

WR-35
Rev. 8/23/13

RECEIVED
Office of Oil and Gas

Page ___ of ___

MAY - 1 2020

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

WV Department of
Environmental Protection

API 47 - 061 - 01850 County Monongalia District Clay
Quad Blacksville, WV Pad Name Lemley Field/Pool Name _____
Farm name Clarence W. Jr. & Charlotte E. Lemley Well Number 2H
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 4391571.3 Easting 573975.5
Landing Point of Curve Northing 4391329.9 Easting 573800.5
Bottom Hole Northing 4388189.0 Easting 575880.1

Elevation (ft) 1,539' 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 8/29/2019 Date drilling commenced 9/19/2019 Date drilling ceased 11/22/2019
Date completion activities began 1/12/2020 Date completion activities ceased 2/1/2020
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 440', 1,060' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 2,140' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 500', 630', 740', 1,060' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by:
David Kulp
6/5/2020

API 47-061 - 01850 Farm name Clarence W. Jr. & Charlotte E. Lemley Well number 2H

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"	40'	N		NA	Y, CTS
Surface	17.5"	13-3/8"	1,312'	N	54.5	NA	Top job 15 bbl
Coal							
Intermediate 1	12.25"	9-5/8"	2,553'	N	36	NA	Y, 30 bbl
Intermediate 2							
Intermediate 3							
Production	8.5"	5.5"	21,061'	N	20	NA	N
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	36				CTS	48
Surface	Class A	1,200	15.6	1.31	1,572	CTS	8
Coal							
Intermediate 1	Class A	980	15.6	1.23	1,212	CTS	8
Intermediate 2							
Intermediate 3							
Production	Class A	3,870	14.5	1.16	4,479	2,155'	48
Tubing							

Drillers TD (ft) 21,084' Loggers TD (ft) 21,054'
 Deepest formation penetrated Marcellus Plug back to (ft) NA
 Plug back procedure NA

Kick off depth (ft) 7,288'

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 _____

Lemley 2H Perforation Information

Stage Number	Report Date	Cluster 5 Bottom TD	Cluster 1 Top TD	Total Shots
1	1/11/20	20,929	0	0
2	1/12/20	20,724	20,885	40
3	1/12/20	20,521	20,681	40
4	1/12/20	20,317	20,478	40
5	1/13/20	20,114	20,274	40
6	1/13/20	19,910	20,071	40
7	1/13/20	19,707	19,867	40
8	1/14/20	19,503	19,664	40
9	1/14/20	19,300	19,460	40
10	1/15/20	19,096	19,257	40
11	1/15/20	18,893	19,053	40
12	1/15/20	18,689	18,850	40
13	1/16/20	18,486	18,646	40
14	1/16/20	18,282	18,443	40
15	1/17/20	18,079	18,239	40
16	1/17/20	17,875	18,036	40
17	1/17/20	17,672	17,832	40
18	1/17/20	17,468	17,629	40
19	1/18/20	17,265	17,425	40
20	1/18/20	17,061	17,222	40
21	1/18/20	16,857	17,018	40
22	1/19/20	16,654	16,815	40
23	1/19/20	16,450	16,611	40
24	1/19/20	16,247	16,408	40
25	1/20/20	16,043	16,204	40
26	1/20/20	15,840	16,001	40
27	1/21/20	15,636	15,797	40
28	1/21/20	15,433	15,594	40
29	1/21/20	15,229	15,390	40
30	1/22/20	15,026	15,187	40
31	1/22/20	14,822	14,983	40
32	1/22/20	14,619	14,780	40
33	1/23/20	14,415	14,576	40
34	1/23/20	14,212	14,373	40
35	1/23/20	14,008	14,169	40
36	1/24/20	13,805	13,966	40
37	1/24/20	13,601	13,762	40
38	1/24/20	13,398	13,559	40
39	1/25/20	13,194	13,355	40
40	1/25/20	12,991	13,152	40
41	1/25/20	12,787	12,948	40
42	1/26/20	12,584	12,745	40
43	1/26/20	12,380	12,541	40
44	1/26/20	12,177	12,338	40
45	1/27/20	11,973	12,134	40
46	1/27/20	11,770	11,931	40
47	1/28/20	11,566	11,727	40
48	1/28/20	11,363	11,524	40
49	1/28/20	11,159	11,320	40
50	1/29/20	10,956	11,117	40
51	1/29/20	10,752	10,913	40
52	1/29/20	10,549	10,709	40
53	1/30/20	10,345	10,506	40
54	1/30/20	10,142	10,302	40
55	1/30/20	9,938	10,099	40
56	1/31/20	9,938	9,895	40
57	1/31/20	9,531	9,692	40
58	1/31/20	9,328	9,488	40
59	2/1/20	9,124	9,285	40
60	2/1/20	8,921	9,081	40
61	2/1/20	8,717	8,878	40
62	2/1/20	8,513	8,674	40

