated Marcellus Plug back to (ft) NA

Plug back procedure NA

Kick off depth (ft) 8,494' *5494*

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

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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 13H Perforation Summary				
Stage Number	Report Date	Cluster 5 Bottom TD	Cluster 1 Top TD	Total Shots
1	05/10/20	22,695	0	40
2	05/11/20	22,518	22,656	40
3	05/11/20	22,342	22,481	40
4	05/11/20	22,166	22,305	40
5	05/11/20	21,990	22,129	40
6	05/12/20	21,814	21,953	40
7	05/12/20	21,638	21,777	40
8	05/12/20	21,463	21,601	40
9	05/13/20	21,287	21,425	40
10	05/13/20	21,111	21,249	40
11	05/13/20	20,935	21,074	40
12	05/13/20	20,759	20,898	40
13	05/14/20	20,583	20,722	40
14	05/14/20	20,407	20,546	40
15	05/14/20	20,231	20,370	40
16	05/15/20	20,056	20,194	40
17	05/15/20	19,880	20,018	40
18	05/15/20	19,704	19,843	40
19	05/16/20	19,528	19,667	40
20	05/16/20	19,352	19,491	40
21	05/16/20	19,176	19,315	40
22	05/16/20	19,000	19,139	40
23	05/16/20	18,824	18,963	40
24	05/17/20	18,649	18,787	40
25	05/17/20	18,471	18,611	40
26	05/17/20	18,297	18,436	40
27	05/17/20	18,121	18,260	40
28	05/17/20	17,945	18,084	40
29	05/18/20	17,769	17,908	40
30	05/18/20	17,593	17,732	40
31	05/18/20	17,418	17,556	40
32	05/18/20	17,242	17,380	40
33	05/19/20	17,066	17,204	40
34	05/19/20	16,890	17,029	40
35	05/19/20	16,714	16,853	40
36	05/19/20	16,538	16,677	40
37	05/20/20	16,362	16,501	40
38	05/20/20	186	16,325	40
39	05/20/20	16,011	16,149	40
40	05/20/20	15,835	15,975	40
41	05/21/20	15,659	15,797	40
42	05/21/20	15,483	15,622	40
43	05/21/20	15,307	15,443	40
44	05/21/20	15,131	15,270	40
45	05/21/20	14,955	15,094	40
46	05/22/20	14,779	14,918	40
47	05/22/20	14,604	14,742	40
48	05/22/20	14,252	14,391	40
49	05/22/20	14,252	14,391	40
50	05/22/20	14,076	14,215	40
51	05/23/20	13,900	14,039	40
52	05/23/20	13,724	13,863	40
53	05/23/20	13,548	13,687	40
54	05/23/20	13,372	13,511	40
55	05/23/20	13,197	13,335	40
56	05/24/20	13,021	13,159	40
57	05/24/20	12,845	12,984	40
58	05/24/20	12,669	12,808	40
59	05/24/20	12,493	12,632	40
60	05/25/20	12,317	12,456	40
61	05/25/20	12,141	12,280	40
62	05/25/20	11,966	12,104	40
63	05/25/20	11,790	11,928	40
64	05/25/20	11,614	11,752	40
65	05/26/20	11,438	11,577	40
66	05/26/20	11,262	11,401	40
67	05/26/20	11,086	11,225	40
68	05/26/20	10,910	11,049	40
69	05/27/20	10,734	10,873	40
70	05/27/20	10,559	10,697	40
71	05/27/20	10,383	10,521	40
72	05/27/20	10,207	10,346	40
73	05/27/20	10,031	10,170	40
74	05/28/20	9,855	9,994	40
75	05/28/20	9,679	9,818	40
76	05/28/20	9,503	9,642	40
77	05/28/20	9,327	9,466	40

