

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

API 47-061-01883 County Monongalia District Battelle  
Quad Mannington Pad Name McClellan Field/Pool Name \_\_\_\_\_  
Farm name McClellan 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 **RECEIVED**  
**Office Of Oil and Gas**  
Top hole Northing 4386001.6 Easting 561910.8 **OCT 10 2023**  
Landing Point of Curve Northing 4385701.8 Easting 561744.3  
Bottom Hole Northing 4382786.8 Easting 563751.9 **WV Department of Environmental Protection**

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 10/19/2021  
Date completion activities began 3/11/2022 Date completion activities ceased 3/27/2022  
Verbal plugging (Y/N) N Date permission granted NA Granted by NA

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

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

Reviewed by:   
**APPROVED**  
**02/09/2024**

API 47-061 - 01883 Farm name McClellan 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"	100'	N		NA	Y
Surface	17-1/2"	13-3/8"	1,458'	N	54.5	NA	Y, 36 bbls
Coal							
Intermediate 1	12-1/4"	9-5/8"	2,698'	N	40	NA	Y, 22 bbl
Intermediate 2							
Intermediate 3							
Production	8-3/4"	5-1/2"	20,198'	N	20	NA	Y, 30 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	1,230	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	3,695	14.5	1.16	4,277	2,097'	48
Tubing							

Drillers TD (ft) 20,210 Loggers TD (ft) 20,180  
 Deepest formation penetrated Marcellus Plug back to (ft) NA  
 Plug back procedure NA

Kick off depth (ft) 7,605

Check all wireline logs run  caliper  density  deviated/directional  induction  
 neutron  resistivity  gamma ray  temperature  sonic

Well cored  Yes  No Conventional Sidewall Were cuttings collected  Yes  No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING \_\_\_\_\_  
Surface: Bow spring centralizers every 3rd joint or approximately 120'  
Intermediate: Bow spring centralizers every 3rd joint or approximately 120'  
Production: Rigid body centralizers placed at a minimum of every other joint (~80') from TD to surface

WAS WELL COMPLETED AS SHOT HOLE  Yes  No DETAILS \_\_\_\_\_

WAS WELL COMPLETED OPEN HOLE?  Yes  No DETAILS \_\_\_\_\_

WERE TRACERS USED  Yes  No TYPE OF TRACER(S) USED \_\_\_\_\_





**McClellan Completion lithology**

<b>Lithology/Formation</b>	<b>Top Depth in FT TVD</b>	<b>Bottom Depth in FT TVD</b>	<b>Describe rock type and record quantity and type of fluid (freshwater, brine, oil, gas, H2S, etc)</b>
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 2H Stimulation Report

Stage Number	Report Date	ISIP (psi)	Breakdown Pressure (psi)	Avg Treating Pressure (psi)	Avg Treating Rate (BPM)	Pad Volume (bbbls)	Total Clean Fluid (Bbbls)	Total Proppant Amount (lbs)	Flush Volume (bbbls)
1	3/13/2022	5,036	0	9,329	91	429	7,149	300,000	458
2	3/13/2022	5,728	6,132	9,212	92	470	9,385	454,700	454
3	3/13/2022	5,604	6,330	9,334	91	471	9,348	454,673	447
4	3/14/2022	5,629	6,413	9,250	92	451	9,763	454,994	442
5	3/13/2022	5,838	7,720	9,081	91	462	9,455	456,580	433
6	3/15/2022	5,914	7,640	9,066	92	469	9,313	454,917	440
7	3/15/2022	5,922	7,936	9,369	91	65	9,418	455,000	431
8	3/15/2022	5,782	8,135	9,565	84	24	9,373	455,000	427
9	3/15/2022	6,258	7,318	9,530	84	82	9,310	454,559	604
10	3/16/2022	6,525	8,199	9,579	91	74	9,375	447,919	414
11	3/16/2022	6,615	7,147	9,242	92	56	9,360	455,400	414
12	3/16/2022	6,000	7,502	9,462	92	55	9,246	454,800	470
13	3/16/2022	5,720	7,984	9,496	83	21	9,255	454,665	626
14	3/17/2022	5,917	7,905	9,750	92	18	9,415	454,556	398
15	3/17/2022	5,842	7,823	9,699	91	24	9,231	455,000	396
16	3/17/2022	5,504	7,039	9,371	92	14	9,323	455,140	388
17	3/17/2022	5,131	7,942	9,366	92	54	9,215	455,000	385
18	3/18/2022	5,837	6,819	9,223	92	76	9,335	455,000	401
19	3/18/2022	5,818	6,958	9,045	92	73	9,341	455,000	389
20	3/18/2022	5,218	6,768	9,039	92	74	9,244	455,000	534
21	3/18/2022	5,143	5,004	8,961	92	49	9,281	455,000	561
22	3/19/2022	5,744	6,567	8,898	92	54	9,382	455,000	368
23	3/19/2022	5,773	7,338	9,106	92	34	9,325	455,000	355
24	3/19/2022	5,409	7,529	9,248	92	37	9,049	455,000	351
25	3/20/2022	5,676	800	9,281	92	58	9,209	455,000	359
26	3/20/2022	5,596	7,763	9,223	92	68	9,165	455,000	345
27	3/20/2022	5,461	7,708	9,216	92	18	9,128	455,000	339
28	3/21/2022	5,233	7,413	9,050	92	8	9,319	455,000	336
29	3/21/2022	5,332	7,329	9,282	92	51	9,246	455,000	331
30	3/21/2022	5,446	7,414	9,068	91	40	9,262	455,000	308
31	3/21/2022	5,482	7,949	9,135	92	48	9,355	455,000	320
32	3/21/2022	5,179	5,011	9,279	92	35	9,090	455,000	314
33	3/22/2022	5,370	4,932	9,122	92	51	9,374	455,000	309
34	3/22/2022	5,657	8,425	9,118	92	98	9,219	454,998	310
35	3/22/2022	5,610	7,765	8,932	92	88	9,210	453,893	309
36	3/22/2022	5,599	7,944	9,100	92	45	9,021	455,000	295
37	3/23/2022	5,734	8,032	8,980	92	39	9,120	455,000	274
38	3/23/2022	5,607	7,991	9,026	92	29	9,167	454,965	291
39	3/23/2022	5,817	6,858	9,027	92	72	9,207	454,670	287
40	3/23/2022	5,566	8,308	8,904	92	107	9,728	455,000	1,197
41	3/24/2022	5,059	7,629	8,843	92	36	9,164	455,000	279
42	3/24/2022	5,701	7,746	8,905	92	20	9,226	455,000	282
43	3/24/2022	5,600	8,197	8,884	92	27	9,174	455,037	269
44	3/24/2022	5,406	7,667	8,849	92	66	9,116	452,780	271
45	3/24/2022	4,936	7,907	8,895	92	63	9,278	455,000	268