Lemley 2H 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	1/11/20	5,346	7,187	9,083	84	714	7,433	301,560	466
2	1/12/20	5,940	7,614	9,552	86	80	10,476	490,480	463
3	1/12/20	5,234	5,812	9,455	80	156	11,876	500,540	459
4	1/12/20	5,000	6,209	9,852	79	158	11,301	500,660	454
5	1/13/20	5,940	6,336	9,320	87	44	10,575	500,620	450
6	1/13/20	5,066	6,314	9,385	81	29	11,420	493,020	446
7	1/13/20	5,695	6,186	9,045	84	127	10,518	500,960	441
8	1/14/20	6,004	6,240	9,342	90	61	10,635	500,220	438
9	1/14/20	6,020	4,534	9,005	84	102	10,377	500,660	432
10	1/15/20	5,827	6,343	9,290	80	51	10,169	498,100	428
11	1/15/20	5,855	6,620	9,742	90	71	9,956	500,480	425
12	1/15/20	5,711	6,476	9,240	80	28	9,878	497,040	850
13	1/16/20	5,847	6,644	9,744	87	79	10,428	499,500	415
14	1/16/20	5,463	6,459	9,441	84	60	10,307	500,490	408
15	1/17/20	5,969	6,372	9,133	83	34	10,259	502,680	404
16	1/17/20	6,280	7,139	9,601	86	80	10,340	500,720	400
17	1/17/20	6,135	6,951	9,679	86	46	10,033	486,580	395
18	1/17/20	6,363	6,903	9,167	79	65	10,167	501,280	391
19	1/18/20	5,966	6,180	9,365	88	58	10,133	500,780	388
20	1/18/20	6,178	6,485	9,329	87	63	10,013	500,760	382
21	1/18/20	6,252	6,152	8,909	86	25	9,913	500,400	378
22	1/19/20	6,009	6,571	9,468	89	36	10,123	500,680	375
23	1/19/20	6,115	6,156	9,187	90	70	10,767	500,340	368
24	1/19/20	5,460	6,012	8,862	83	21	9,761	503,860	364
25	1/20/20	5,933	6,155	8,997	89	47	10,192	500,960	360
26	1/20/20	6,109	6,424	9,102	84	110	10,106	500,500	355
27	1/21/20	5,729	6,054	8,716	84	58	9,651	500,420	351
28	1/21/20	5,866	6,559	9,232	89	103	10,283	502,180	350
29	1/21/20	5,670	6,258	8,981	84	75	9,521	500,480	342
30	1/22/20	6,174	6,017	8,746	83	48	9,161	501,780	337
31	1/22/20	6,047	6,321	9,031	86	25	10,164	500,240	336
32	1/22/20	6,457	6,184	8,828	83	50	9,519	487,880	328
33	1/23/20	5,757	6,187	9,051	88	29	10,165	473,140	329
34	1/23/20	6,136	5,841	8,659	87	25	10,955	500,480	325
35	1/23/20	5,712	5,885	8,625	85	26	9,652	505,140	315
36	1/24/20	6,103	6,226	8,757	92	36	9,871	500,700	310
37	1/24/20	6,155	6,516	8,835	88	30	10,336	500,460	312
38	1/24/20	5,718	6,168	8,368	85	36	9,619	500,500	305
39	1/25/20	6,195	6,049	9,481	81	27	16,204	505,620	307
40	1/25/20	6,343	6,469	8,216	85	75	9,658	500,160	293
41	1/25/20	5,655	6,262	8,584	88	46	9,572	500,700	289
42	1/26/20	6,029	6,391	8,614	89	31	10,142	504,200	293
43	1/26/20	6,025	6,087	8,509	90	34	10,100	500,380	284
44	1/26/20	6,071	5,988	8,115	85	21	9,602	500,720	274
45	1/27/20	5,984	6,155	8,269	90	48	9,460	500,600	270
46	1/27/20	6,136	7,629	8,252	89	93	9,644	501,620	265
47	1/28/20	6,190	6,506	8,823	89	40	10,319	500,510	259
48	1/28/20	6,249	6,434	8,425	90	34	10,243	501,300	255
49	1/28/20	6,093	6,366	8,698	90	61	9,405	500,620	251
50	1/29/20	5,998	6,544	8,536	90	83	9,510	500,870	246
51	1/29/20	5,315	6,848	8,647	87	24	10,219	500,400	242
52	1/29/20	5,488	6,029	8,515	89	59	9,533	500,780	238
53	1/30/20	5,878	7,233	8,458	90	76	9,321	500,040	233
54	1/30/20	6,216	6,034	8,108	90	31	10,130	496,920	228
55	1/30/20	5,804	5,993	8,111	90	73	9,440	500,380	226
56	1/31/20	6,331	5,565	8,026	90	56	9,451	500,000	220
57	1/31/20	6,467	6,083	8,081	90	88	10,109	500,440	214
58	1/31/20	6,509	5,600	8,120	90	57	9,324	497,940	212
59	2/1/20	5,846	5,500	8,029	89	331	9,005	503,560	207
60	2/1/20	6,229	6,191	7,935	90	42	10,015	499,460	202
61	2/1/20	6,089	6,642	8,322	87	33	10,808	484,780	196
62	2/1/20		15	7,781	90	231	9,726	507,600	0

