

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

RECEIVED
Office Of Oil and Gas

OCT 10 2023

API 47 - 061 - 01889 County Monongalia District Battelle WV Department of
Quad Mannington Pad Name McClellan Field/Pool Name Environmental Protection
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

APPROVED

Reviewed by:
MSK 1/2/24
02/09/2024

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 _____

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

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
	See attached				

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
See	Attached							

Please insert additional pages as applicable.

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

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>Marcellus</u>	<u>8,064'</u> TVD	<u>19,050'</u> MD
_____	_____	_____
_____	_____	_____
_____	_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface _____ psi Bottom Hole 2,426 psi DURATION OF TEST 24 hrs

OPEN FLOW Gas 1,772 mcfpd Oil _____ bpd NGL _____ bpd Water _____ bpd
 GAS MEASURED BY Estimated Orifice Pilot

LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
Attached	0		0		

Please insert additional pages as applicable.

Drilling Contractor Patterson UTI
 Address 4000 Town Center Blvd, Suite 240 City Canonsburg State PA Zip 15317

Logging Company Baker Hughes
 Address 837 Phillippi Pike City Clarksburg State WV Zip 26301

Cementing Company NextTier
 Address 4000 Town Center Blvd City Canonsburg State PA Zip 15317

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

Please insert additional pages as applicable.

Completed by Hollie Medley Telephone 304-212-0422
 Signature Title Regulatory Manager Date 9-28-03

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

02/09/2024

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

02/09/2024

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

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

02/09/2024

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

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

02/09/2024

FILE #: NEE14

DRAWING #: 2968

SCALE: N/A

DATE: SEPTEMBER 28, 2023

OPERATOR'S WELL #: McCLELLAN 12H

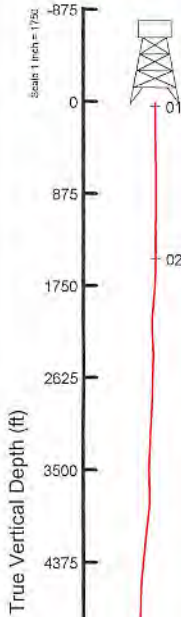
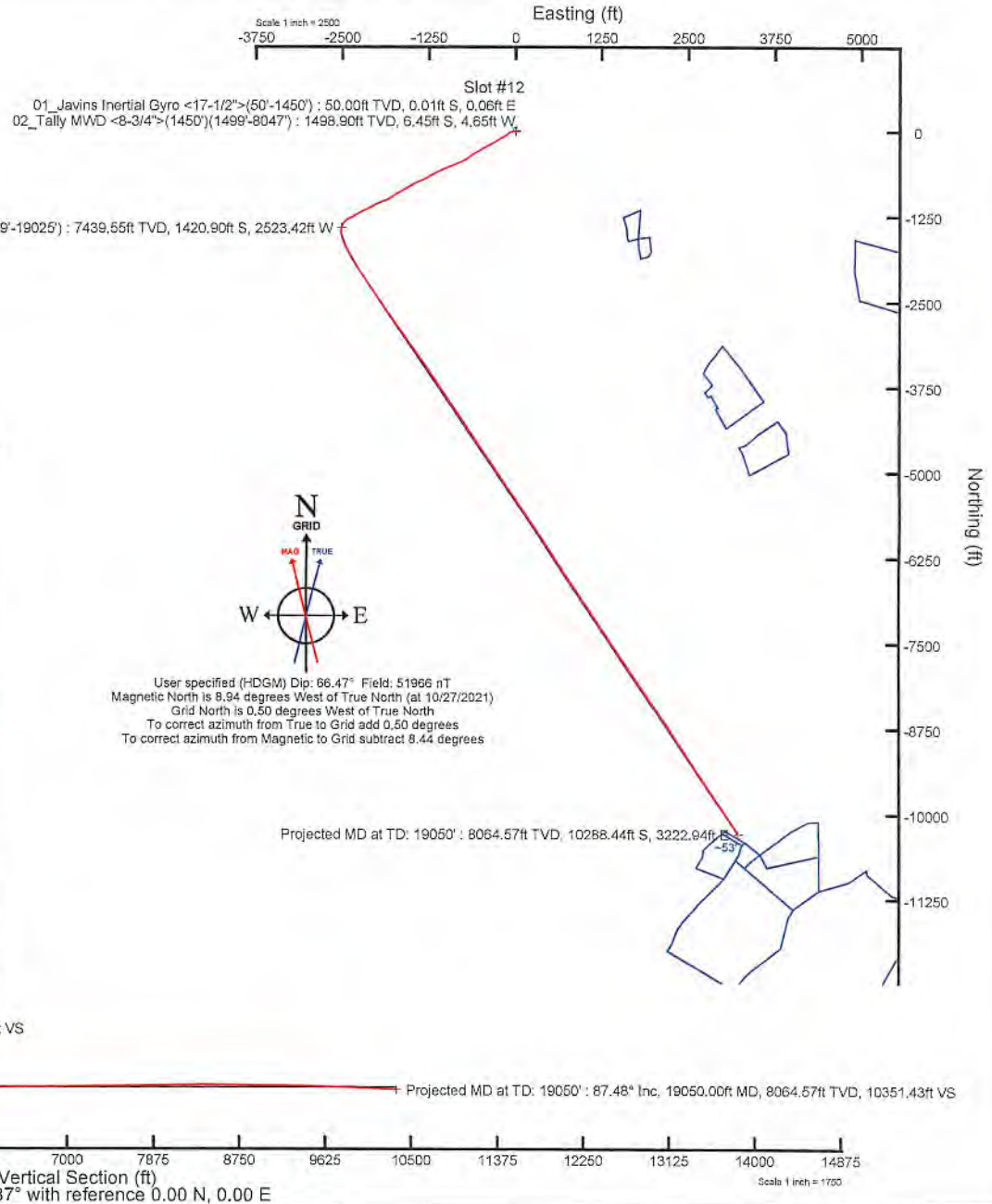
API WELL #: 47 61 01899
STATE COUNTY PERMIT

NORTHEAST NATURAL ENERGY, LLC

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

Slot: Slot #12
 Well: McClellan 12H
 Wellbore: McClellan 12H PWB

API: 47-061-01889-0000
 BH Job #: 111066128
 Rig: Patterson 277
 Duration: 10/27/21 - 11/2/21



Plot reference wellbore is McClellan 12H PWP Rev-A.0	Log System: AAD8 / Lambert West Uprate 07 Northern Zone (RTD) US Stat
True vertical depths are referenced to Patterson 277 (RKB)	North Reference: Grid North
Reference wellbore measured depths are referenced to Patterson 277 (RKB)	Scale: True distance
Patterson 277 (RKB) to Mean Sea Level: 1483 feet	Coordinates are in feet referenced to Grid
Mean Sea Level to Ground level (At Slot: Slot #12) : -1412 feet	Datum: sea in feet
Offset wellbore MDs are referenced to each well's initial MD station	Created by: Baker Hughes (2021-11-02) Database: USL_WPL_KA11842021_001

Slot	Well	Wellbore	Wellpath
Slot #12	McClellan 12H	McClellan 12H AWB	McClellan 12H AWB Proj 19050'
Slot #12	McClellan 12H	McClellan 12H PWB	McClellan 12H PWP Rev-A.0

Location Information						
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude		
McClellan Pad	1749185.000	409485.900	39°37'18.02117N	50°19'42.81867W		
Slot	Local N (ft)	Local E (ft)	Grid North (US ft)	Latitude	Longitude	
Slot #12	-29.70	-32.10	1749152.900	409466.200	39°37'17.72487N	50°19'43.32567W
Patterson 277 (RKB) to Ground level (At Slot: Slot #12)			28ft			
Mean Sea Level to Ground level (At Slot: Slot #12)			-1412ft			
Patterson 277 (RKB) to Mean Sea Level			1440ft			

Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (%/100ft)	VS (ft)
Tie On	8047.00	27.970	208.990	7331.25	-1387.89	-2505.42	6.26	-248.62
Proj. to Bottom	8113.00	28.330	197.080	7389.46	-1396.97	-2517.05	7.10	-231.10
End of 3D Arc	8451.21	28.848	164.550	7638.52	-1352.46	-2519.04	4.54	-102.40
Landing Pt.	8170.11	30.900	146.373	8040.00	-2371.03	-2246.11	8.75	480.46
BHL	16041.82	90.000	146.373	8040.00	-10280.94	3220.69	0.00	10352.26





Actual Wellpath Report

McClellan 12H AWP Proj: 19050'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	McClellan 12H
Field	Monongalia	API/Legal	
Facility	McClellan Pad	Wellbore	McClellan 12H AWB
Slot	Slot #12		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert West Virginia SP, Northern Zone (4701), US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Hilpthop
Scale	0.999941	Report Generated	11/3/2021 at 4:17:23 PM
Convergence at slot	0.50° West	Database	WA_MPL_EASTERNUS_Defn