02/09/2024

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46	3/24/2022	5,250	7,403	8,860	92	29	9,148	455,000	273
47	3/25/2022	5,063	7,544	8,801	92	38	8,652	455,000	254
48	3/25/2022	5,932	7,486	8,641	92	92	9,157	455,209	255
49	3/25/2022	5,693	7,196	8,553	92	60	9,111	455,666	241
50	3/25/2022	5,198	7,415	8,654	92	51	8,947	455,000	242
51	3/26/2022	5,443	7,667	8,717	92	48	9,218	455,000	240
52	3/26/2022	5,358	7,100	8,518	92	20	9,080	455,213	215
53	3/26/2022	5,358	7,100	8,518	92	20	9,080	455,213	215
54	3/26/2022	5,802	7,107	8,514	92	23	9,100	454,670	215
55	3/26/2022	5,136	6,968	8,316	92	53	9,323	455,000	217
56	3/27/2022	5,249	7,167	8,443	92	34	9,104	455,000	216
57	3/27/2022	5,568	7,303	8,228	89	83	9,708	454,725	205
58	3/27/2022	6,424	7,097	8,414	91	73	9,164	449,801	201
59	3/27/2022	5,277	7,553	8,458	92	24	8,954	455,243	203

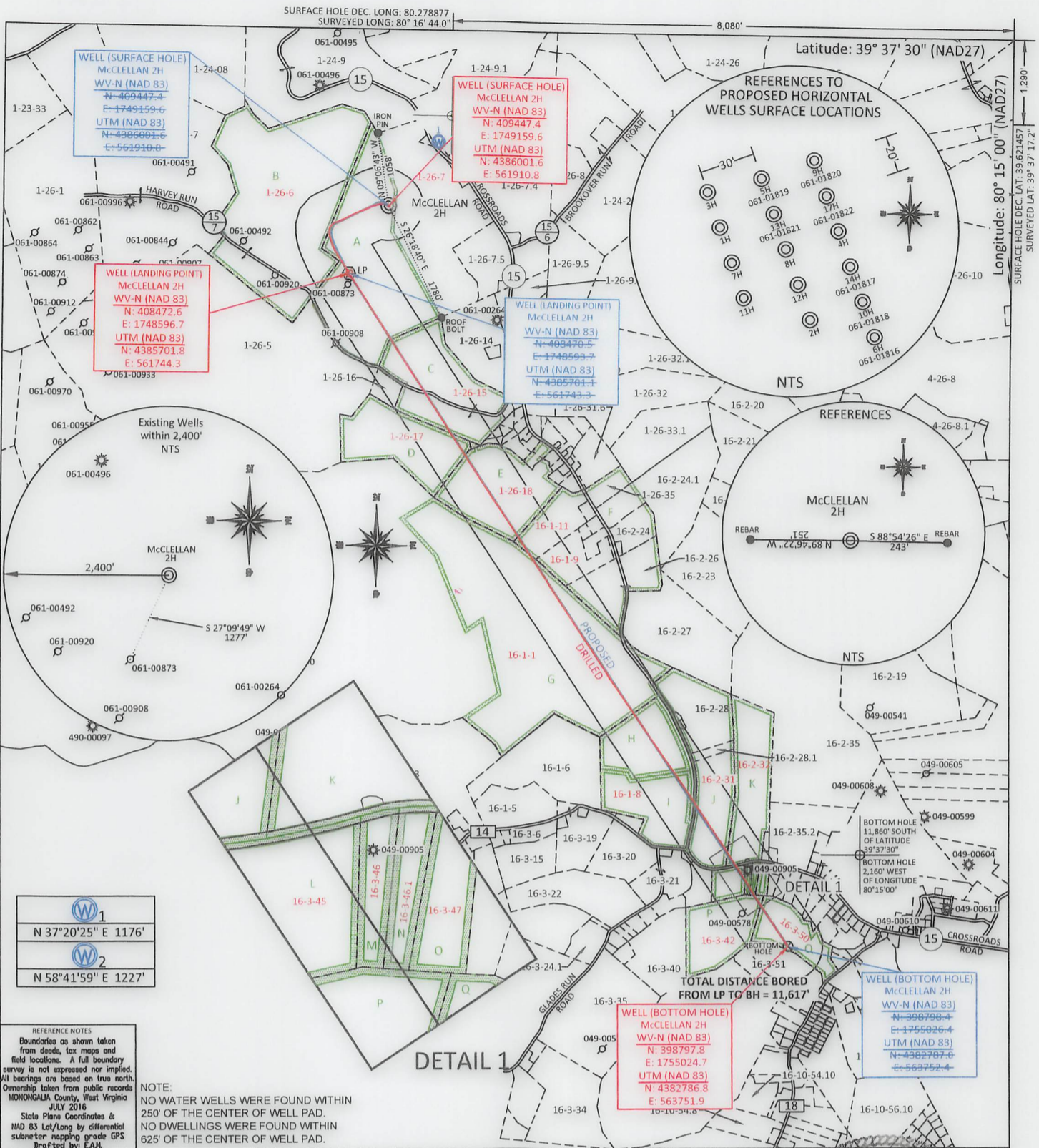
**McClellan 2H**  
Perforation Report

Stage Number	Report Date	Total Shots	Cluster 1 Top TD	Cluster 5 Bottom TD
1	3/13/2022	0	0	20,086
2	3/13/2022	40	20,046	19,886
3	3/13/2022	40	19,844	19,687
4	3/14/2022	40	19,645	19,487
5	3/13/2022	40	19,445	19,288
6	3/15/2022	40	19,246	19,088
7	3/15/2022	40	19,046	18,889
8	3/15/2022	40	18,847	18,689
9	3/15/2022	40	18,647	18,490
10	3/16/2022	40	18,448	18,290
11	3/16/2022	40	18,248	18,091
12	3/16/2022	40	18,049	17,891
13	3/16/2022	40	17,849	17,691
14	3/17/2022	40	17,650	17,492
15	3/17/2022	40	18,559	18,420
16	3/17/2022	40	17,248	17,093
17	3/17/2022	40	17,050	16,893
18	3/18/2022	40	16,851	16,694
19	3/18/2022	40	16,652	16,494
20	3/18/2022	40	16,452	16,295
21	3/18/2022	40	16,253	16,095
22	3/19/2022	40	16,053	15,896