Lemley 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	180	Sand/silt
silt/red shale	180	390	silt/red shale
siltstone/sandstone/limestone	390	440	siltstone/sandstone/limestone
limestone/siltstone/sandstone	440	500	limestone/siltstone/sandstone
coal	500	510	coal
siltstone/limestone/shale	510	630	siltstone/limestone/shale
coal	630	640	coal
siltstone/sandstone	640	740	siltstone/sandstone
coal	740	750	coal
sandstone/siltstone/limestone	750	1060	sandstone/siltstone/limestone
coal-Pittsburgh	1060	1070	coal-Pittsburgh
sandstone/limestone	1070	1190	sandstone/limestone
red shale/siltstone	1190	1480	red shale/siltstone
Limestone/siltstone	1480	1730	Limestone/siltstone
sandstone	1730	1860	sandstone
sandstone/siltstone/red shale	1860	2050	sandstone/siltstone/red shale
siltstone/sandstone	2050	2110	siltstone/sandstone
sandstone	2110	2140	sandstone
sandstone/siltstone/red shale	2140	2300	sandstone/siltstone/red shale
Big Lime	2300	2420	Big Lime
Big Injun Sandstone	2420	2520	Big Injun Sandstone
siltstone/sandstone	2520	2810	siltstone/sandstone
Berea Sandstone	2810	2820	Berea Sandstone
Upper Devonian Sands/silts	2820	3350	Upper Devonian Sands/silts
shale/siltstone	3350	7514	shale/siltstone
Middlesex shale/silt	7514	7737	Middlesex shale/silt
Burkett shale	7737	7918	Burkett shale
Geneseo shale	7918	7969	Geneseo shale
Tully Limestone	7969	8044	Tully Limestone
Hamilton shale	8044	8129	Hamilton shale
Marcellus shale	8129	TD	Marcellus shale