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-29.70	-32.10	1749152.90	409466.20	39°37'17.7248"N	80°16'43.3256"W
Facility Reference Pt			1749185.00	409495.90	39°37'18.0211"N	80°16'42.9186"W
Field Reference Pt			1777685.71	440640.65	39°42'28.1140"N	80°10'41.6900"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Patterson 277 (RKB) to Facility Vertical Datum	1440.00ft
Horizontal Reference Pt	Slot	Patterson 277 (RKB) to Mean Sea Level	1440.00ft
Vertical Reference Pt	Patterson 277 (RKB)	Patterson 277 (RKB) to Ground Level at Slot (Slot #12)	28.00ft
MD Reference Pt	Patterson 277 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	146.37°



Actual Wellpath Report

McClellan 12H AWP Proj: 19050'

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REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	McClellan 12H
Field	Monongalia	API/Legal	
Facility	McClellan Pad	Wellbore	McClellan 12H AWB
Slot	Slot #12		

WELLPATH DATA (220 stations) † = interpolated, ‡ = extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
0.00†	0.000	97.100	0.00	0.00	0.00	0.00	1749152.90	409466.20	39°37'17.7248"N	80°16'43.3256"W	0.00	0.000	0.00	0.00	0.00
28.00	0.000	97.100	28.00	0.00	0.00	0.00	1749152.90	409466.20	39°37'17.7248"N	80°16'43.3256"W	0.00	0.000	0.00	0.00	0.00
50.00	0.300	97.100	50.00	0.04	-0.01	0.06	1749152.96	409466.19	39°37'17.7247"N	80°16'43.3248"W	0.06	97.100	1.36	1.36	0.00
100.00	0.070	174.200	100.00	0.15	-0.05	0.19	1749153.09	409466.15	39°37'17.7243"N	80°16'43.3231"W	0.20	105.767	0.58	-0.46	154.20
150.00	0.200	165.900	150.00	0.26	-0.17	0.21	1749153.11	409466.03	39°37'17.7231"N	80°16'43.3228"W	0.27	128.188	0.26	0.26	-16.60
200.00	0.280	113.500	200.00	0.44	-0.30	0.35	1749153.25	409465.90	39°37'17.7218"N	80°16'43.3211"W	0.46	130.976	0.45	0.16	-104.80
250.00	0.530	109.700	250.00	0.73	-0.43	0.68	1749153.58	409465.77	39°37'17.7206"N	80°16'43.3169"W	0.80	122.325	0.50	0.50	-7.60
300.00	0.710	115.300	299.99	1.18	-0.64	1.18	1749154.08	409465.56	39°37'17.7186"N	80°16'43.3105"W	1.34	118.535	0.38	0.36	11.20
350.00	0.740	122.500	349.99	1.74	-0.94	1.73	1749154.63	409465.26	39°37'17.7156"N	80°16'43.3034"W	1.97	118.676	0.19	0.06	14.40
400.00	0.850	131.700	399.99	2.40	-1.37	2.28	1749155.18	409464.83	39°37'17.7115"N	80°16'43.2963"W	2.65	120.945	0.34	0.22	18.40
450.00	0.860	135.400	449.98	3.12	-1.88	2.82	1749155.72	409464.32	39°37'17.7065"N	80°16'43.2894"W	3.39	123.702	0.11	0.02	7.40
500.00	0.990	163.400	499.97	3.91	-2.56	3.20	1749156.10	409463.64	39°37'17.6998"N	80°16'43.2843"W	4.10	128.625	0.93	0.26	56.00
550.00	0.950	174.700	549.97	4.68	-3.39	3.37	1749156.27	409462.81	39°37'17.6916"N	80°16'43.2822"W	4.77	135.178	0.39	-0.08	22.60
600.00	1.010	188.100	599.96	5.38	-4.24	3.34	1749156.24	409461.96	39°37'17.6832"N	80°16'43.2824"W	5.40	141.727	0.47	0.12	26.80
650.00	0.940	189.700	649.95	5.95	-5.06	3.14	1749156.04	409461.14	39°37'17.6751"N	80°16'43.2849"W	5.95	148.155	0.42	-0.14	23.20
700.00	1.010	207.500	699.95	6.41	-5.84	2.80	1749155.70	409460.37	39°37'17.6674"N	80°16'43.2891"W	6.47	154.366	0.30	0.14	15.60
750.00	0.730	221.200	749.94	6.71	-6.47	2.39	1749155.29	409459.73	39°37'17.6611"N	80°16'43.2943"W	6.89	159.739	0.69	-0.56	27.40
800.00	0.730	241.700	799.94	6.76	-6.86	1.90	1749154.80	409459.34	39°37'17.6572"N	80°16'43.3006"W	7.11	164.539	0.52	0.00	41.00
850.00	0.580	266.800	849.93	6.60	-7.02	1.36	1749154.26	409459.18	39°37'17.6555"N	80°16'43.3074"W	7.15	169.012	0.64	-0.30	50.20
900.00	0.450	305.900	899.93	6.29	-6.92	0.95	1749153.85	409459.28	39°37'17.6565"N	80°16'43.3126"W	6.99	172.171	0.73	-0.26	78.20
950.00	0.480	273.600	949.93	5.98	-6.79	0.58	1749153.48	409459.41	39°37'17.6577"N	80°16'43.3174"W	6.82	175.090	0.52	0.06	-64.60
1000.00	0.420	319.300	999.93	5.67	-6.64	0.26	1749153.15	409459.56	39°37'17.6592"N	80°16'43.3216"W	6.65	177.801	0.71	-0.12	91.40
1022.00	0.390	326.300	1021.93	5.52	-6.52	0.16	1749153.06	409459.68	39°37'17.6604"N	80°16'43.3228"W	6.52	178.586	0.26	-0.14	31.82
1050.00	0.490	296.000	1049.93	5.32	-6.39	0.00	1749152.90	409459.82	39°37'17.6617"N	80°16'43.3249"W	6.39	179.996	0.89	0.36	-108.21
1100.00	0.520	272.500	1099.92	5.00	-6.28	-0.42	1749152.48	409459.92	39°37'17.6627"N	80°16'43.3302"W	6.30	183.811	0.42	0.06	-47.00
1150.00	0.520	276.600	1149.92	4.72	-6.25	-0.87	1749152.03	409459.95	39°37'17.6630"N	80°16'43.3360"W	6.31	187.935	0.07	0.00	8.20
1200.00	0.430	280.000	1199.92	4.44	-6.19	-1.28	1749151.62	409460.01	39°37'17.6635"N	80°16'43.3412"W	6.32	191.695	0.19	-0.18	6.80
1250.00	0.590	267.100	1249.92	4.18	-6.17	-1.72	1749151.18	409460.03	39°37'17.6637"N	80°16'43.3469"W	6.40	195.605	0.39	0.32	-25.80
1300.00	0.640	249.800	1299.92	3.98	-6.28	-2.24	1749150.66	409459.92	39°37'17.6626"N	80°16'43.3535"W	6.66	199.654	0.38	0.10	-34.60
1350.00	0.730	267.500	1349.91	3.76	-6.39	-2.82	1749150.08	409459.81	39°37'17.6614"N	80°16'43.3609"W	6.98	203.837	0.46	0.18	35.40



Actual Wellpath Report

McClellan 12H AWP Proj: 19050'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	McClellan 12H
Field	Monongalia	API/Legal	
Facility	McClellan Pad	Wellbore	McClellan 12H AWB
Slot	Slot #12		