23	3/19/2022	40	15,854	15,696
24	3/19/2022	40	15,654	15,497
25	3/20/2022	40	15,455	15,297
26	3/20/2022	40	15,255	15,098
27	3/20/2022	40	15,056	14,898
28	3/21/2022	40	14,856	14,698
29	3/21/2022	40	14,657	14,499
30	3/21/2022	40	14,457	14,299
31	3/21/2022	40	14,258	14,100
32	3/21/2022	40	14,058	13,900
33	3/22/2022	40	13,858	13,701
34	3/22/2022	40	13,659	13,501
35	3/22/2022	40	13,459	13,302
36	3/22/2022	40	13,260	13,102
37	3/23/2022	40	13,060	12,903
38	3/23/2022	40	12,861	12,703
39	3/23/2022	40	12,661	12,504
40	3/23/2022	40	12,462	12,304
41	3/24/2022	40	12,262	12,105
42	3/24/2022	40	12,063	11,905
43	3/24/2022	40	11,863	11,706
44	3/24/2022	40	11,664	11,506
45	3/24/2022	40	11,464	11,306

02/09/2024



Stage Number	Report Date	Total Shots	Cluster 1 Top TD	Cluster 5 Bottom TD
46	3/24/2022	40	11,265	11,107
47	3/25/2022	40	11,065	10,907
48	3/25/2022	40	10,866	10,708
49	3/25/2022	40	10,666	10,508
50	3/25/2022	40	10,466	10,309
51	3/26/2022	40	10,267	10,109
52	3/26/2022	40	10,067	9,910
53	3/26/2022	40	9,868	9,710
54	3/26/2022	40	9,668	9,511
55	3/26/2022	40	9,469	9,311
56	3/27/2022	40	9,269	9,112
57	3/27/2022	40	9,070	8,912
58	3/27/2022	40	8,870	8,713
59	3/27/2022	40	8,671	8,513



1	N 37°20'25\" E 1176'
2	N 58°41'59\" E 1227'

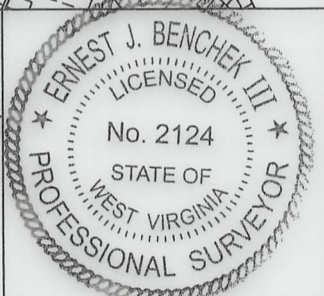
**REFERENCE NOTES**  
 Boundaries as shown taken from deeds, tax maps and field locations. A full boundary survey is not expressed nor implied. All bearings are based on true north. Ownership taken from public records MONONGALIA County, West Virginia JULY 2016  
 State Plane Coordinates & NAD 83 Lat/Long by differential submeter mapping grade GPS Drafted by: EAJL