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:	09/20/19	09/20/19	09/21/19	
Time:	4:00pm	6:32pm	6:30am	8:00am

Customer and Well Information					
Customer: NORTHEAST		Well Name: LEMELY		Well #: 2H	Well Type: GAS
County:	State: WV	AFE #/API #: 100366-602		PO #/Permit #:	Well Class:
Field:		Lease: LEMLEY		Rig Name/# : Dicker rig 8	
Wellbore Information					
Bit Size (Inches): 17.5	Well MD (ft):	Well TVD (ft): 1316	BHST (F°):	BHCT (F°):	Deviation (°):
Drilling Fluid Type:	Drilling Fluid Density (ppg):		Packer Depth (ft):	Treating Down:	
Previous Casing/Liner					
Size (Inches): 24	Weight (lb/ft):	Thread:	Grade:	Total Footage (ft): 50	
Casing/Liner/Tubing					
Size (Inches): 13 3/8	Weight (lb/ft): 54.5	Thread:	Grade:	Total Footage (ft): 1312	
Job					
Job Type:		Connection to Well: YES		Top Plug: YES	
Lift Pressure (PSI): 500	Max Annulus Pressure (PSI):		Mix Water Temp (F°):	Bottom Plug: No	
Casing/Tubing Secured : YES		Pipe Rotated: No	Cement Return to Surface (bbl): no	Top Job (bbl): 161 bbl 15 bbl back	
Pipe Reciprocated : No	Circulation Lost: yes	Job Completed: no			



Ticket #: 0

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

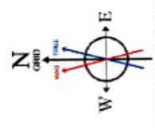
Job Times				
On Loc:	Job Start:	Job End:	Off Loc:	
Date: 09/23/19	09/23/19	09/23/19	09/23/19	
Time: 5:00pm	6:00pm	8:30pm	10:00pm	

Customer and Well Information					
Customer: NORTHEAST		Well Name: LEMELY		Well #: 2H	Well Type: GAS
County:	State: WV	AFE #/API #: 100366-602		PO #/Permit #:	Well Class:
Field:		Lease: LEMLEY		Rig Name/# : Dicker rig 8	
Wellbore Information					
Bit Size (Inches): 12 3/8	Well MD (ft):	Well TVD (ft): 2620	BHST (F°):	BHCT (F°):	Deviation (°):
Drilling Fluid Type:	Drilling Fluid Density (ppg):		Packer Depth (ft):	Treating Down:	
Previous Casing/Liner					
Size (Inches): 13 3/8	Weight (lb/ft): 54.5	Thread:	Grade:	Total Footage (ft): 1312	
Casing/Liner/Tubing					
Size (Inches): 9 5/8	Weight (lb/ft): 36	Thread:	Grade:	Total Footage (ft): 2553	
Job					
Job Type:		Connection to Well: YES		Top Plug: YES	
Lift Pressure (PSI): 1314	Max Annulus Pressure (PSI):		Mix Water Temp (F°):	Bottom Plug: No	
Casing/Tubing Secured : YES		Pipe Rotated: No	Cement Return to Surface (bbl): 30 bbl	Top Job (bbl):	
Pipe Reciprocated : No	Circulation Lost: no	Job Completed: yes			

NORTHEAST NATURAL ENERGY, LLC

Location: Monongalia County, WV
 Field: Monongalia
 Facility: Lemley Pad
 Slot: Slot 2H
 Well: Lemley 2H
 Wellbore: Lemley 2H PWB