WELLPATH DATA (220 stations)															
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
1400.00	0.730	280.900	1399.91	3.37	-6.34	-3.45	1749149.45	409459.86	39°37'17.6618"N	80°16'43.3690"W	7.22	208.572	0.34	0.00	26.80
1450.00	0.880	271.400	1449.90	2.92	-6.27	-4.15	1749148.75	409459.93	39°37'17.6625"N	80°16'43.3779"W	7.52	213.493	0.40	0.30	-19.00
1499.00	0.530	211.830	1498.90	2.80	-6.45	-4.65	1749148.26	409459.75	39°37'17.6606"N	80°16'43.3842"W	7.95	215.743	1.56	-0.71	-121.57
1563.00	0.860	246.210	1562.90	2.84	-6.90	-5.24	1749147.66	409459.30	39°37'17.6562"N	80°16'43.3918"W	8.66	217.220	0.81	0.52	53.72
1657.00	3.490	261.050	1656.82	1.53	-7.63	-8.71	1749144.19	409458.57	39°37'17.6486"N	80°16'43.4361"W	11.58	228.794	2.84	2.80	15.79
1752.00	7.570	267.740	1751.36	-2.94	-8.33	-17.83	1749135.07	409457.87	39°37'17.6410"N	80°16'43.5524"W	19.67	244.963	4.34	4.29	7.04
1847.00	10.550	266.140	1845.16	-10.52	-9.16	-32.76	1749120.14	409457.04	39°37'17.6315"N	80°16'43.7432"W	34.02	254.380	3.15	3.14	-1.68
1941.00	12.390	259.120	1937.29	-18.69	-11.64	-51.25	1749101.65	409454.56	39°37'17.6053"N	80°16'43.9792"W	52.56	257.202	2.45	1.96	-7.47
2034.00	15.960	253.390	2027.44	-26.29	-17.18	-73.31	1749079.59	409449.02	39°37'17.5487"N	80°16'44.2605"W	75.30	256.809	4.12	3.84	-6.16
2129.00	16.290	240.940	2118.73	-31.18	-27.39	-97.48	1749055.43	409438.81	39°37'17.4457"N	80°16'44.5682"W	101.25	254.305	3.65	0.35	-13.11
2224.00	14.270	225.680	2210.41	-30.07	-42.05	-117.51	1749035.39	409424.15	39°37'17.2992"N	80°16'44.8226"W	124.81	250.311	4.72	-2.13	-16.06
2318.00	14.260	223.830	2301.51	-25.41	-58.50	-133.82	1749019.09	409407.71	39°37'17.1352"N	80°16'45.0291"W	146.05	246.389	0.49	-0.01	-1.97
2412.00	16.060	234.580	2392.25	-22.49	-74.39	-152.44	1749000.47	409391.82	39°37'16.9766"N	80°16'45.2653"W	169.62	243.988	3.54	1.91	11.44
2507.00	19.120	243.820	2482.82	-24.09	-88.87	-177.12	1748975.79	409377.33	39°37'16.8313"N	80°16'45.5791"W	198.17	243.354	4.35	3.22	9.73
2601.00	19.100	243.200	2571.64	-27.92	-102.60	-204.66	1748948.25	409363.61	39°37'16.6933"N	80°16'45.9295"W	228.94	243.375	0.22	-0.02	-0.66
2676.00	19.740	239.840	2642.37	-30.15	-114.50	-226.57	1748926.35	409351.71	39°37'16.5738"N	80°16'46.2081"W	253.85	243.190	1.72	0.85	-4.48
2727.00	20.200	237.730	2690.31	-30.88	-123.53	-241.46	1748911.46	409342.68	39°37'16.4833"N	80°16'46.3974"W	271.22	242.907	1.68	0.90	-4.14
2825.00	22.860	237.580	2781.46	-31.68	-142.77	-271.84	1748881.08	409323.44	39°37'16.2906"N	80°16'46.7835"W	307.05	242.292	2.71	2.71	-0.15
2920.00	24.070	239.600	2868.61	-33.16	-162.46	-304.13	1748848.79	409303.74	39°37'16.0931"N	80°16'47.1939"W	344.80	241.889	1.53	1.27	2.13
3014.00	25.740	239.290	2953.86	-35.28	-182.59	-338.21	1748814.71	409283.62	39°37'15.8913"N	80°16'47.6273"W	384.35	241.637	1.78	1.78	-0.33
3108.00	28.850	241.800	3037.39	-38.47	-203.74	-375.76	1748777.16	409262.48	39°37'15.6791"N	80°16'48.1047"W	427.44	241.533	3.53	3.31	2.67
3203.00	30.410	242.700	3119.96	-43.29	-225.60	-417.33	1748735.60	409240.62	39°37'15.4595"N	80°16'48.6335"W	474.40	241.605	1.71	1.64	0.95
3298.00	31.430	239.940	3201.47	-47.48	-249.03	-460.13	1748692.80	409217.18	39°37'15.2242"N	80°16'49.1779"W	523.20	241.577	1.84	1.07	-2.91
3393.00	29.750	239.050	3283.24	-50.13	-273.56	-501.79	1748651.14	409192.65	39°37'14.9782"N	80°16'49.7075"W	571.51	241.402	1.83	-1.77	-0.94
3487.00	28.880	243.790	3365.21	-54.15	-295.59	-542.16	1748610.77	409170.63	39°37'14.7571"N	80°16'50.2210"W	617.50	241.401	2.64	-0.93	5.04
3582.00	27.850	239.460	3448.82	-58.31	-317.00	-581.86	1748571.07	409149.22	39°37'14.5421"N	80°16'50.7259"W	662.61	241.418	2.42	-1.08	-4.56
3681.00	27.500	234.960	3536.50	-58.99	-341.88	-620.50	1748532.44	409124.35	39°37'14.2929"N	80°16'51.2168"W	708.44	241.147	2.14	-0.35	-4.55
3777.00	27.020	232.230	3621.84	-56.87	-367.96	-655.88	1748497.06	409098.26	39°37'14.0321"N	80°16'51.6661"W	752.05	240.707	1.40	-0.50	-2.84
3872.00	27.740	233.450	3706.20	-54.19	-394.34	-690.70	1748462.24	409071.88	39°37'13.7684"N	80°16'52.1081"W	795.35	240.277	0.96	0.76	1.28
3966.00	30.850	238.970	3788.18	-54.17	-419.81	-728.94	1748424.00	409046.42	39°37'13.5135"N	80°16'52.5940"W	841.19	240.062	4.38	3.31	5.87



Actual Wellpath Report

McClellan 12H AWP Proj; 19050'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	McClellan 12H
Field	Monongalia	API/Legal	
Facility	McClellan Pad	Wellbore	McClellan 12H AWB
Slot	Slot #12		