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### McClellan 13H 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	05/10/20	5,320	8,718	9,456	83	465	6,978	301,440	507
2	05/11/20	5,524	7,350	9,586	80	32	7,208	357,740	503
3	05/11/20	4,919	8,336	9,934	82	81	7,390	355,520	506
4	05/11/20	5,478	8,744	9,980	88	68	7,419	355,680	497
5	05/11/20	5,122	7,155	9,797	90	47	7,172	354,080	493
6	05/12/20	5,376	6,919	9,713	90	84	7,478	356,300	492
7	05/12/20	5,164	7,374	9,974	90	50	7,352	355,030	484
8	05/12/20	5,612	7,148	9,807	89	67	7,436	360,860	478
9	05/13/20	5,763	5,875	9,640	89	93	7,368	359,590	478
10	05/13/20	5,535	7,285	9,880	85	60	7,401	368,660	474
11	05/13/20	5,026	7,730	9,825	87	45	7,115	346,960	465
12	05/13/20	5,550	7,386	9,738	87	203	7,229	355,600	462
13	05/14/20	5,492	7,313	10,003	92	35	6,721	354,410	464
14	05/14/20	5,480	7,014	9,789	89	55	7,110	355,257	458
15	05/14/20	5,449	7,379	9,760	87	46	6,574	355,750	452
16	05/15/20	5,581	7,594	9,783	89	170	7,483	355,800	450
17	05/15/20	5,770	7,331	9,736	88	78	7,179	355,160	446
18	05/15/20	6,269	7,333	9,713	83	39	8,785	357,780	442
19	05/16/20	5,990	7,358	9,773	87	45	6,796	354,110	433
20	05/16/20	5,436	7,237	9,692	85	70	7,286	352,750	435
21	05/16/20	5,430	8,594	9,661	89	50	7,106	354,560	429
22	05/16/20	5,334	7,656	9,801	89	56	7,139	382,790	425
23	05/16/20	5,293	7,986	9,603	86	26	6,386	353,260	469
24	05/17/20	6,015	7,010	9,653	89	60	6,736	356,740	505
25	05/17/20	5,543	7,066	9,578	90	27	6,596	354,640	423
26	05/17/20	5,221	6,876	9,261	89	23	6,634	354,120	419
27	05/17/20	5,180	7,665	9,770	94	32	6,451	353,960	406
28	05/17/20	5,193	7,967	9,159	81	44	6,464	354,030	401
29	05/18/20	5,122	6,944	9,202	89	32	6,666	355,416	410
30	05/18/20	5,402	7,074	9,336	89	25	6,794	354,400	404
31	05/18/20	5,320	7,524	9,762	93	47	6,535	356,500	405
32	05/18/20	5,125	7,520	9,105	85	47	6,313	358,420	389
33	05/19/20	4,813	7,685	9,733	80	54	7,886	359,660	510
34	05/19/20	5,438	7,558	9,503	90	27	6,665	358,360	391
35	05/19/20	5,412	6,451	9,583	95	121	6,712	355,120	381
36	05/19/20	6,177	6,634	9,469	95	32	6,434	358,150	374
37	05/20/20	6,049	7,027	9,309	91	45	6,560	354,700	375
38	05/20/20	5,268	7,260	9,570	92	44	6,314	349,450	368
39	05/20/20	5,277	6,910	9,486	92	46	6,771	354,930	370
40	05/20/20	5,272	6,783	9,169	91	31	6,542	351,720	354
41	05/21/20	5,529	6,829	9,168	93	16	6,785	354,170	350
42	05/21/20	5,395	6,518	8,998	89	32	6,839	355,760	357
43	05/21/20	5,220	7,278	8,970	89	19	6,421	359,300	354
44	05/21/20	5,844	6,760	9,013	90	32	6,201	354,820	350
45	05/21/20	5,521	6,596	8,781	90	54	6,332	357,090	335
46	05/22/20	5,773	6,837	8,978	92	58	6,512	366,210	332
47	05/22/20	5,280	6,957	9,138	90	38	6,640	354,800	340
48	05/22/20	5,411	6,690	9,052	89	46	8,005	353,240	330
49	05/22/20	6,267	6,322	8,889	93	80	6,096	356,610	325
50	05/22/20	6,194	6,290	8,742	93	42	6,476	356,030	314
51	05/23/20	5,944	6,608	8,917	94	18	6,100	355,200	330
52	05/23/20	5,822	7,294	8,839	90	35	6,238	353,900	319
53	05/23/20	6,463	7,921	9,043	90	57	6,336	358,000	314
54	05/23/20	5,106	6,964	9,105	92	45	6,099	359,530	301
55	05/23/20	6,173	6,781	8,934	93	17	6,119	355,280	294
56	05/24/20	6,253	6,935	9,270	96	125	5,993	359,150	301
57	05/24/20	6,129	6,549	8,615	87	45	6,768	355,690	294
58	05/24/20	5,112	6,777	8,483	90	30	6,497	354,900	283
59	05/24/20	5,990	6,507	8,561	90	23	6,271	355,530	280
60	05/25/20	5,747	6,914	8,916	91	11	6,301	354,790	277
61	05/25/20	5,318	6,758	8,824	90	27	6,437	361,860	285
62	05/25/20	5,763	7,077	8,801	91	25	6,458	357,790	276
63	05/25/20	5,950	6,767	8,687	90	21	6,351	354,740	274
64	05/25/20	5,363	7,152	8,987	94	61	6,354	355,630	262
65	05/26/20	7,221	7,506	8,907	91	40	6,299	355,148	593
66	05/26/20	4,950	7,827	8,862	88	37	6,139	354,720	255
67	05/26/20	5,421	7,658	8,641	91	30	5,863	351,980	250
68	05/26/20	5,241	7,883	9,030	89	35	5,643	327,890	246
70	05/27/20	5,515	5,960	8,207	91	47	6,441	361,590	240
71	05/27/20	5,841	6,750	8,109	91	53	6,332	357,120	233
72	05/27/20	5,570	6,885	8,203	90	40	6,307	359,450	230
73	05/27/20	4,920	7,138	8,051	90	9	5,809	357,800	225
74	05/28/20	6,172	6,752	7,894	88	30	5,762	357,040	222
75	05/28/20	6,197	6,923	8,092	91	45	6,083	358,020	230
76	05/28/20	6,186	7,340	7,935	90	34	6,184	357,930	223
77	05/28/20	5,138	6,928	7,940	92	43	6,200	349,910	219