True vertical depths are referenced to Patterson 334 (KB)	Grid System: NAD83 / Lambert West Virginia SP, Northern Zone (4701), US feet
Reference wellbore measured depths are referenced to Patterson 334 (KB)	North Reference: Q44 north
Patterson 334 (KB) to Mean Sea Level: 1559 feet	Scale: True distance
Mean Sea Level to Ground level (At Slot: Slot 2H): -1534 feet	Coordinates are in feet referenced to Slot
Offset wellbore MWDs are referenced to each path's datum MD datum	Depths are in feet
	Created by: atgpc on 2018-11-20; Database: WA_MPL_EASTERNUS_Dein



User specified Dip: 66.64° Field: 52120 nT
 Magnetic North is 9.18 degrees West of True North at 11/14/2019
 To correct azimuth from True to Grid add 0.41 degrees
 To correct azimuth from Magnetic to Grid subtract 8.77 degrees

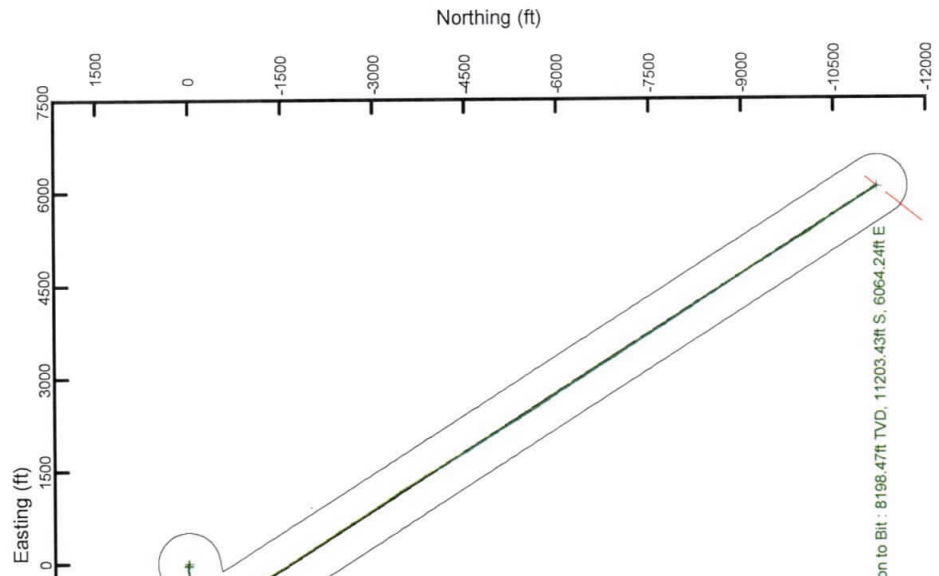


Location Information

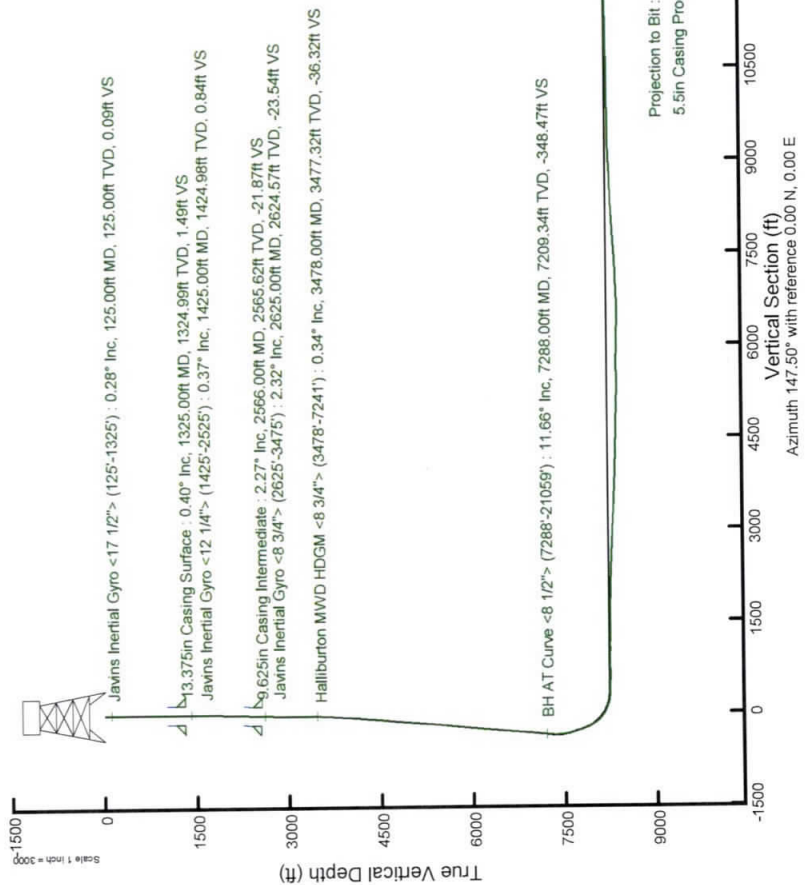
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Lemley Pad	1789033.100	427062.900	39°40'14.7439"N	80°08'15.2590"W
Local N (ft)	Local E (ft)	Grid North (US ft)	Latitude	Longitude
-0.94	19.96	427061.963	39°40'14.7360"N	80°08'15.0035"W
Patterson 334 (KB) to Ground level (At Slot: Slot 2H)			25ft	
Mean Sea Level to Ground level (At Slot: Slot 2H)			-1534ft	
Patterson 334 (KB) to Mean Sea Level			1559ft	