WELLPATH DATA (220 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
4061.00	28.830	246.030	3870.61	-59.12	-441.68	-770.76	1748382.18	409024.55	39°37'13.2937"N	80°16'53.1260"W	888.34	240.186	4.26	-2.13	7.43
4156.00	30.540	248.250	3953.14	-67.93	-459.93	-814.12	1748338.83	409006.30	39°37'13.1096"N	80°16'53.6779"W	935.05	240.536	2.14	1.80	2.34
4250.00	32.100	247.020	4033.44	-77.46	-478.53	-859.30	1748293.66	408987.70	39°37'12.9219"N	80°16'54.2532"W	983.55	240.887	1.79	1.66	-1.31
4344.00	31.640	247.010	4113.27	-86.63	-497.91	-904.99	1748247.97	408968.32	39°37'12.7265"N	80°16'54.8349"W	1032.92	241.181	0.49	-0.49	-0.01
4439.00	30.150	246.800	4194.79	-95.55	-517.04	-949.86	1748203.10	408949.19	39°37'12.5335"N	80°16'55.4061"W	1081.46	241.439	1.57	-1.57	-0.22
4538.00	28.610	246.990	4281.05	-104.42	-536.10	-994.53	1748158.43	408930.13	39°37'12.3413"N	80°16'55.9749"W	1129.82	241.673	1.56	-1.56	0.19
4632.00	28.510	247.480	4363.61	-112.89	-553.49	-1035.97	1748117.00	408912.74	39°37'12.1659"N	80°16'56.5025"W	1174.55	241.885	0.27	-0.11	0.52
4726.00	31.350	247.010	4445.07	-121.73	-571.64	-1079.21	1748073.76	408894.60	39°37'11.9828"N	80°16'57.0530"W	1221.25	242.091	3.03	3.02	-0.50
4821.00	30.590	243.760	4526.53	-129.40	-591.98	-1123.64	1748029.33	408874.26	39°37'11.7780"N	80°16'57.6186"W	1270.04	242.218	1.93	-0.80	-3.42
4915.00	30.150	240.710	4607.64	-134.27	-614.10	-1165.69	1747987.28	408852.13	39°37'11.5557"N	80°16'58.1534"W	1317.55	242.219	1.71	-0.47	-3.24
5011.00	29.470	241.000	4690.93	-138.00	-637.35	-1207.37	1747945.61	408828.89	39°37'11.3224"N	80°16'58.6834"W	1365.26	242.171	0.72	-0.71	0.30
5105.00	29.500	237.930	4773.64	-140.52	-661.10	-1247.63	1747905.35	408805.14	39°37'11.0842"N	80°16'59.1952"W	1411.96	242.082	1.59	0.03	-3.23
5200.00	29.530	240.890	4855.44	-142.98	-684.66	-1287.48	1747865.50	408781.59	39°37'10.8480"N	80°16'59.7019"W	1458.21	241.997	1.55	0.03	3.15
5295.00	28.180	245.850	4938.66	-148.52	-705.23	-1328.41	1747824.57	408761.02	39°37'10.6412"N	80°17'0.2226"W	1504.00	242.037	2.89	-1.42	5.22
5390.00	28.230	245.300	5022.38	-155.70	-723.79	-1369.29	1747788.89	408742.45	39°37'10.4542"N	80°17'0.7429"W	1548.82	242.140	0.28	0.05	-0.58
5485.00	29.630	246.950	5105.52	-163.50	-742.38	-1411.32	1747741.67	408723.87	39°37'10.2669"N	80°17'1.2779"W	1594.66	242.255	1.70	1.47	1.74
5583.00	30.150	244.980	5190.49	-171.63	-762.27	-1455.91	1747697.08	408703.97	39°37'10.0664"N	80°17'1.8455"W	1643.39	242.365	1.13	0.53	-2.01
5677.00	30.740	239.070	5271.54	-176.30	-784.61	-1497.92	1747655.07	408681.64	39°37'9.8420"N	80°17'2.3798"W	1690.97	242.354	3.25	0.63	-6.29
5771.00	32.170	237.820	5351.73	-178.06	-810.29	-1539.71	1747613.28	408655.96	39°37'9.5847"N	80°17'2.9110"W	1739.91	242.244	1.67	1.52	-1.33
5864.00	28.990	237.580	5431.78	-179.17	-835.56	-1579.70	1747573.30	408630.69	39°37'9.3315"N	80°17'3.4192"W	1787.07	242.124	3.42	-3.42	-0.26
5959.00	27.820	240.770	5515.35	-181.35	-858.73	-1618.48	1747534.52	408607.52	39°37'9.0991"N	80°17'3.9122"W	1832.19	242.051	2.02	-1.23	3.36
6054.00	28.880	240.990	5598.96	-184.90	-880.68	-1657.89	1747495.11	408585.57	39°37'8.8788"N	80°17'4.4133"W	1877.29	242.022	1.12	1.12	0.23
6148.00	30.970	240.790	5680.42	-188.60	-903.50	-1698.86	1747454.15	408562.76	39°37'8.6498"N	80°17'4.9342"W	1924.17	241.995	2.23	2.22	-0.21
6242.00	32.730	235.280	5760.28	-189.98	-929.78	-1740.87	1747412.14	408536.48	39°37'8.3864"N	80°17'5.4681"W	1973.60	241.894	3.61	1.87	-5.86
6336.00	31.260	236.170	5840.00	-189.41	-957.83	-1782.01	1747371.00	408508.43	39°37'8.1057"N	80°17'5.9907"W	2023.12	241.742	1.65	-1.57	0.95
6435.00	27.490	239.880	5926.27	-190.72	-983.60	-1823.13	1747329.89	408482.66	39°37'7.8474"N	80°17'6.5132"W	2071.54	241.652	4.22	-3.80	3.75
6530.00	28.420	245.140	6010.20	-195.51	-1004.11	-1862.61	1747290.40	408462.15	39°37'7.6413"N	80°17'7.0155"W	2116.03	241.671	2.77	0.98	5.54
6625.00	27.760	248.990	6094.01	-203.79	-1021.55	-1903.78	1747249.24	408444.71	39°37'7.4654"N	80°17'7.5396"W	2160.54	241.782	2.03	-0.69	4.05
6720.00	29.290	246.580	6177.48	-212.74	-1038.72	-1945.76	1747207.26	408427.54	39°37'7.2921"N	80°17'8.0741"W	2205.66	241.905	2.02	1.61	-2.54
6815.00	32.170	243.340	6259.14	-219.93	-1059.31	-1989.70	1747163.32	408406.95	39°37'7.0848"N	80°17'8.6333"W	2254.12	241.958	3.50	3.02	-3.41



Actual Wellpath Report

McClellan 12H AWP Proj: 19050'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	McClellan 12H
Field	Monongalia	API/Legal	
Facility	McClellan Pad	Wellbore	McClellan 12H AWB
Slot	Slot #12		

WELLPATH DATA (220 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
6910.00	29.910	239.730	6340.54	-224.39	-1082.60	-2032.77	1747120.26	408383.66	39°37'6.8509"N	80°17'9.1810"W	2303.08	241.961	3.08	-2.38	-3.80
7004.00	28.890	240.070	6422.43	-227.23	-1105.75	-2072.69	1747080.34	408360.52	39°37'6.6187"N	80°17'9.6885"W	2349.19	241.921	1.10	-1.09	0.36
7098.00	27.470	241.750	6505.29	-230.73	-1127.34	-2111.47	1747041.56	408338.93	39°37'6.4020"N	80°17'10.1817"W	2393.57	241.902	1.73	-1.51	1.79
7192.00	28.640	245.400	6588.25	-236.30	-1146.98	-2151.05	1747001.98	408319.29	39°37'6.2045"N	80°17'10.6853"W	2437.74	241.933	2.21	1.24	3.88
7281.00	30.510	246.830	6674.35	-244.58	-1166.75	-2195.73	1746957.80	408299.52	39°37'6.0052"N	80°17'11.2540"W	2486.47	242.015	2.02	1.89	1.44
7385.00	29.780	242.860	6755.64	-251.56	-1166.79	-2238.45	1746914.59	408279.48	39°37'5.8035"N	80°17'11.7976"W	2533.60	242.068	2.26	-0.78	-4.22
7480.00	32.460	239.050	6836.97	-255.42	-1210.67	-2281.32	1746871.72	408255.61	39°37'5.5638"N	80°17'12.3427"W	2582.66	242.046	3.50	2.82	-4.01
7574.00	30.220	240.080	6917.25	-258.13	-1235.44	-2323.46	1746829.58	408230.83	39°37'5.3153"N	80°17'12.8785"W	2631.50	241.999	2.45	-2.38	1.10
7669.00	28.150	240.890	7000.19	-261.44	-1258.27	-2363.76	1746789.28	408208.00	39°37'5.0862"N	80°17'13.3910"W	2677.80	241.973	2.22	-2.18	0.85
7763.00	29.780	241.830	7082.43	-265.41	-1280.08	-2403.72	1746749.33	408186.20	39°37'4.8672"N	80°17'13.8991"W	2723.52	241.963	1.80	1.73	1.00
7857.00	29.290	238.900	7164.22	-268.64	-1302.98	-2443.99	1746709.06	408163.30	39°37'4.6374"N	80°17'14.4111"W	2769.63	241.936	1.62	-0.52	-3.12
7952.00	28.600	223.550	7247.46	-264.62	-1331.50	-2479.60	1746673.45	408134.78	39°37'4.3525"N	80°17'14.8630"W	2814.49	241.765	7.64	-0.73	-16.16
8047.00	27.970	206.990	7331.25	-248.62	-1367.89	-2505.42	1746647.63	408098.39	39°37'3.9906"N	80°17'15.1888"W	2854.52	241.367	8.26	-0.66	-17.43
8169.00	27.200	190.310	7439.55	-214.45	-1420.90	-2523.42	1746629.63	408045.39	39°37'3.4652"N	80°17'15.4129"W	2895.96	240.617	6.34	-0.63	-13.67
8263.00	28.060	178.170	7522.89	-180.17	-1464.17	-2526.56	1746626.48	408002.12	39°37'3.0373"N	80°17'15.4482"W	2920.16	239.907	6.05	0.91	-12.91
8359.00	28.200	170.680	7607.58	-140.29	-1509.13	-2522.17	1746630.89	407957.16	39°37'2.5933"N	80°17'15.3870"W	2939.19	239.106	3.68	0.15	-7.80
8453.00	27.790	162.280	7690.61	-98.96	-1551.94	-2511.90	1746641.16	407914.35	39°37'2.1712"N	80°17'15.2509"W	2952.65	238.291	4.21	-0.44	-8.94
8548.00	36.070	159.940	7771.17	-50.39	-1599.39	-2495.53	1746657.52	407866.91	39°37'1.7037"N	80°17'15.0365"W	2964.08	237.344	8.81	8.72	-2.46
8642.00	43.630	157.010	7843.29	8.47	-1655.32	-2473.34	1746679.71	407810.98	39°37'1.1528"N	80°17'14.7467"W	2976.16	236.207	8.28	8.04	-3.12
8737.00	51.330	153.730	7907.46	77.58	-1718.86	-2444.08	1746708.97	407747.45	39°37'0.5275"N	80°17'14.3656"W	2987.97	234.882	8.49	8.11	-3.45
8831.00	58.220	152.360	7961.65	153.80	-1787.24	-2409.26	1746743.79	407679.07	39°36'59.8547"N	80°17'13.9131"W	2999.79	233.431	7.43	7.33	-1.46
8926.00	65.980	150.840	8006.07	237.34	-1861.02	-2369.32	1746783.72	407605.30	39°36'59.1291"N	80°17'13.3945"W	3012.82	231.852	8.29	8.17	-1.60
9021.00	73.850	149.980	8038.67	326.28	-1938.53	-2325.29	1746827.76	407527.79	39°36'58.3668"N	80°17'12.8231"W	3027.35	230.183	8.33	8.28	-0.91
9116.00	83.890	148.700	8056.98	419.24	-2018.60	-2277.80	1746875.24	407447.72	39°36'57.5796"N	80°17'12.2074"W	3043.54	228.452	10.65	10.57	-1.35
9210.00	90.960	145.850	8061.21	513.07	-2097.45	-2226.93	1746926.11	407368.88	39°36'56.8048"N	80°17'11.5488"W	3059.17	226.716	8.18	7.51	-3.24
9305.00	89.940	146.230	8060.47	608.06	-2176.15	-2173.73	1746979.31	407290.18	39°36'56.0317"N	80°17'10.8599"W	3075.83	224.968	1.23	-1.06	0.61
9401.00	90.120	146.250	8060.42	704.06	-2255.96	-2120.38	1747032.65	407210.38	39°36'55.2475"N	80°17'10.1693"W	3096.02	223.225	0.19	0.19	0.02
9495.00	89.970	146.100	8060.35	798.06	-2334.05	-2068.05	1747084.98	407132.29	39°36'54.4803"N	80°17'9.4920"W	3118.43	221.542	0.23	-0.16	-0.16
9590.00	89.940	145.930	8060.42	893.06	-2412.82	-2014.95	1747138.08	407053.53	39°36'53.7064"N	80°17'8.8047"W	3143.52	219.865	0.18	-0.03	-0.18
9684.00	89.910	146.020	8060.55	987.06	-2490.73	-1962.35	1747190.67	406975.62	39°36'52.9411"N	80°17'8.1239"W	3170.89	218.238	0.10	-0.03	0.10