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McClellan 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
Genesee shale	7816	7845	Genesee shale
Tully Limestone	7845	7898	Tully Limestone
Hamilton shale	7898	7996	Hamilton shale
Marcellus shale	7996	TD	Marcellus shale

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## Job Properties and Details

### Wellbore Data

<b>Casing</b>				<b>Casing Depths</b>	
Size	13.375 in	Weight	54.5 lb/ft	Top	0 ft
Type	J55	Collar	1208	Bottom	1250 ft
<b>Drill Pipe</b>					
Size		Weight			
		Collars			
<b>Open Hole</b>					
Size #1	17.50 in	Top	40 ft	T. D.	1310 ft
Size #2		Top		T. D.	

### Slurry Details

<b>Spacer</b>					
Design		6% GEL			
Amount	500 LB	Yield		Density	8.7 lb/gal
Top of Spacer				Volume	25 bbls
<b>Lead</b>					
Design		CLASS A + ADDITIVES			
Pump Time		Amount	1037 sks	Yield	1.18 cu. ft/sk
Top of Cement	0 FT	Density	15.6 lb/gal	Volume	218 bbls
<b>Tail</b>					
Design					
Pump Time		Amount		Yield	
Top of Cement		Density		Volume	
<b>Water</b>					
Lead Water Req	5.24 gal/sk	Tail Water Req			
Total Water Used		Lead		Tail	
<b>Displacement Fluid</b>					
Type	FRESH WATER				
Amount	187 bbls	Weight	8.34 lb/gal		
<b>Wellbore fluid</b>					
Type					

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Ticket #: 0

Remit to:  
 Lightning Energy Services  
 104 Heliport Loop Road  
 Bridgeport, WV 26330

Job Times				
On Loc:	Job Start:	Job End:	Off Loc:	
Date: 06/28/19			06/29/19	
Time: 12:am	6:27 AM	8:43am	10:00am	

Customer and Well Information					
Customer: NORTHEAST		Well Name: McClellan	Well #: 13 H	Well Type: GAS	
County:	State: WV	AFE #/API #: 100382-602	PO #/Permit #:	Well Class:	
Field:	Lease: McClellan	Rig Name/# : HIGHLAND RIG 8			
Wellbore Information					
Bit Size (Inches): 12.25	Well MD (ft):	Well TVD (ft): 2750	BHST (F°):	BHCT (F°):	Deviation (°):
Drilling Fluid Type:	Drilling Fluid Density (ppg):	Packer Depth (ft):	Treating Down:		
Previous Casing/Liner					
Size (Inches): 13.375	Weight (lb/ft): 54.5	Thread:	Grade:	Total Footage (ft): 1250	
Casing/Liner/Tubing					
Size (Inches): 9.625	Weight (lb/ft): 40	Thread:	Grade:	Total Footage (ft): 2695	
Job					
Job Type: Intermediate		Connection to Well: YES		Top Plug: YES	
Lift Pressure (PSI): 1580	Max Annulus Pressure (PSI):	Mix Water Temp (F°):		Bottom Plug: No	
Casing/Tubing Secured : YES	Pipe Rotated: No	Cement Return to Surface (bbl): 21	Top Job (bbl): no		
Pipe Reciprocated : No	Circulation Lost: No	Job Completed: YES			