**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 #: 2963  
 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

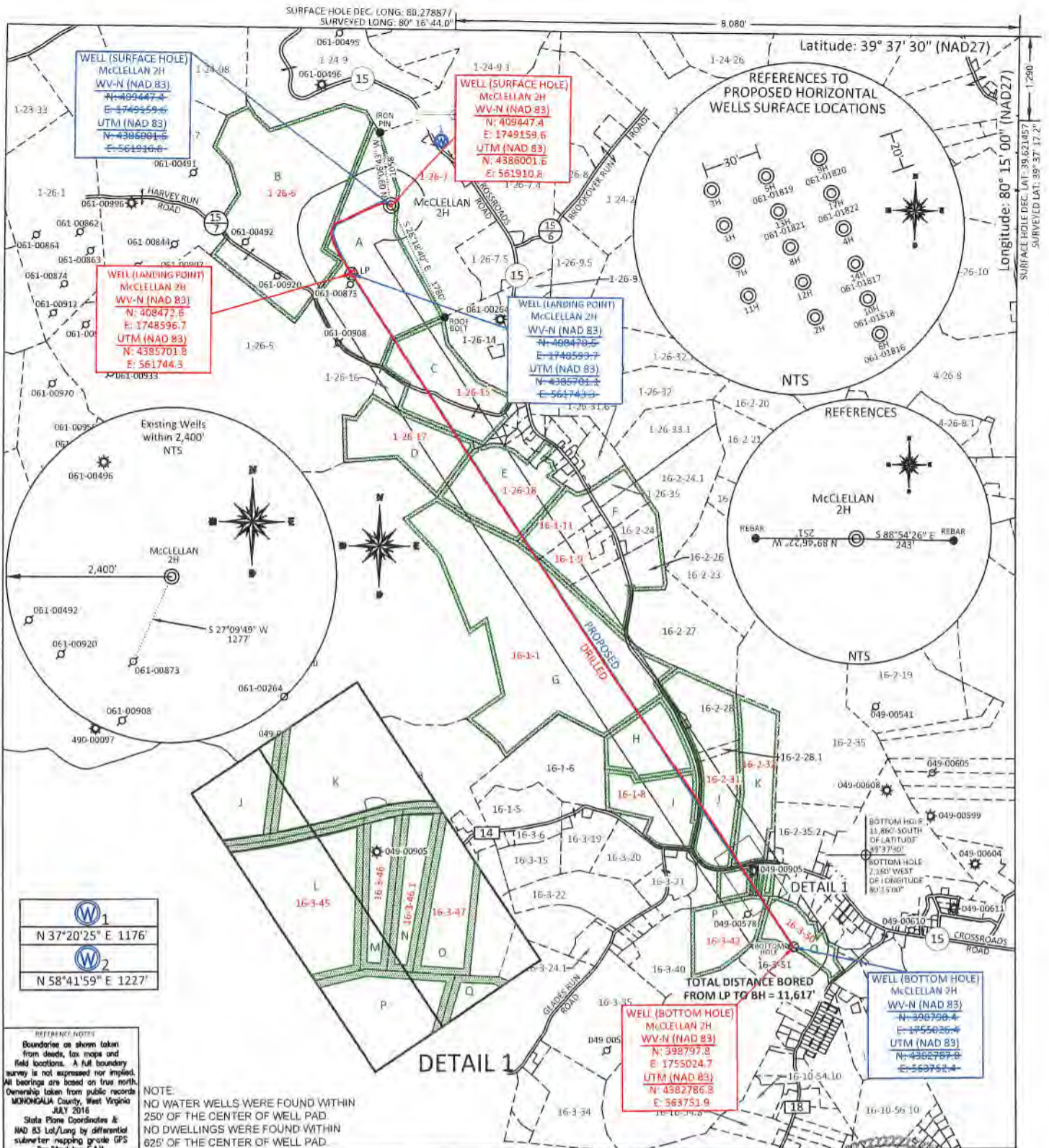
DATE: SEPTEMBER 28, 2023  
 OPERATOR'S WELL #: McCLELLAN 2H AS-DRILLED  
 API WELL #: 47 61  
 STATE COUNTY PERMIT  
 AS-BUILT ELEVATION: 1,411.7'

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

WATERSHED: UPPER MONONGAHELA  
 COUNTY/DISTRICT: MONONGALIA / BATTELLE QUADRANGLE: MANNINGTON  
 SURFACE OWNER: KLONDIKE REAL ESTATE PARTNERSHIP ACREAGE: 440.44 +/-  
 OIL & GAS ROYALTY OWNER: Barbara June Sutton, et al ACREAGE: 129.4 +/- **02/09/2024**  
 LEASE NUMBERS: \_\_\_\_\_


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

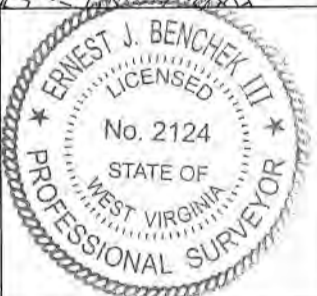
TARGET FORMATION: MARCELLUS DRILLED DEPTH: TVD: 8,136' TMD: 20,210'  
 WELL OPERATOR: NORTHEAST NATURAL ENERGY LLC DESIGNATED AGENT: JOHN ADAMS  
 ADDRESS: 707 VIRGINIA STREET EAST, SUITE 1200 ADDRESS: 707 VIRGINIA STREET EAST, SUITE 1200  
 CITY: CHARLESTON STATE: WV ZIP CODE: 25301 CITY: CHARLESTON STATE: WV ZIP CODE: 25301



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(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
 WYDEP  
 OFFICE OF OIL & GAS  
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 CHARLESTON, WV 25304

DATE: SEPTEMBER 28, 2023  
 OPERATOR'S WELL #: McCLELLAN 2H AS-DRILLED  
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 STATE COUNTY PERMIT  
 AS-BUILT ELEVATION: 1,411.7'