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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	McClellan 12H
Field	Monongalia	API/Legal	
Facility	McClellan Pad	Wellbore	McClellan 12H AWB
Slot	Slot #12		

WELLPATH DATA (220 stations)															
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
9779.00	89.820	145.760	8060.77	1082.05	-2569.39	-1909.08	1747243.94	406896.97	39°36'52.1683"N	80°17'7.4344"W	3200.99	216.813	0.29	-0.09	-0.27
9874.00	89.290	145.250	8061.51	1177.04	-2547.68	-1855.28	1747297.74	406818.68	39°36'51.3992"N	80°17'6.7382"W	3232.99	215.020	0.77	-0.56	-0.54
9968.00	88.710	145.110	8063.15	1271.00	-2724.84	-1801.61	1747351.40	406741.53	39°36'50.6414"N	80°17'6.0439"W	3266.58	213.472	0.63	-0.62	-0.15
10063.00	88.250	145.650	8065.67	1365.95	-2802.99	-1747.66	1747405.35	406663.38	39°36'49.8737"N	80°17'5.3458"W	3303.19	211.943	0.75	-0.48	0.57
10156.00	88.890	145.390	8067.99	1458.91	-2879.63	-1895.02	1747457.98	408586.75	39°36'49.1208"N	80°17'4.6647"W	3341.46	210.482	0.74	0.69	-0.28
10252.00	89.910	145.280	8069.00	1554.89	-2958.58	-1640.43	1747512.57	406507.80	39°36'48.3453"N	80°17'3.9583"W	3382.93	209.007	1.07	1.06	-0.11
10346.00	90.090	146.130	8069.00	1648.89	-3036.24	-1587.46	1747565.54	406430.15	39°36'47.5824"N	80°17'3.2728"W	3426.19	207.602	0.92	0.19	0.90
10441.00	90.000	145.800	8068.92	1743.88	-3114.96	-1534.29	1747618.70	406351.43	39°36'46.8090"N	80°17'2.5847"W	3472.32	206.223	0.36	-0.09	-0.35
10535.00	89.940	145.300	8068.97	1837.87	-3192.48	-1481.12	1747671.87	406273.92	39°36'46.0475"N	80°17'1.8966"W	3519.32	204.888	0.54	-0.08	-0.53
10630.00	90.120	145.340	8068.92	1932.86	-3270.60	-1427.06	1747725.93	406195.80	39°36'45.2801"N	80°17'1.1972"W	3568.38	203.573	0.19	0.19	0.04
10724.00	89.820	144.320	8068.97	2026.82	-3347.44	-1372.92	1747780.07	406118.97	39°36'44.5254"N	80°17'0.4969"W	3616.04	202.300	1.13	-0.32	-1.09
10819.00	89.780	146.750	8069.30	2121.80	-3425.76	-1319.16	1747833.82	406040.65	39°36'43.7561"N	80°16'59.8013"W	3670.97	201.060	2.56	-0.04	2.56
10914.00	89.570	146.530	8069.84	2216.80	-3505.10	-1266.92	1747886.06	405961.31	39°36'42.9764"N	80°16'59.1250"W	3727.04	199.872	0.32	-0.22	-0.23
11008.00	89.080	146.540	8070.95	2310.79	-3583.51	-1215.09	1747937.88	405882.91	39°36'42.2060"N	80°16'58.4540"W	3783.92	198.731	0.52	-0.52	0.01
11103.00	89.230	146.240	8072.85	2405.78	-3662.62	-1162.51	1747990.46	405803.80	39°36'41.4287"N	80°16'57.7734"W	3842.68	197.609	0.35	0.16	-0.32
11197.00	89.660	146.780	8073.26	2499.78	-3741.01	-1110.65	1748042.32	405725.42	39°36'40.6585"N	80°16'57.1020"W	3902.40	196.535	0.73	0.46	0.57
11292.00	90.280	146.660	8073.31	2594.78	-3820.43	-1058.52	1748094.45	405646.00	39°36'39.8781"N	80°16'56.4271"W	3964.36	195.486	0.66	0.65	-0.13
11386.00	90.090	146.390	8073.01	2688.77	-3898.84	-1006.67	1748146.29	405567.60	39°36'39.1077"N	80°16'56.7559"W	4026.70	194.477	0.35	-0.20	-0.29
11482.00	90.250	146.950	8072.72	2784.77	-3979.05	-953.92	1748199.04	405487.39	39°36'38.3195"N	80°16'55.0730"W	4091.80	193.481	0.61	0.17	0.58
11577.00	90.370	146.360	8072.21	2879.77	-4058.41	-901.70	1748251.25	405408.04	39°36'37.5397"N	80°16'54.3970"W	4157.37	192.527	0.63	0.13	-0.62
11672.00	90.620	146.480	8071.39	2974.77	-4137.55	-849.16	1748303.79	405328.90	39°36'36.7621"N	80°16'53.7169"W	4223.79	191.598	0.29	0.26	0.13
11766.00	90.310	145.730	8070.62	3068.76	-4215.57	-796.74	1748356.21	405250.88	39°36'35.9956"N	80°16'53.0385"W	4290.20	190.703	0.86	-0.33	-0.80
11861.00	89.750	146.960	8070.57	3163.76	-4294.65	-744.09	1748408.85	405171.81	39°36'35.2186"N	80°16'52.3570"W	4358.63	189.830	1.42	-0.59	1.29
11954.00	88.860	146.720	8071.70	3256.75	-4372.50	-693.23	1748459.71	405093.97	39°36'34.4537"N	80°16'51.6985"W	4427.11	189.009	0.99	-0.96	-0.26
12048.00	89.860	145.710	8072.76	3350.74	-4451.07	-641.65	1748511.29	405015.40	39°36'33.6816"N	80°16'51.0307"W	4497.08	188.203	1.05	1.05	-0.01
12143.00	90.090	146.550	8072.81	3445.74	-4530.41	-589.39	1748563.54	404936.07	39°36'32.9020"N	80°16'50.3543"W	4568.59	187.412	0.30	0.25	-0.17
12238.00	90.000	146.760	8072.73	3540.74	-4609.77	-537.17	1748615.76	404856.71	39°36'32.1222"N	80°16'49.6783"W	4640.96	186.647	0.24	-0.09	0.22
12332.00	90.310	146.530	8072.48	3634.74	-4688.28	-485.49	1748667.44	404778.20	39°36'31.3507"N	80°16'49.0092"W	4713.35	185.912	0.41	0.33	-0.24
12427.00	90.280	146.360	8071.99	3729.73	-4767.45	-432.98	1748719.95	404699.04	39°36'30.5728"N	80°16'48.3295"W	4787.07	185.189	0.18	-0.03	-0.18
12521.00	90.620	146.280	8071.25	3828.78	-4846.69	-380.89	1748772.04	404620.80	39°36'29.8040"N	80°16'47.6553"W	4860.64	184.494	0.36	0.36	-0.03