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Cement Job Log



<b>Customer:</b> NORTHEAST NATURAL ENERGY LLC		<b>Date:</b> 19-Mar-20		<b>Serv. Supervisor:</b> Jason Beeson							
<b>Cust. Rep.:</b> Josh Grim		<b>Ticket #:</b> JWV2003-0005		<b>Serv. Center:</b> Jane Lew - 3044							
<b>Well Name:</b> McClellan 13H		<b>API Well #:</b> 4706101821		<b>County:</b> MONONGAL	<b>State:</b> WEST VIRGINIA						
<b>Well Type:</b> production casing		<b>Rig:</b> Patterson-UTI Rig #339		<b>Type of Job:</b> CMA-PROD. CASING							
<b>Materials Furnished by NexTier</b>											
<b>Plugs</b>	<b>Casing Hardware</b>		<b>Physical Slurry Properties</b>								
		<b>Sacks of Cement</b>	<b>Fluid Density (lb/gal)</b>	<b>Excess</b>	<b>Yield (cuft/sk)</b>	<b>Mix Water (gal/sk)</b>	<b>Fluid Volume (bbls)</b>	<b>Mix Water (bbls)</b>			
13.5 ppg PureScrub Spacer w/Surfactant	+7.0 PPB CJ157011+55.0 PPB CJ111+1.1 GPB CJ880			13.5			100.00				
14.5 ppg Cement	50 % CJ610-74+50 % CJ910 +0.2 % CJ157011+0.25 % CJFCP013+0.1 % CJ405+0.15 % CJ504+0.15 % CJ540		4155	14.5	1.16	4.90	856.47	484			
Displacement				8.33			505.01				
0											
Displacement Chemicals:											
<b>OPEN HOLE DATA</b>			<b>TUBULAR DATA</b>								
2.78 in. I.D. (12.595 to 5.460 ft) 8.5 in. O.D. (5.460 to 22.867 ft)		9.5 in. 20# (0 to 22.817 ft)		<b>SIZE WEIGHT</b>	<b>THRD</b>	<b>DEPTH (ft)</b>	<b>GRADE</b>	<b>ID (in)</b>	<b>BURST (psi)</b>	<b>COLLAPSE (psi)</b>	
<b>Mix Ceml. Temperature °F</b>	<b>Lead Temp.</b>	<b>Middle Temp.</b>	<b>Tail Temp.</b>	5.5 20#	BTC	22803					
53.0 °F			61.0 °F								
<b>PREVIOUS CASING DATA</b>			<b>PERFORATED INTERVAL DATA</b>			<b>CASING EQUIPMENT DEPTHS</b>					
9.626 in. 40# (0 to 2,885 ft)			<b>TOP</b>	<b>BTM</b>	<b>SPF</b>	<b>SIZE</b>	<b>SHOE</b>	<b>FLOAT</b>	<b>STAGE</b>	<b>ACP</b>	
							3	22800			
<b>WELL FLUID</b>		<b>DISPLACEMENT FLUID</b>			<b>DIFF PRESS (psi)</b>	<b>CSG LFT (psi)</b>	<b>MAX PRESS (psi)</b>	<b>Total Number of Runs</b>		<b>WATER ON LOG (bbl)</b>	
<b>TYPE</b>	<b>DENSITY</b>	<b>VOLUME</b>	<b>TYPE</b>	<b>DENSITY</b>	2401	6867		1		2100	
12.4	SOBM	504 bbl	FRESH	8.3 ppg							
<b>Bumped Plug</b>	<b>Final Differential (psi)</b>	<b>Floats Held (Y/N)</b>	<b>PSI Left on Casing</b>	<b>Cement to Surface (bbl)</b>	<b>Top of Cement (ft)</b>	<b>Full Circ. During Job (Y/N)</b>	<b>Max Pump Pressure (psi)</b>	<b>Casing Rotation</b>	<b>Standby Charged (hrs)</b>	<b>Casing Retrievability</b>	<b>Wireline Co.</b>
Yes	3,100.00	Y	-	-	2,165	Yes	3,950.00	No	-	No	0
<b>Comments/Special Customer Instructions</b>											

Jason Beeson  
Service Supervisor

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# NORTHEAST NATURAL ENERGY, LLC

Location: Monongalia County, WV  
 Field: Monongalia  
 Facility: McClellan Pad

Well: McClellan 13H PWB  
 Wellbore: McClellan 13H PWB

Slot: Slot #13  
 Slot: McClellan 13H PWB

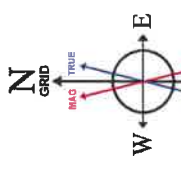


### Location Information

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
McClellan Pad	17481.85.000	409495.900	39°37'18.0211"N	80°16'42.6186"W
Local N (ft)	Local E (ft)	Grid North (US ft)	Latitude	Longitude
7.98	-45.62	17481.39.460	39°37'18.0980"N	80°16'43.5012"W
Slot #13	Patterson 339 (KB) to Ground level (At Slot: Slot #13)			
Mean Sea Level to Ground level (At Slot: Slot #13)	25ft			
Patterson 339 (KB) to Mean Sea Level	-1411ft			

### Comments

API: 47-061-01821-0000  
 BH Job #: 11038667A  
 Rig: Patterson UTI 339  
 Duration: 03/09/2020 - 03/18/2020



24in Conductor: 0.14° Inc, 50.00ft MD, -0.03ft VS  
 Javins Inertial Gyro <17 1/2> (75-1225) : 0.28° Inc, 75.00ft MD, 75.00ft TVD, -0.12ft VS

13.375in Casing Surface : 0.20° Inc, 1260.00ft MD, 1259.98ft TVD, -4.53ft VS  
 Javins Inertial Gyro <12 1/4> (1325-2625) : 0.21° Inc, 1325.00ft MD, 1324.98ft TVD, -4.57ft VS

9.625in Casing Intermediate : 0.44° Inc, 2695.00ft MD, 2594.96ft TVD, -10.10ft VS  
 Javins Inertial Gyro <8 3/4> (2725-5425) : 0.38° Inc, 2725.00ft MD, 2724.96ft TVD, -10.31ft VS