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

WATERSHED: UPPER MONONGAHELA  
 COUNTY/DISTRICT: MONONGALIA / BATTELLE  
 SURFACE OWNER: KLONDIKE REAL ESTATE PARTNERSHIP  
 OIL & GAS ROYALTY OWNER: Barbara June Sutton, et al  
 LEASE NUMBERS: \_\_\_\_\_

QUADRANGLE: MANNINGTON  
 ACREAGE: 440.44 +/-  
 ACREAGE: 129.4 +/- **02/09/2024**

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

TARGET FORMATION: MARCELLUS  
 DRILLED DEPTH: TVD: 8,136' TMD: 20,210'  
 WELL OPERATOR: NORTHEAST NATURAL ENERGY LLC  
 DESIGNATED AGENT: JOHN ADAMS  
 ADDRESS: 707 VIRGINIA STREET EAST, SUITE 1200  
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 CITY: CHARLESTON STATE: WV ZIP CODE: 25301  
 CITY: CHARLESTON STATE: WV ZIP CODE: 25301

PROPERTY OWNER INDEX	
1-26-7	KLONDIKE REAL ESTATE PARTNERSHIP
1-26-15	KELSI L. & PRESTON K. WILSON
1-26-17	KELSI L. & PRESTON K. WILSON
1-26-18	CHARLENE CHAPMAN & DALE REISING
16-1-1	CONSOLIDATION COAL COMPANY
16-1-8	CONSOLIDATION COAL COMPANY
16-1-11	MARSHA E. & BRADLEY D. WOLFE
16-1-9	ZACHARY R. & JACQUELINE E. PHILLIPS
1-26-6	ROBERT G, SIMON, HAROLD & DANIEL SANTEE EST ET AL
16-2-32	DOROTHY GRIEGER
16-2-31	CONSOLIDATION COAL COMPANY
16-3-50	DONALD & PATRICIA PYLES
16-3-42	SHIRLEY L MOORE
16-3-45	JOEY DAWN & GILLESPIE
16-3-46	JOEY DAWN & GILLESPIE
16-3-46.1	JOHN & DONNA HLUSKO
16-3-47	RONALD D & JOANN PARRISH

LEASE INDEX			
A	WV-061-004172-011	I	WV-049-005482-001
B	WV-061-004173-066	J	WV-049-800042-001
C	WV-061-005241-001	K	WV-049-004233-047
D	WV-061-004560-050	L	WV-049-800042-001
E	WV-061-004793-039	M	WV-049-005804-001
F	WV-061-005509-006	N	WV-049-005664-003
G	WV-049-004839-001	O	WV-049-005664-003
H	WV-049-005482-001	P	WV-049-005693-003
		Q	WV-049-005236-000

02/09/2024

FILE #: NEE14

DRAWING #: 2963

SCALE: N/A

DATE: SEPTEMBER 28, 2023

OPERATOR'S WELL #: McCLELLAN 2H

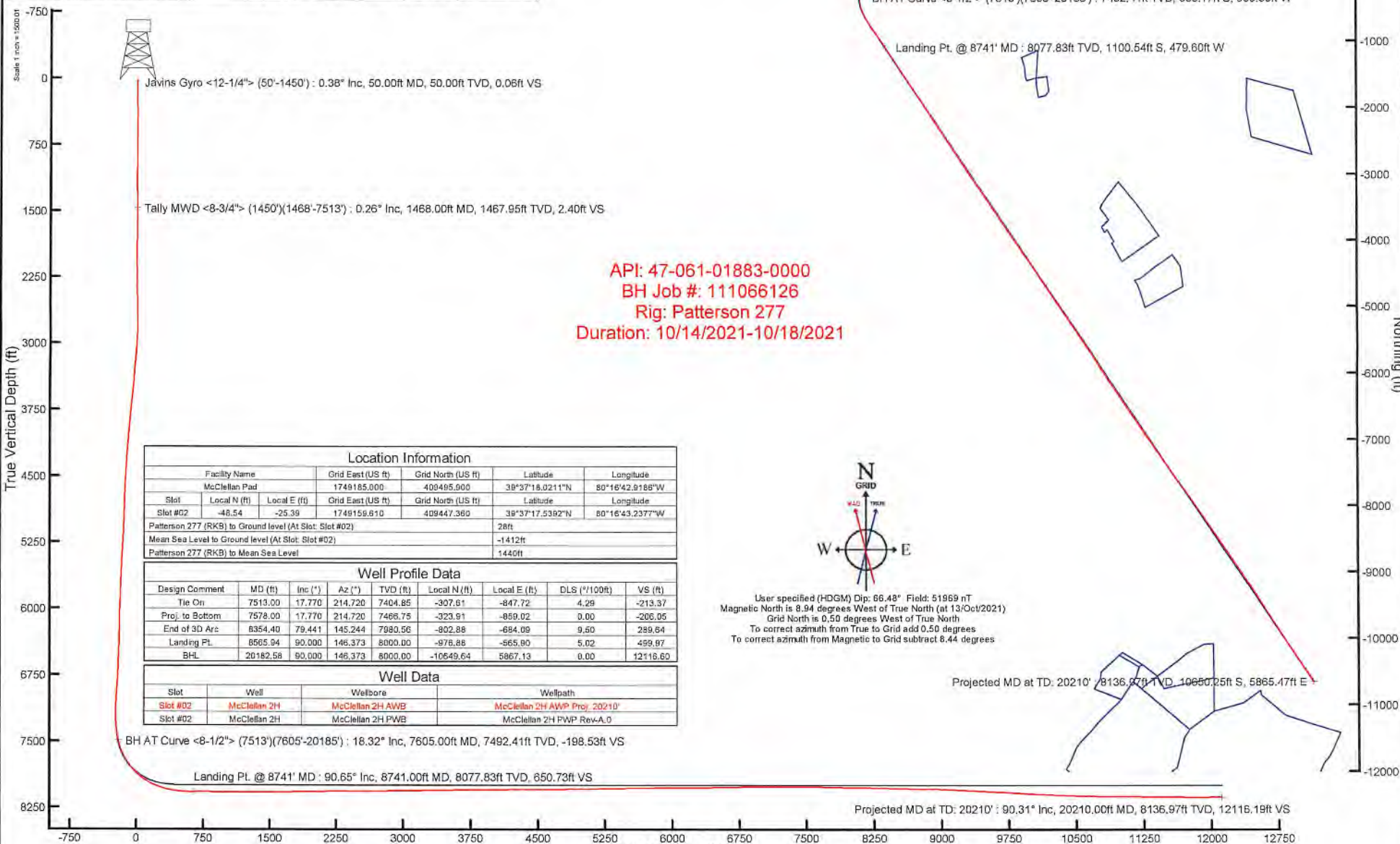
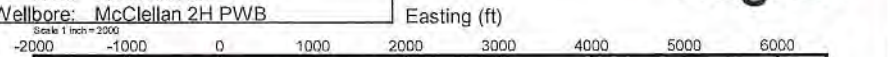
API WELL #: 47 61   
STATE COUNTY PERMIT