Comments

API: 47-061-01850-0000
 BH Job #: 110087541A
 Rig: Patterson 334
 Duration: 11/15/2019 - 11/20/2019



Javins Inertial Gyro <17 1/2"> (125°-1325') : 125.00ft TVD, 0.06ft N, 0.24ft E
 Javins Inertial Gyro <12 1/4"> (1425°-2525') : 1424.98ft TVD, 0.31ft S, 1.07ft E
 Javins Inertial Gyro <8 3/4"> (2625°-3475') : 2624.57ft TVD, 11.40ft N, 25.92ft W
 Halliburton MWD HDGM <8 3/4"> (3478°-7241') : 3477.32ft TVD, 14.54ft N, 44.78ft W
 BH AT Curve <8 1/2"> (7288°-21059') : 7209.34ft TVD, 85.31ft S, 782.46ft W



Javins Inertial Gyro <17 1/2"> (125°-1325') : 0.28° Inc, 125.00ft MD, 125.00ft TVD, 0.09ft VS
 13.375in Casing Surface : 0.40° Inc, 1325.00ft MD, 1324.99ft TVD, 1.49ft VS
 Javins Inertial Gyro <12 1/4"> (1425°-2525') : 0.37° Inc, 1425.00ft MD, 1424.98ft TVD, 0.64ft VS
 4 1/2 in Casing Intermediate : 2.27° Inc, 2566.00ft MD, 2565.62ft TVD, -21.87ft VS
 Javins Inertial Gyro <8 3/4"> (2625°-3475') : 2.32° Inc, 2625.00ft MD, 2624.57ft TVD, -23.54ft VS
 Halliburton MWD HDGM <8 3/4"> (3478°-7241') : 0.34° Inc, 3478.00ft MD, 3477.32ft TVD, -36.32ft VS

BH AT Curve <8 1/2"> (7288°-21059') : 11.66° Inc, 7288.00ft MD, 7209.34ft TVD, -348.47ft VS

Projection to Bit : 91.51° Inc, 21084.00ft MD, 8198.47ft TVD, 12707.20ft VS
 5.5in Casing Production : 91.51° Inc, 21084.00ft MD, 8198.47ft TVD, 12707.20ft VS