BH 7.5" (5494.09813) : 3.64° Inc, 5494.00ft MD, 5493.81ft TVD, -26.85ft VS

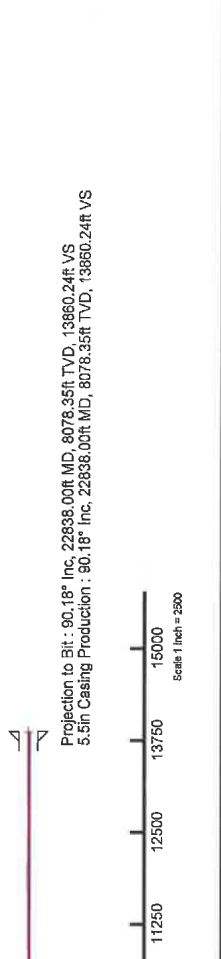
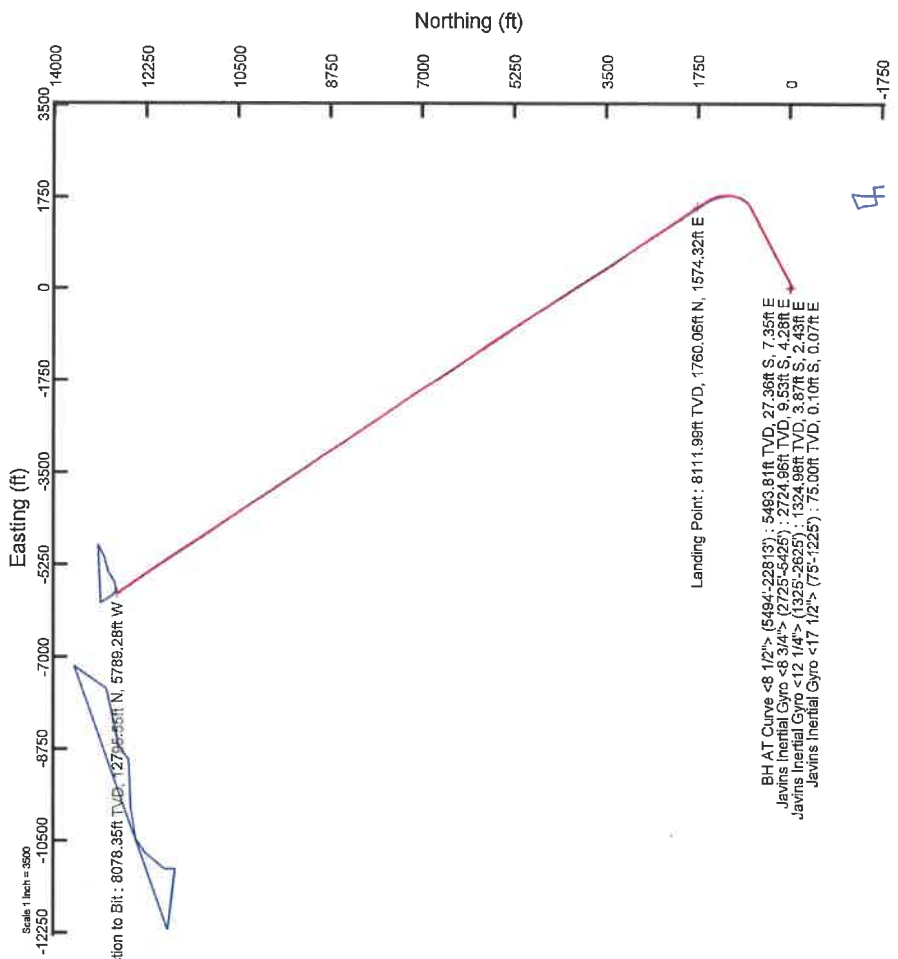
Landing Point : 85.93° Inc, 9565.00ft MD, 8111.99ft TVD, 593.58ft VS

Projection to Bit : 8078.35ft TVD, 1274.35ft N, 5789.28ft W

Landing Point : 8111.98ft TVD, 1760.06ft N, 1574.32ft E

BH AT Curve <8 1/2> (5494-22813) : 5493.81ft TVD, 27.36ft S, 7.35ft E  
 Javins Inertial Gyro <8 3/4> (2725-5425) : 2724.96ft TVD, 6.53ft S, 4.28ft E  
 Javins Inertial Gyro <12 1/4> (1325-2625) : 1324.96ft TVD, 3.87ft S, 2.43ft E  
 Javins Inertial Gyro <17 1/2> (75-1225) : 75.00ft TVD, 0.10ft S, 0.07ft E

Projection to Bit : 90.18° Inc, 22838.00ft MD, 8078.35ft TVD, 13860.24ft VS  
 5.5in Casing Production : 90.18° Inc, 22838.00ft MD, 8078.35ft TVD, 13860.24ft VS



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# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	5/10/2020
Job End Date:	5/28/2020
State:	West Virginia
County:	Monongalia
API Number:	47-061-01821-00-00
Operator Name:	Northeast Natural Energy LLC
Well Name and Number:	McClellan 13H
Latitude:	39.62169300
Longitude:	-80.27875000
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	8,200
Total Base Water Volume (gal):	21,656,956
Total Base Non Water Volume:	0