Actual Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	McClellan 12H
Field	Monongalia	API/Legal	
Facility	McClellan Pad	Wellbore	McClellan 12H AWB
Slot	Slot #12		

WELLPATH DATA (220 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
12615.00	90.490	146.490	8070.34	3917.73	-4923.99	-328.89	1748824.03	404542.51	39°36'29.0347"N	80°16'46.9822"W	4934.97	183.821	0.22	-0.14	0.17
12709.00	91.260	146.550	8068.91	4011.71	-5002.39	-277.04	1748875.88	404464.12	39°36'28.2644"N	80°16'46.3111"W	5010.05	183.170	0.82	0.82	0.06
12804.00	90.770	146.960	8067.22	4106.70	-5081.83	-224.96	1748927.95	404384.68	39°36'27.4838"N	80°16'45.6370"W	5086.80	182.535	0.67	-0.52	0.43
12899.00	90.580	146.590	8066.10	4201.69	-5161.29	-172.92	1748980.00	404305.23	39°36'26.7029"N	80°16'44.9632"W	5164.19	181.919	0.44	-0.20	-0.39
12993.00	90.430	146.120	8065.28	4295.68	-5239.54	-120.84	1749032.07	404225.98	39°36'25.9341"N	80°16'44.2891"W	5240.93	181.321	0.52	-0.16	-0.50
13088.00	89.820	146.490	8065.07	4390.68	-5318.58	-68.13	1749084.77	404147.94	39°36'25.1575"N	80°16'43.6070"W	5319.02	180.734	0.75	-0.64	0.39
13183.00	89.720	146.690	8065.45	4485.68	-5397.88	-15.83	1749137.08	404068.65	39°36'24.3783"N	80°16'42.9300"W	5397.90	180.168	0.24	-0.11	0.21
13278.00	90.620	146.730	8065.17	4580.66	-5477.29	36.32	1749189.22	403989.24	39°36'23.5980"N	80°16'42.2550"W	5477.41	179.620	0.95	0.95	0.04
13372.00	90.830	146.050	8063.98	4674.67	-5555.57	88.35	1749241.24	403910.97	39°36'22.8288"N	80°16'41.5816"W	5556.27	179.089	0.76	0.22	-0.72
13467.00	91.540	146.480	8062.01	4769.65	-5634.55	141.11	1749294.00	403832.00	39°36'22.0528"N	80°16'40.8988"W	5636.31	178.565	0.86	0.75	0.43
13561.00	91.350	146.490	8059.64	4863.62	-5712.88	193.01	1749345.89	403753.67	39°36'21.2831"N	80°16'40.2271"W	5716.14	178.065	0.20	-0.20	0.03
13656.00	90.520	146.590	8058.09	4958.60	-5792.13	245.38	1749398.26	403674.43	39°36'20.5044"N	80°16'39.5492"W	5797.32	177.574	0.88	-0.87	0.11
13751.00	90.520	146.450	8057.23	5053.60	-5871.36	297.78	1749450.66	403595.20	39°36'19.7259"N	80°16'38.8709"W	5878.91	177.097	0.15	0.00	-0.15
13844.00	90.650	146.070	8056.28	5146.60	-5948.69	349.43	1749502.31	403517.87	39°36'18.9661"N	80°16'38.2025"W	5958.95	176.638	0.43	0.14	-0.41
13939.00	90.550	146.190	8055.29	5241.59	-6027.57	402.37	1749555.25	403439.00	39°36'18.1911"N	80°16'37.5174"W	6040.98	176.181	0.16	-0.11	0.13
14034.00	90.280	146.360	8054.60	5336.59	-6106.58	455.12	1749607.99	403359.99	39°36'17.4148"N	80°16'36.8348"W	6123.52	175.738	0.34	-0.28	0.18
14128.00	90.000	146.460	8054.37	5430.59	-6184.88	507.12	1749659.99	403281.70	39°36'16.6454"N	80°16'36.1618"W	6205.64	175.313	0.32	-0.30	0.11
14223.00	90.460	147.000	8053.99	5525.58	-6264.31	559.24	1749712.10	403202.27	39°36'15.8649"N	80°16'35.4872"W	6289.22	174.899	0.75	0.48	0.57
14317.00	90.400	146.520	8053.28	5619.58	-6342.93	610.76	1749763.62	403123.66	39°36'15.0923"N	80°16'34.8202"W	6372.27	174.500	0.51	-0.06	-0.51
14413.00	90.400	146.550	8052.61	5715.57	-6423.01	663.70	1749816.66	403043.58	39°36'14.3054"N	80°16'34.1351"W	6457.21	174.100	0.03	0.00	0.03
14508.00	90.370	146.220	8051.97	5810.57	-6502.12	716.29	1749869.15	402964.47	39°36'13.5281"N	80°16'33.4545"W	6541.46	173.714	0.35	-0.03	-0.35
14602.00	90.490	146.160	8051.27	5904.57	-6580.22	768.59	1749921.45	402886.38	39°36'12.7607"N	80°16'32.7776"W	6624.96	173.338	0.14	0.13	-0.06
14697.00	90.770	146.510	8050.22	5999.56	-6659.29	821.25	1749974.10	402807.32	39°36'11.9838"N	80°16'32.0962"W	6709.74	172.970	0.47	0.29	0.37
14791.00	91.020	146.180	8048.76	6093.55	-6737.52	873.34	1750026.19	402729.09	39°36'11.2151"N	80°16'31.4221"W	6793.89	172.614	0.44	0.27	-0.35
14885.00	90.950	146.410	8047.14	6187.54	-6815.71	925.49	1750078.34	402650.91	39°36'10.4489"N	80°16'30.7472"W	6878.26	172.267	0.26	-0.07	0.24
14980.00	90.860	146.620	8045.64	6282.53	-6894.93	977.90	1750130.74	402571.69	39°36'9.6684"N	80°16'30.0689"W	6963.93	171.928	0.24	-0.09	0.22
15075.00	90.950	146.350	8044.14	6377.51	-6974.13	1030.35	1750183.19	402492.50	39°36'8.8902"N	80°16'29.3902"W	7049.83	171.596	0.30	0.09	-0.28
15170.00	91.320	146.350	8042.26	6472.49	-7053.19	1082.98	1750235.81	402413.44	39°36'8.1133"N	80°16'28.7091"W	7135.85	171.271	0.39	0.39	0.00
15264.00	90.710	146.890	8040.59	6566.48	-7131.22	1135.37	1750288.20	402335.42	39°36'7.3467"N	80°16'28.0312"W	7221.04	170.954	0.81	-0.65	-0.49
15359.00	90.770	146.470	8039.96	6661.47	-7210.14	1189.24	1750341.07	402256.50	39°36'6.5713"N	80°16'27.3470"W	7307.40	170.642	0.61	0.06	0.61



Actual Wellpath Report

McClellan 12H AWP Proj: 19050'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	McClellan 12H
Field	Monongalia	API/Legal	
Facility	McClellan Pad	Wellbore	McClellan 12H AWB
Slot	Slot #12		