Vertical Section (ft)
 Azimuth 147.50° with reference 0.00 N, 0.00 E

Scale 1 inch = 3000

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	1/11/2020
Job End Date:	2/1/2020
State:	West Virginia
County:	Monongalia
API Number:	47-061-01850-00-00
Operator Name:	Northeast Natural Energy LLC
Well Name and Number:	Lemley 2H
Latitude:	39.67076000
Longitude:	-80.13750100
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	8,395
Total Base Water Volume (gal):	27,091,005
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	Water	7732-18-5	100.00000	87.76781	None
Sand (100 Mesh Proppant)	ProFrac	Proppant	Silica Substrate	14808-60-7	100.00000	8.36943	None
Sand (40/70 White Proppant)	ProFrac	Proppant	Silica Substrate	14808-60-7	100.00000	3.57436	None
Hydrochloric Acid (7.5%)	PVS	Acidizing	Water	7732-18-5	85.00000	0.17166	None
			Hydrochloric Acid (Hydrogen Chloride)	7647-01-0	36.00000	0.07270	None
StimSTREAM FR 9800	ChemStream	Friction Reducer	Butene, homopolymer	9003-29-6	25.00000	0.01219	None
			Alkanes, C16-20-iso-	90622-59-6	25.00000	0.01219	None
			Ethoxylated alcohols (C12-18)	68213-23-0	3.00000	0.00146	None
Clearal 268	ChemStream	Biocide	Non-hazardous substances	Proprietary	90.00000	0.01627	None

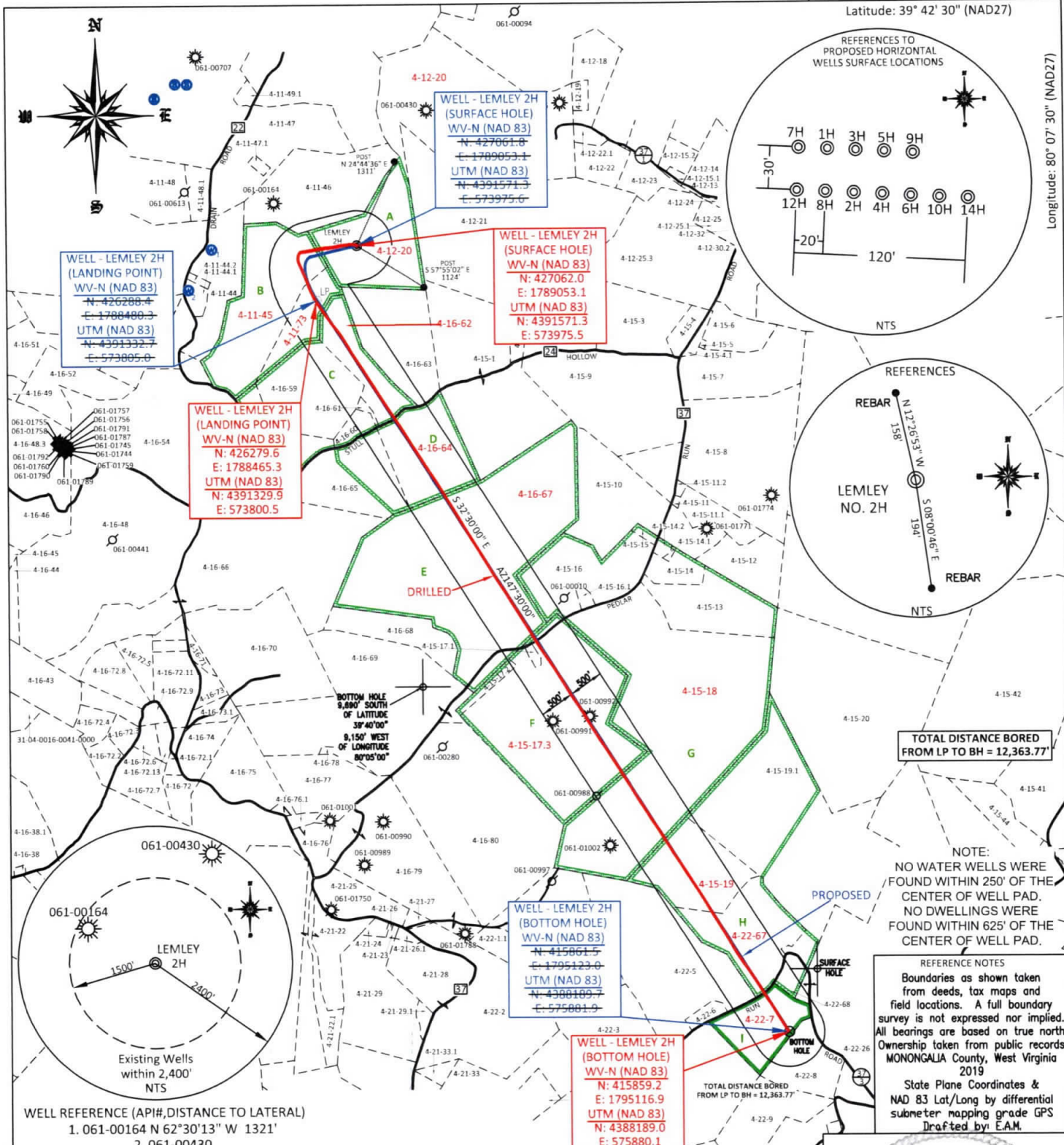
				111-30-8	20.00000	0.00362	None
				7173-51-5	3.00000	0.00054	None
				68391-01-5	3.00000	0.00054	None
StimSTREAM SC-398	ChemStream	Scale Inhibitor		Proprietary	100.00000	0.01831	None
				34690-00-1	10.00000	0.00183	None
ProFE 105	ProFrac	Iron Control					
				77-92-9	50.50000	0.00038	None
				7732-18-5	49.50000	0.00038	None
ProHib 100	ProFrac	Acid Inhibitor					
				67-56-1	45.00000	0.00024	None
				107-21-1	20.00000	0.00011	None
				119-65-3	15.00000	0.00008	None
				7732-18-5	10.00000	0.00005	None
				68-12-2	10.00000	0.00005	None
				111-76-2	5.00000	0.00003	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					
				7732-18-5	85.00000	0.17166	
				Proprietary	100.00000	0.01831	
				Proprietary	90.00000	0.01627	
				9003-29-6	25.00000	0.01219	
				68213-23-0	3.00000	0.00146	
				7173-51-5	3.00000	0.00054	
				68391-01-5	3.00000	0.00054	
				7732-18-5	49.50000	0.00038	
				107-21-1	20.00000	0.00011	
				119-65-3	15.00000	0.00008	
				7732-18-5	10.00000	0.00005	
				68-12-2	10.00000	0.00005	
				111-76-2	5.00000	0.00003	