# NORTHEAST NATURAL ENERGY, LLC

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

Slot: Slot #02  
 Well: McClellan 2H  
 Wellbore: McClellan 2H PWB

Plot reference wellpath is McClellan 2H PWB Rev-A.0	Grid System: NAD83 Lambert West Virginia SP, Northern Zone (4701), US feet
True vertical depths are referenced to Patterson 277 (RKB)	North Reference: Grid north
Reference wellpath measured depths are referenced to Patterson 277 (RKB)	Scale: True distance
Patterson 277 (RKB) to Mean Sea Level: 1442 feet	Coordinates are in feet referenced to Grid
Mean Sea Level to Ground level (At Slot: Slot #02): +1412 feet	Depths are in feet
Offset wellpath MDs are referenced to each well's default MD datum	Created by: adalberto on 2021-10-20 Database: WA_MPL_EASTERNUS_10m



API: 47-061-01883-0000  
 BH Job #: 111066126  
 Rig: Patterson 277  
 Duration: 10/14/2021-10/18/2021

Location Information					
Facility Name		Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
McClellan Pad		1749185.000	409495.000	38°37'18.0211"N	80°16'42.9188"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude
Slot #02	-48.54	-25.39	1749159.610	409447.360	38°37'17.5392"N
Patterson 277 (RKB) to Ground level (At Slot: Slot #02)				28ft	
Mean Sea Level to Ground level (At Slot: Slot #02)				-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	7513.00	17.770	214.720	7404.85	-307.61	-847.72	4.29	-213.37
Proj. to Bottom	7578.00	17.770	214.720	7466.75	-323.91	-859.02	0.00	-206.05
End of 3D Arc	8354.40	79.441	145.244	7980.56	-802.88	-684.09	9.50	289.64
Landing Pt.	8565.94	90.000	146.373	8000.00	-976.88	-565.90	5.02	459.97
BHL	20182.58	90.000	146.373	8000.00	-10549.64	5867.13	0.00	12116.60

Well Data			
Slot	Well	Wellbore	Wellpath
Slot #02	McClellan 2H	McClellan 2H AWP	McClellan 2H AWP Proj. 20210'
Slot #02	McClellan 2H	McClellan 2H PWB	McClellan 2H PWB Rev-A.0



User specified (HDGM) Dip: 66.48° Field: 51969 nT  
 Magnetic North is 8.94 degrees West of True North (at 13/Oct/2021)  
 Grid North is 0.50 degrees West of True North  
 To correct azimuth from True to Grid add 0.50 degrees  
 To correct azimuth from Magnetic to Grid subtract 8.44 degrees



# Actual Wellpath Report

McClellan 2H AWP Proj: 20210'

Page 1 of 14



REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	McClellan 2H
Field	Monongalia	API/Legal	
Facility	McClellan Pad	Wellbore	McClellan 2H AWB
Slot	Slot #02		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert West Virginia SP, Northern Zone (4701), US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Edsaryar
Scale	0.999941	Report Generated	20/Oct/2021 at 17:30
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	-48.54	-25.39	1749159.61	409447.36	39°37'17.5392"N	80°16'43.2377"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 #02)	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 2H AWP Proj: 20210'  
Page 2 of 14



REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	McClellan 2H
Field	Monongalia	API/Legal	
Facility	McClellan Pad	Wellbore	McClellan 2H AWB
Slot	Slot #02		