WELLPATH DATA (220 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
15454.00	90.650	146.410	8038.19	6756.46	-7289.30	1240.76	1750393.58	402177.35	39°36'5.7934"N	80°16'26.6674"W	7394.14	170.340	0.14	-0.13	-0.06
15548.00	90.710	146.070	8037.07	6850.45	-7367.44	1292.99	1750445.81	402099.21	39°36'5.0256"N	80°16'25.9915"W	7480.04	170.048	0.37	0.06	-0.36
15643.00	90.860	146.600	8035.77	6945.45	-7446.50	1345.65	1750498.46	402020.16	39°36'4.2488"N	80°16'25.3102"W	7567.11	169.757	0.58	0.16	0.56
15738.00	90.860	146.570	8034.34	7040.43	-7525.79	1397.96	1750550.77	401940.87	39°36'3.4697"N	80°16'24.6332"W	7654.53	169.477	0.03	0.00	-0.03
15832.00	90.400	146.300	8033.31	7134.43	-7604.11	1449.92	1750602.74	401862.56	39°36'2.7001"N	80°16'23.9506"W	7741.11	169.205	0.57	-0.49	-0.29
15926.00	90.650	146.180	8032.45	7228.42	-7682.26	1502.16	1750654.97	401784.42	39°36'1.9322"N	80°16'23.2848"W	7827.74	168.936	0.30	0.27	-0.13
16021.00	90.460	146.570	8031.53	7323.42	-7761.36	1554.76	1750707.57	401705.32	39°36'1.1550"N	80°16'22.6040"W	7915.55	168.672	0.46	-0.20	0.41
16114.00	90.430	146.670	8030.81	7418.42	-7839.01	1605.93	1750758.73	401627.67	39°36'0.3919"N	80°16'21.9419"W	8001.82	168.422	0.11	-0.03	0.11
16210.00	90.650	146.830	8029.90	7512.41	-7919.29	1658.56	1750811.36	401547.39	39°35'59.6030"N	80°16'21.2606"W	8091.11	168.171	0.28	0.23	0.17
16304.00	90.620	146.520	8028.86	7606.40	-7997.83	1710.20	1750863.00	401468.86	39°35'58.8312"N	80°16'20.5923"W	8178.64	167.930	0.33	-0.03	-0.33
16398.00	90.860	146.460	8027.65	7700.39	-8076.20	1762.09	1750914.89	401390.49	39°35'58.0611"N	80°16'19.9208"W	8266.20	167.692	0.26	0.26	-0.08
16493.00	91.110	146.180	8026.01	7795.38	-8155.24	1814.77	1750967.56	401311.46	39°35'57.2844"N	80°16'19.2392"W	8354.72	167.455	0.40	0.26	-0.29
16587.00	91.050	146.260	8024.24	7889.36	-8233.36	1867.02	1751019.81	401233.34	39°35'56.5169"N	80°16'18.5631"W	8442.39	167.223	0.11	-0.06	0.09
16682.00	91.230	146.520	8022.35	7984.34	-8312.46	1919.60	1751072.38	401154.25	39°35'55.7396"N	80°16'17.8828"W	8531.23	166.997	0.33	0.19	0.27
16777.00	91.140	146.410	8020.38	8078.32	-8391.63	1972.07	1751124.85	401075.08	39°35'54.9616"N	80°16'17.2038"W	8620.24	166.775	0.15	-0.09	-0.12
16871.00	90.860	146.270	8018.75	8173.31	-8469.86	2024.16	1751176.94	400996.86	39°35'54.1929"N	80°16'16.5298"W	8708.37	166.559	0.33	-0.30	-0.15
16965.00	90.680	146.630	8017.48	8267.30	-8547.74	2076.79	1751229.56	400918.99	39°35'53.4278"N	80°16'15.8489"W	8796.41	166.344	0.71	-0.19	-0.68
17061.00	90.340	146.690	8016.63	8363.29	-8627.47	2130.25	1751283.02	400839.26	39°35'52.6443"N	80°16'15.1573"W	8886.57	166.130	1.16	-0.35	1.10
17156.00	89.780	146.870	8016.53	8458.29	-8706.94	2182.29	1751335.06	400759.79	39°35'51.8633"N	80°16'14.4837"W	8976.26	165.929	0.62	-0.59	0.19
17250.00	89.850	146.710	8016.83	8552.29	-8785.59	2233.78	1751386.54	400681.15	39°35'51.0905"N	80°16'13.8174"W	9065.12	165.735	0.19	0.07	-0.17
17345.00	89.260	146.880	8017.57	8647.28	-8865.07	2285.80	1751438.56	400601.67	39°35'50.3094"N	80°16'13.1441"W	9155.02	165.542	0.65	-0.62	0.18
17440.00	88.650	146.580	8018.30	8742.26	-8944.49	2337.91	1751490.66	400522.26	39°35'49.5289"N	80°16'12.4688"W	9244.98	165.352	0.72	-0.64	-0.32
17535.00	88.370	146.910	8021.77	8837.23	-9023.91	2389.98	1751542.74	400442.85	39°35'48.7485"N	80°16'11.7958"W	9335.04	165.168	0.46	-0.29	0.35
17630.00	89.050	146.690	8023.91	8932.20	-9103.38	2441.98	1751594.74	400363.38	39°35'47.9675"N	80°16'11.1228"W	9425.22	164.984	0.75	0.72	-0.23
17724.00	89.600	146.760	8025.02	9026.13	-9181.96	2493.56	1751646.81	400284.80	39°35'47.1953"N	80°16'10.4554"W	9514.53	164.807	0.59	0.59	0.07
17819.00	90.000	146.850	8025.35	9121.19	-9261.46	2545.57	1751698.31	400205.31	39°35'46.4141"N	80°16'9.7823"W	9604.92	164.631	0.43	0.42	0.09
17913.00	89.780	146.510	8025.53	9215.19	-9340.00	2597.21	1751749.95	400126.77	39°35'45.6422"N	80°16'9.1142"W	9694.39	164.460	0.43	-0.23	-0.36
18007.00	88.770	145.930	8026.72	9309.18	-9418.13	2649.47	1751802.20	400048.65	39°35'44.8745"N	80°16'8.4380"W	9783.70	164.288	1.24	-1.07	-0.62
18101.00	88.980	146.870	8028.57	9403.16	-9496.41	2701.47	1751854.21	399970.38	39°35'44.1053"N	80°16'7.7651"W	9873.18	164.120	1.02	0.22	1.00
18195.00	88.370	146.960	8030.74	9497.13	-9575.14	2752.77	1751905.50	399891.64	39°35'43.3315"N	80°16'7.1012"W	9962.99	163.961	0.65	-0.65	0.10



Actual Wellpath Report

McClellan 12H AWP Proj: 19050'

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REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	McClellan 12H
Field	Monongalia	API/Legal	
Facility	McClellan Pad	Wellbore	McClellan 12H AWB
Slot	Slot #12		

WELLPATH DATA (220 stations) † = interpolated, ‡ = extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
18289.00	87.970	146.440	8033.74	9591.08	-9653.67	2804.35	1751957.08	399813.12	39°35'42.5599"N	80°16'6.4337"W	10052.75	163.802	0.70	-0.43	-0.55
18384.00	87.780	147.110	8037.26	9686.01	-9733.08	2856.37	1752009.10	399733.71	39°35'41.7794"N	80°16'5.7606"W	10143.56	163.645	0.73	-0.20	0.71
18479.00	87.880	146.500	8040.86	9780.94	-9812.52	2908.35	1752061.07	399654.28	39°35'40.9987"N	80°16'5.0880"W	10234.46	163.491	0.65	0.11	-0.64
18574.00	87.970	146.390	8044.30	9875.87	-9891.64	2960.82	1752113.54	399575.17	39°35'40.2213"N	80°16'4.4090"W	10325.26	163.336	0.15	0.09	-0.12
18668.00	87.970	146.680	8047.63	9969.82	-9970.01	3012.62	1752165.34	399496.80	39°35'39.4512"N	80°16'3.7388"W	10415.23	163.187	0.31	0.00	0.31
18763.00	87.140	146.040	8051.68	10064.73	-10049.03	3065.20	1752217.91	399417.79	39°35'38.6747"N	80°16'3.0585"W	10506.11	163.037	1.10	-0.87	-0.67
18857.00	87.380	146.680	8056.18	10158.62	-10127.19	3117.21	1752269.92	399339.63	39°35'37.9066"N	80°16'2.3856"W	10596.09	162.891	0.73	0.26	0.68
18952.00	87.600	146.680	8060.34	10253.53	-10206.50	3169.35	1752322.06	399260.32	39°35'37.1272"N	80°16'1.7110"W	10687.26	162.749	0.23	0.23	0.00
19025.00	87.480	146.890	8063.47	10326.46	-10267.52	3209.30	1752362.00	399199.31	39°35'36.5276"N	80°16'1.1940"W	10757.40	162.642	0.33	-0.16	0.29
19050.00‡	87.480	146.890	8064.57	10351.43	-10288.44	3222.94	1752375.65	399178.39	39°35'36.3220"N	80°16'1.0174"W	10781.44	162.606	0.00	0.00	0.00

HOLE & CASING SECTIONS - Ref Wellbore: McClellan 12H AWB Ref Wellpath: McClellan 12H AWP Proj: 19050'

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
17.5in Open Hole	28.00	1455.00	1427.00	28.00	1454.90	0.00	0.00	-6.27	-4.22
13.375in Casing Surface	28.00	1455.00	1427.00	28.00	1454.90	0.00	0.00	-6.27	-4.22
12.25in Open Hole	1455.00	2705.00	1250.00	1454.90	2669.65	-6.27	-4.22	-119.54	-235.03
9.625in Casing Intermediate	28.00	2705.00	2677.00	28.00	2669.65	0.00	0.00	-119.54	-235.03
8.75in Open Hole	2705.00	8113.00	5408.00	2669.65	7389.75	-119.54	-235.03	-1396.09	-2517.14
8.5in Open Hole	8113.00	19050.00	10937.00	7389.75	8064.57	-1396.09	-2517.14	-10288.44	3222.94
5.5in Casing Production	28.00	19050.00	19022.00	28.00	8064.57	0.00	0.00	-10288.44	3222.94