**Frac Focus**  
Chemical Disclosure Registry



## 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	Company 1	Carrier/Base Fluid	Water	7732-18-5	100.00000	86.58463	None
Sand (Proppant)	Producers Service Corp	Proppant					
StimSTREAM FR 9800	Producers Service Corp	Friction Reducer	Silica Substrate	14808-60-7	100.00000	13.11090	None
			copolymer of 2-propenamide	Proprietary	30.00000	0.01545	None
			Petroleum Distillate	64742-47-8	20.00000	0.01030	None
			Oleic Acid Diethanolamide	93-83-4	2.00000	0.00103	None
			Alcohols, C12-16, ethoxylated	68551-12-2	2.00000	0.00103	None
			Ammonium chloride ((NH4)Cl)	12125-02-9	1.00000	0.00051	None
StimStream SC-404	Producers Service Corp	Scale Inhibitor					
			Non-Hazardous substances	Proprietary	85.00000	0.01805	None
			2-Phosphono-1,2,4-butanetricarboxylic acid (PBTC)	37971-36-1	5.00000	0.00106	None
			Bis(HexaMethylene Triamine Penta) (BHTM)	34690-00-1	5.00000	0.00106	None
			Citric acid	77-92-9	5.00000	0.00106	None

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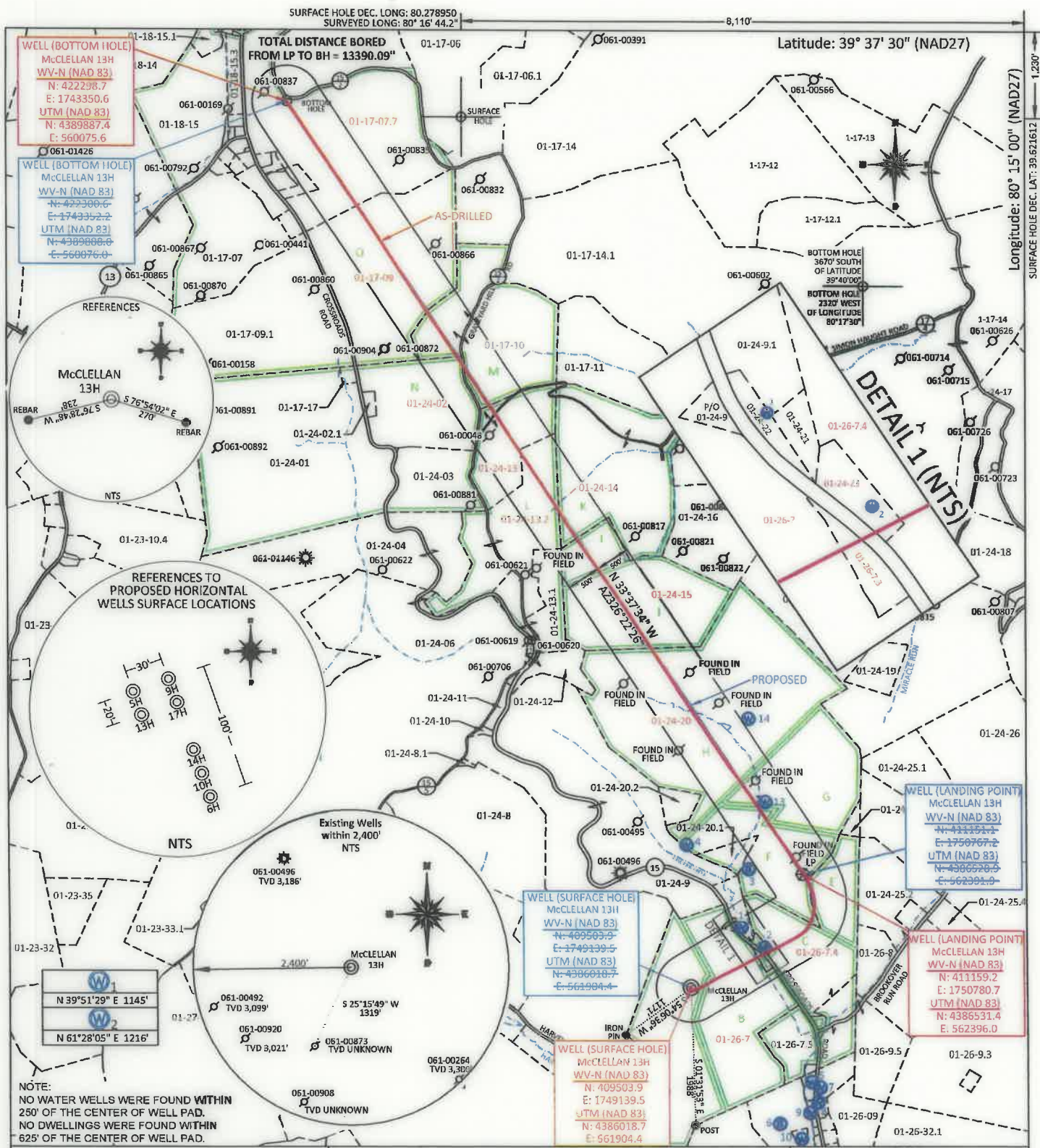