* 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%

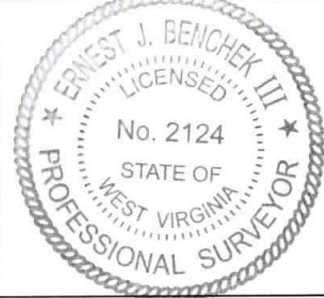
Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided. Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

SURFACE HOLE DEC. LONG: 80.137709 SURVEYED LONG: 80°08'15.8" Longitude: 80° 07' 30" (NAD27)



FILE #: NEE14
 DRAWING #: 2900
 SCALE: 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

DATE: APRIL 20, 2020
 OPERATOR'S WELL #: LEMLEY 2H AS-DRILLED
 API WELL #: 47 61 01850
 STATE COUNTY PERMIT
 AS-BUILT ELEVATION: 1,539.47'

Well Type: Oil Waste Diposal Production Deep
 Gas Liquid Injection Storage Shallow

WATERSHED: DUNKARD CREEK
 COUNTY/DISTRICT: MONONGALIA / CLAY
 SURFACE OWNER: CLARENCE W. LEMLEY JR. & CHARLOTTE E. LEMLEY
 OIL & GAS ROYALTY OWNER: LEROY TENNANT, et al
 LEASE NUMBERS: _____

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
 AS-DRILLED DEPTH: TVD: 8,198' TMD: 21,084'
 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