Actual Wellpath Report

McClellan 12H AWP Proj: 19050'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	McClellan 12H
Field	Monongalia	API/Legal	
Facility	McClellan Pad	Wellbore	McClellan 12H AWB
Slot	Slot #12		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
McClellan 12H BHL Rev-11	8040.00	-10290.94	3220.69	1752373.39	399175.89	39°35'36.2971"N	80°16'1.0460"W	point
McClellan 12H LP Rev-6	8040.00	-2071.03	-2246.11	1746906.92	407395.29	39°36'57.0642"N	80°17'11.7967"W	point
McClellan Hardline #1 (8.31.21)	8529.00	-1263.95	1562.79	1750715.60	408202.33	39°37'5.3671"N	80°16'23.2158"W	polygon
2D Polygon: dimensions not calculated								
McClellan Hardline #10 (8.31.21)	8529.00	-12571.93	3157.83	1752310.54	396895.04	39°35'13.7495"N	80°16'1.6000"W	polygon
2D Polygon: dimensions not calculated								
McClellan Hardline #11 (8.31.21)	8529.00	-10583.74	6974.50	1756126.98	398883.11	39°35'33.7174"N	80°15'13.0643"W	polygon
2D Polygon: dimensions not calculated								
McClellan Hardline #12 (8.31.21)	8529.00	-10022.88	8244.12	1757396.51	399443.93	39°35'39.3651"N	80°14'56.9065"W	polygon
2D Polygon: dimensions not calculated								
McClellan Hardline #13 (8.31.21)	8529.00	-10109.87	4241.83	1753394.47	399356.95	39°35'38.1725"N	80°15'48.0219"W	polygon
2D Polygon: dimensions not calculated								
McClellan Hardline #2 (8.31.21)	8529.00	-1571.82	1773.58	1750926.37	407894.48	39°37'2.3424"N	80°16'20.4885"W	polygon
2D Polygon: dimensions not calculated								



Actual Wellpath Report

McClellan 12H AWP Proj: 19050'

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REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	McClellan 12H
Field	Monongalia	API/Legal	
Facility	McClellan Pad	Wellbore	McClellan 12H AWB
Slot	Slot #12		

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
McClellan Hardline #3 (8.31.21)	8529.00	-1760.42	5602.08	1754754.63	407705.88	39°37'0.8009"N	80°15'31.5471"W	polygon
2D Polygon: dimensions not calculated								
McClellan Hardline #4 (8.31.21)	8529.00	-3136.43	2990.64	1752143.36	406329.97	39°36'46.9831"N	80°16'4.7658"W	polygon
2D Polygon: dimensions not calculated								
McClellan Hardline #5 (8.31.21)	8529.00	-4625.93	3235.02	1752387.72	404840.56	39°36'32.2836"N	80°16'1.4808"W	polygon
2D Polygon: dimensions not calculated								
McClellan Hardline #6 (8.31.21)	8529.00	-7589.84	7074.72	1756227.19	401876.83	39°36'3.3135"N	80°15'12.1048"W	polygon
2D Polygon: dimensions not calculated								
McClellan Hardline #7 (8.31.21)	8529.00	-10232.91	3032.38	1752185.09	399233.92	39°35'36.8547"N	80°16'3.4577"W	polygon
2D Polygon: dimensions not calculated								
McClellan Hardline #8 (8.31.21)	8529.00	-10275.63	2986.07	1752138.79	399191.20	39°35'36.4286"N	80°16'4.0446"W	polygon
2D Polygon: dimensions not calculated								
McClellan Hardline #9 (8.31.21)	8529.00	-10937.85	3014.32	1752167.03	398529.02	39°35'29.8865"N	80°16'3.6114"W	polygon
2D Polygon: dimensions not calculated								



Actual Wellpath Report

McClellan 12H AWP Proj: 19050'

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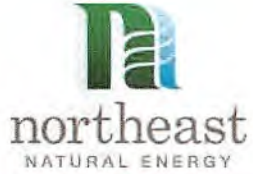


REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	McClellan 12H
Field	Monongalia	API/Legal	
Facility	McClellan Pad	Wellbore	McClellan 12H AWB
Slot	Slot #12		

WELLPATH COMPOSITION - Ref Wellbore: McClellan 12H AWB Ref Wellpath: McClellan 12H AWP Proj: 19050'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
28.00	1450.00	BH Generic gyro - northseeking (Standard)	01_Javins Inertial Gyro <17-1/2">(50'-1450')	McClellan 12H AWB	10/27/2021
1450.00	8047.00	OWSG MWD rev2 + HRGM	02_Tally MWD <8-3/4">(1450')(1499'-8047')	McClellan 12H AWB	10/27/2021
8047.00	19050.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	03_BH AT Curve <8-1/2">(8047')(8169'-19025')	McClellan 12H AWB	10/27/2021



Actual Wellpath Report

McClellan 12H AWP Proj: 19050'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	McClellan 12H
Field	Monongalia	API/Legal	
Facility	McClellan Pad	Wellbore	McClellan 12H AWB
Slot	Slot #12		

COMMENTS
<p>Wellpath general comments API: 47-061-01889-0000 BH Job #: 111066128 Rig: Patterson 277 Duration: 10/27/21 - 11/2/21</p> <p>01_Javins Inertial Gyro <17-1/2">(50'-1450') 02_Tally MWD <8-3/4">(1450')(1499'-8047') 03_BH AT Curve <8-1/2">(8047')(8169'-19025') Projected MD at TD: 19050'</p>

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					
			Water	7732-18-5	100.00000	87.29374	None
Sand (100 Mesh Proppant)	ProFrac	Proppant					
			Silica Substrate	14808-60-7	100.00000	8.70447	None
Sand (40/70 White Proppant)	ProFrac	Proppant					
			Silica Substrate	14808-60-7	100.00000	3.70457	None
Hydrochloric Acid (7.5%)	CNR	Acidizing					
			Water	7732-18-5	85.00000	0.15326	None
			Hydrochloric Acid (Hydrogen Chloride)	7647-01-0	37.00000	0.06671	None
StimSTREAM SC 405	Chemstream	Scale Control					
			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

Clearal 268	Chemstream	Biocide					
			Non-Hazardous Substances	Proprietary	80.00000	0.02134	None
			Glutaraldehyde	111-30-8	20.00000	0.00533	None
			Didecyl dimethyl ammonium chloride	7173-51-5	3.00000	0.00080	None
			Quaternary Ammonim Compounds	68424-85-1	3.00000	0.00080	None
			Ethanol	64-17-5	1.50000	0.00040	None
StimSTREAM FR 2800	Chemstream	Friction Reducer					
			Distillates (petroleum), hydrotreated light	64742-47-8	25.00000	0.00907	None
			Alcohols, C11-14-iso, C13-rich, ethoxylated	78330-21-9	5.00000	0.00181	None
StimSTREAM FR 9800	Chemstream	Friction Reducer					
			Butene, homopolymer	9003-29-6	25.00000	0.00374	None
			Alkanes, C16-20-iso-	90622-59-6	25.00000	0.00374	None
			Ethoxylated alcohols (C12-18)	68213-23-0	3.00000	0.00045	None
ProHib 100	CNR	Acid Inhibitor					
			2-Butoxyethanol	111-76-2	60.00000	0.00035	None
			Proprietary material	Proprietary	30.00000	0.00017	None
			Proprietary non-ionic surfactant	Proprietary	20.00000	0.00012	None
			Proprietary ethoxylated alcohol	Proprietary	10.00000	0.00006	None
			Proprietary corrosion inhibitor	Proprietary	10.00000	0.00006	None
ProFE 105	CNR	Iron Control					
			Citric Acid	77-92-9	20.00000	0.00011	None
			Acetic Acid	64-19-7	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					
			Water	7732-18-5	85.00000	0.15326	
			Non-Hazardous Substances	Proprietary	70.00000	0.02651	
			Non-Hazardous Substances	Proprietary	80.00000	0.02134	
			Diethylenetriamine penta (methylene phosphonic acid) (DTPMP)	15827-60-8	10.00000	0.00379	
			Citric Acid	77-92-9	10.00000	0.00379	
			Butene, homopolymer	9003-29-6	25.00000	0.00374	
			Alcohols, C11-14-iso, C13-rich, ethoxylated	78330-21-9	5.00000	0.00181	
			Quaternary Ammonim Compounds	68424-85-1	3.00000	0.00080	
			Didecyl dimethyl ammonium chloride	7173-51-5	3.00000	0.00080	
			Ethoxylated alcohols (C12-18)	68213-23-0	3.00000	0.00045	
			Ethanol	64-17-5	1.50000	0.00040	
			Proprietary material	Proprietary	30.00000	0.00017	
			Proprietary non-ionic surfactant	Proprietary	20.00000	0.00012	
			Proprietary ethoxylated alcohol	Proprietary	10.00000	0.00006	
			Proprietary corrosion inhibitor	Proprietary	10.00000	0.00006	

		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)