Cleeral 268	Producers Service Corp	Biocide	Non-Hazardous substances	Proprietary		80.00000	0.01425	None
			Glutaraldehyde	111-30-8		20.00000	0.00356	None
			Quaternary Ammonium Compounds	68424-85-1		3.00000	0.00053	None
			Didecyl dimethyl ammonium chloride	7173-51-5		3.00000	0.00053	None
			Ethanol	64-17-5		1.50000	0.00027	None
7.5% HCL	Producers Service Corp	Acidizing	Hydrochloric Acid	7647-01-0		7.50000	0.01598	None
4-N-1	Producers Service Corp	Inhibitor	Acetic acid	64-19-7		90.00000	0.00078	None
			2-Ethylhexanol	104-76-7		10.00000	0.00008	None
			Methanol	67-56-1		10.00000	0.00008	None
			Cocamide Diethanolamine	68603-42-9		5.00000	0.00004	None
			Diethanolamine	111-42-2		1.00000	0.00001	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						
			Non-Hazardous substances	Proprietary		85.00000	0.01805	
			Non-Hazardous substances	Proprietary		80.00000	0.01425	
			Petroleum Distillate	64742-47-8		20.00000	0.01030	
			Citric acid	77-92-9		5.00000	0.00106	
			2-Phosphono-1,2,4-butanetricarboxylic acid (PBTC)	37971-36-1		5.00000	0.00106	
			Alcohols, C12-16, ethoxylated	68551-12-2		2.00000	0.00103	
			Oleic Acid Diethanolamide	93-83-4		2.00000	0.00103	
			Didecyl dimethyl ammonium chloride	7173-51-5		3.00000	0.00053	
			Quaternary Ammonium Compounds	68424-85-1		3.00000	0.00053	
			Ammonium chloride ((NH4)Cl)	12125-02-9		1.00000	0.00051	
			Ethanol	64-17-5		1.50000	0.00027	
			2-Ethylhexanol	104-76-7		10.00000	0.00008	
			Methanol	67-56-1		10.00000	0.00008	
			Cocamide Diethanolamine	68603-42-9		5.00000	0.00004	
			Diethanolamine	111-42-2		1.00000	0.00001	

\* 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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 WV Department of  
 Environmental Protection



FILE #: NNE14  
 DRAWING #: 2972  
 SCALE: PLAT: 1" = 2000'  
TICK: 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY: 1/200  
 PROVEN SOURCE OF ELEVATION: SUBMETER MAPPING GRADE GPS

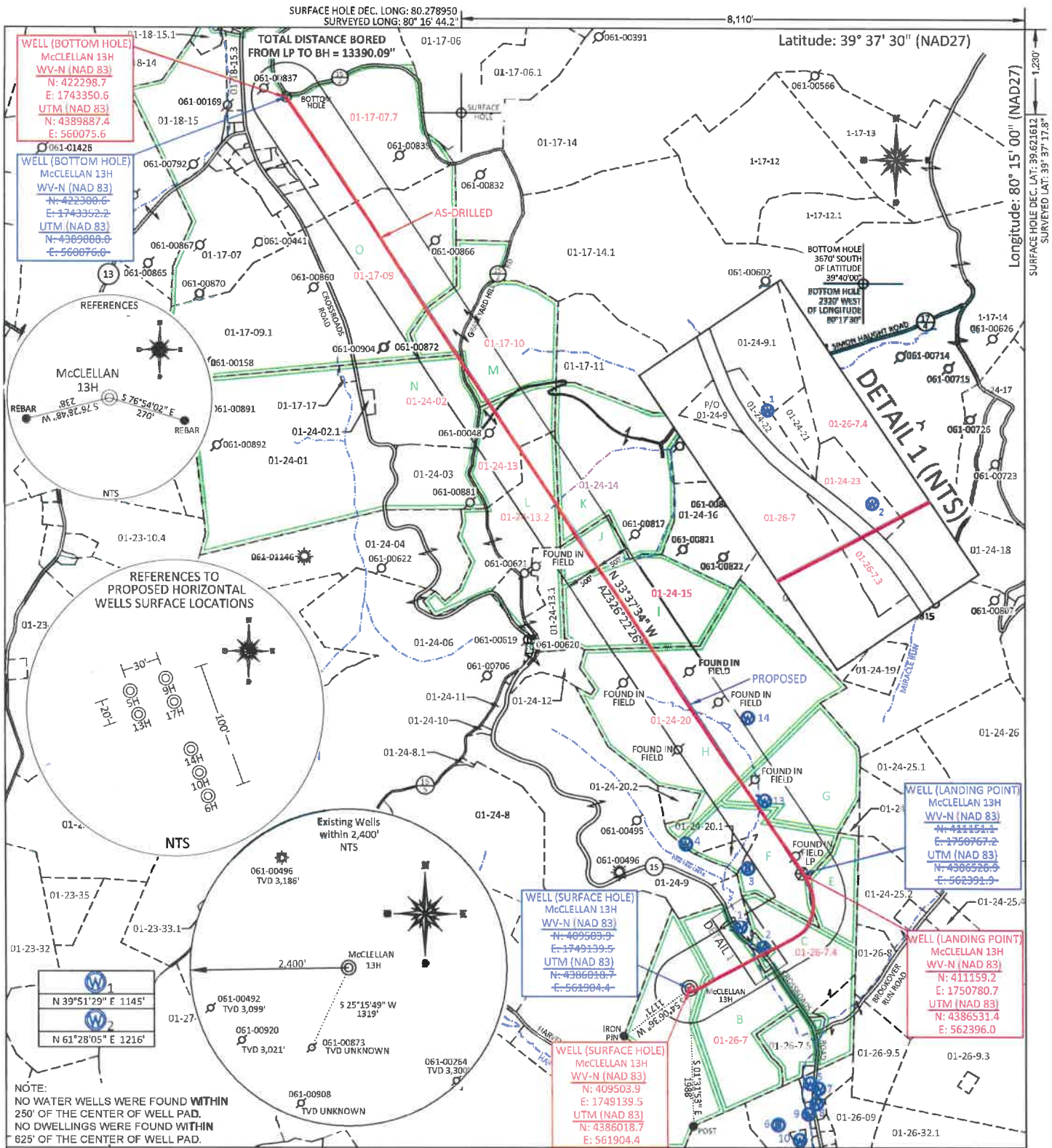
I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.  
 Signed: [Signature]  
 L.L.S. #2124 : Ernest J. Benchek III