WELLPATH DATA (233 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	109.600	0.00	0.00	0.00	0.00	1749159.61	409447.36	39°37'17.5392°N	80°16'43.2377°W	0.00	0.000	0.00	0.00	0.00
28.00	0.000	109.600	28.00	0.00	0.00	0.00	1749159.61	409447.36	39°37'17.5392°N	80°16'43.2377°W	0.00	0.000	0.00	0.00	0.00
50.00	0.380	109.600	50.00	0.06	-0.02	0.07	1749159.68	409447.34	39°37'17.5389°N	80°16'43.2368°W	0.07	109.600	1.73	1.73	0.00
100.00	0.430	57.100	100.00	0.19	0.02	0.38	1749159.99	409447.38	39°37'17.5394°N	80°16'43.2328°W	0.38	86.735	0.72	0.10	-105.00
150.00	0.420	76.400	150.00	0.26	0.17	0.72	1749160.33	409447.53	39°37'17.5409°N	80°16'43.2286°W	0.74	76.922	0.29	-0.02	38.60
200.00	0.460	65.600	200.00	0.35	0.29	1.08	1749160.69	409447.65	39°37'17.5421°N	80°16'43.2240°W	1.12	74.816	0.18	0.08	-21.60
250.00	0.440	89.500	249.99	0.49	0.38	1.45	1749161.06	409447.74	39°37'17.5430°N	80°16'43.2192°W	1.50	75.447	0.37	-0.04	47.80
300.00	0.530	134.900	299.99	0.82	0.22	1.81	1749161.42	409447.58	39°37'17.5414°N	80°16'43.2146°W	1.82	83.197	0.77	0.18	90.80
350.00	0.570	172.500	349.99	1.27	-0.19	2.01	1749161.62	409447.17	39°37'17.5374°N	80°16'43.2121°W	2.02	95.523	0.71	0.08	75.20
400.00	0.560	205.600	399.99	1.62	-0.66	1.93	1749161.54	409446.70	39°37'17.5328°N	80°16'43.2130°W	2.04	108.878	0.64	-0.02	66.20
450.00	0.500	250.500	449.99	1.69	-0.95	1.62	1749161.23	409446.41	39°37'17.5299°N	80°16'43.2169°W	1.88	120.472	0.82	-0.12	89.80
500.00	0.490	294.300	499.98	1.46	-0.94	1.22	1749160.83	409446.42	39°37'17.5300°N	80°16'43.2220°W	1.54	127.560	0.74	-0.02	87.60
550.00	0.380	7.900	549.98	1.15	-0.69	1.05	1749160.66	409446.67	39°37'17.5325°N	80°16'43.2242°W	1.25	123.212	1.06	-0.22	147.20
600.00	0.370	57.500	599.98	1.03	-0.44	1.21	1749160.82	409446.92	39°37'17.5350°N	80°16'43.2222°W	1.28	109.837	0.63	-0.02	99.20
650.00	0.560	129.000	649.98	1.27	-0.50	1.53	1749161.14	409446.86	39°37'17.5343°N	80°16'43.2181°W	1.61	108.147	1.13	0.38	143.00
700.00	0.620	189.000	699.98	1.70	-0.92	1.68	1749161.29	409446.44	39°37'17.5302°N	80°16'43.2161°W	1.92	118.782	1.18	0.12	120.00
750.00	0.570	213.400	749.98	2.00	-1.40	1.50	1749161.11	409445.96	39°37'17.5255°N	80°16'43.2184°W	2.05	132.952	0.51	-0.10	48.80
800.00	0.540	252.000	799.97	2.03	-1.68	1.14	1749160.75	409445.68	39°37'17.5227°N	80°16'43.2230°W	2.03	145.795	0.74	-0.06	77.20
850.00	0.400	324.100	849.97	1.79	-1.61	0.81	1749160.42	409445.75	39°37'17.5233°N	80°16'43.2271°W	1.80	153.162	1.13	-0.28	144.20
900.00	0.570	253.200	899.97	1.55	-1.54	0.47	1749160.08	409445.82	39°37'17.5240°N	80°16'43.2316°W	1.61	162.888	1.16	0.34	-141.80
950.00	0.450	268.800	949.97	1.37	-1.62	0.04	1749159.65	409445.74	39°37'17.5232°N	80°16'43.2370°W	1.62	178.583	0.36	-0.24	31.20
1000.00	0.420	332.200	999.97	1.08	-1.46	-0.24	1749159.37	409445.90	39°37'17.5247°N	80°16'43.2407°W	1.48	189.410	0.92	-0.06	126.80
1018.00	0.330	24.700	1017.97	0.99	-1.35	-0.25	1749159.36	409446.01	39°37'17.5258°N	80°16'43.2408°W	1.38	190.501	1.90	-0.50	291.67
1050.00	0.350	335.400	1049.97	0.84	-1.18	-0.25	1749159.36	409446.18	39°37'17.5275°N	80°16'43.2408°W	1.21	192.096	0.89	0.06	-154.06
1100.00	0.370	358.400	1099.97	0.56	-0.88	-0.32	1749159.29	409446.48	39°37'17.5304°N	80°16'43.2417°W	0.94	200.035	0.29	0.04	46.00
1150.00	0.350	47.300	1149.97	0.39	-0.62	-0.21	1749159.40	409446.74	39°37'17.5331°N	80°16'43.2404°W	0.65	199.118	0.60	-0.04	97.80
1200.00	0.450	79.500	1199.96	0.45	-0.48	0.09	1749159.70	409446.88	39°37'17.5345°N	80°16'43.2365°W	0.49	169.083	0.48	0.20	64.40
1250.00	0.710	119.500	1249.96	0.80	-0.59	0.55	1749160.16	409446.77	39°37'17.5333°N	80°16'43.2306°W	0.81	136.924	0.93	0.52	80.00
1300.00	0.490	114.900	1299.96	1.26	-0.84	1.02	1749160.63	409446.52	39°37'17.5310°N	80°16'43.2246°W	1.32	129.380	0.45	-0.44	-9.20
1350.00	0.510	113.900	1349.96	1.63	-1.02	1.42	1749161.03	409446.34	39°37'17.5292°N	80°16'43.2195°W	1.74	125.666	0.04	0.04	-2.00