(+) 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: ALYCEMARIE MCCLELLAN & MICHELLE D. MOORE  
 OIL & GAS ROYALTY OWNER: Barbara June Sutton, et al  
 LEASE NUMBERS: \_\_\_\_\_  
 TARGET FORMATION: MARCELLUS  
 WELL OPERATOR: NORTHEAST NATURAL ENERGY LLC  
 ADDRESS: 707 VIRGINIA STREET EAST, SUITE 1200  
 CITY: CHARLESTON STATE: WV ZIP CODE: 25301

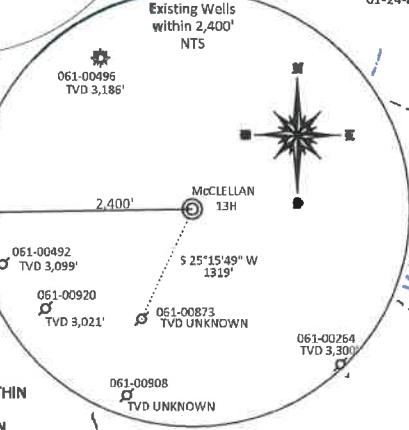
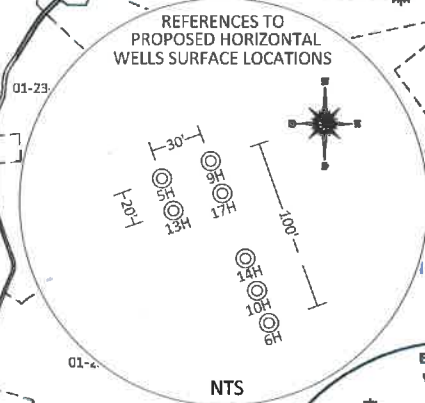
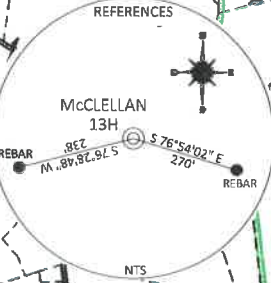
DATE: JULY 10, 2020  
 OPERATOR'S WELL #: McCLELLAN 13H AS-DRILLED  
 API WELL #: 47 61 01821  
 STATE COUNTY PERMIT  
 AS-BUILT ELEVATION: 1,411.7'  
 QUADRANGLE: MANNINGTON  
 ACREAGE: 986.28 +/-  
 ACREAGE: 129.4 +/-  
 DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE   
 PLUG OFF FORMATION  PERFORATE NEW FORMATION  PLUG & ABANDON   
 CLEAN OUT & REPLUG  OTHER CHANGE  (SPECIFY): \_\_\_\_\_  
 ESTIMATED DEPTH: TVD: 8,078' TMD: 22,838'  
 DESIGNATED AGENT: JOHN ADAMS  
 ADDRESS: 707 VIRGINIA STREET EAST, SUITE 1200  
 CITY: CHARLESTON STATE: WV ZIP CODE: 25301





**WELL (BOTTOM HOLE)**  
 McCLELLAN 13H  
 WV-N (NAD 83)  
 N: 422298.7  
 E: 1743350.6  
 UTM (NAD 83)  
 N: 4389887.4  
 E: 560075.6

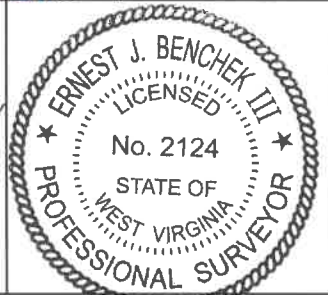
**WELL (BOTTOM HOLE)**  
 McCLELLAN 13H  
 WV-N (NAD 83)  
 N: 422298.6  
 E: 1743352.2  
 UTM (NAD 83)  
 N: 4389888.0  
 E: 560076.0



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 #: NNE14  
 DRAWING #: 2972  
 SCALE: PLAT: 1" = 2000'  
TRCK: 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY: 1/200  
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 Signed:   
 L.L.S. #2124 : Ernest J. Benchek III



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
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DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE   
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