# Actual Wellpath Report

McClellan 2H AWP Proj: 20210'  
Page 3 of 14



REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	McClellan 2H
Field	Monongalia	API/Legal	
Facility	McClellan Pad	Wellbore	McClellan 2H AWB
Slot	Slot #02		

WELLPATH DATA (233 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	0.430	123.000	1399.96	1.99	-1.21	1.78	1749161.39	409446.15	39°37'17.5274"N	80°16'43.2149"W	2.15	124.223	0.22	-0.16	18.20	
1450.00	0.430	135.000	1449.95	2.35	-1.44	2.07	1749161.68	409445.92	39°37'17.5251"N	80°16'43.2112"W	2.52	124.929	0.18	0.00	24.00	
1468.00	0.260	254.640	1467.95	2.40	-1.50	2.07	1749161.68	409445.86	39°37'17.5245"N	80°16'43.2110"W	2.56	125.896	3.35	-0.94	664.67	
1563.00	0.180	244.840	1562.95	2.31	-1.62	1.73	1749161.34	409445.74	39°37'17.5233"N	80°16'43.2154"W	2.37	133.128	0.09	-0.08	-10.32	
1657.00	0.670	254.090	1656.95	2.12	-1.84	1.07	1749160.68	409445.52	39°37'17.5211"N	80°16'43.2239"W	2.12	149.771	0.52	0.52	9.84	
1752.00	1.080	262.810	1751.94	1.70	-2.25	-0.32	1749159.29	409445.11	39°37'17.5169"N	80°16'43.2416"W	2.28	188.083	0.43	0.43	-1.35	
1847.00	1.480	260.640	1846.92	0.94	-2.72	-2.39	1749157.22	409444.64	39°37'17.5121"N	80°16'43.2679"W	3.62	221.290	0.46	0.42	8.24	
1941.00	1.140	257.840	1940.89	0.10	-3.11	-4.50	1749155.11	409444.25	39°37'17.5080"N	80°16'43.2949"W	5.47	235.328	0.37	-0.36	-2.98	
2034.00	0.450	177.910	2033.88	0.07	-3.67	-5.39	1749154.22	409443.69	39°37'17.5024"N	80°16'43.3062"W	6.52	235.737	1.24	-0.74	-85.95	
2129.00	0.780	130.130	2128.88	1.01	-4.46	-4.88	1749154.73	409442.90	39°37'17.4947"N	80°16'43.2996"W	6.61	227.576	0.61	0.35	-50.29	
2224.00	0.990	113.450	2223.87	2.32	-5.20	-3.63	1749155.98	409442.16	39°37'17.4874"N	80°16'43.2836"W	6.35	214.923	0.35	0.22	-17.56	
2318.00	1.240	107.850	2317.85	3.80	-5.84	-1.92	1749157.69	409441.52	39°37'17.4813"N	80°16'43.2616"W	6.15	198.205	0.29	0.27	-5.96	
2412.00	1.400	97.540	2411.82	5.35	-6.30	0.19	1749159.80	409441.06	39°37'17.4769"N	80°16'43.2346"W	6.30	178.306	0.30	0.17	-10.97	
2507.00	1.300	101.600	2506.80	6.88	-6.67	2.39	1749162.00	409440.69	39°37'17.4734"N	80°16'43.2064"W	7.09	160.268	0.15	-0.11	4.27	
2601.00	1.390	91.530	2600.77	8.29	-6.91	4.58	1749164.19	409440.45	39°37'17.4712"N	80°16'43.1785"W	8.29	146.501	0.27	0.10	-10.71	
2661.00	1.400	96.600	2660.75	9.18	-7.02	6.03	1749165.64	409440.34	39°37'17.4703"N	80°16'43.1599"W	9.25	139.322	0.21	0.02	8.45	
2727.00	1.460	84.040	2726.73	10.10	-7.02	7.67	1749167.28	409440.34	39°37'17.4704"N	80°16'43.1369"W	10.40	132.485	0.48	0.09	-19.03	
2824.00	1.920	344.590	2823.71	9.13	-5.33	8.47	1749168.08	409442.03	39°37'17.4872"N	80°16'43.1289"W	10.00	122.166	2.68	0.47	-102.53	
2920.00	3.590	322.320	2919.60	4.60	-1.40	6.20	1749165.81	409445.96	39°37'17.5259"N	80°16'43.1583"W	6.36	102.715	2.03	1.74	-23.20	
3013.00	3.800	319.410	3012.40	-1.36	3.25	2.42	1749162.03	409450.61	39°37'17.5714"N	80°16'43.2072"W	4.05	36.681	0.30	0.23	-3.13	
3108.00	3.700	319.070	3107.20	-7.53	7.95	-1.64	1749157.97	409455.31	39°37'17.6176"N	80°16'43.2596"W	8.12	348.352	0.11	-0.11	-0.36	
3202.00	4.080	307.260	3200.98	-13.70	12.27	-6.29	1749153.32	409459.63	39°37'17.6599"N	80°16'43.3194"W	13.79	332.863	0.94	0.40	-12.56	
3297.00	3.950	301.660	3295.75	-19.86	16.03	-11.76	1749147.85	409463.39	39°37'17.6966"N	80°16'43.3898"W	19.88	323.731	0.43	-0.14	-5.89	
3392.00	3.920	298.470	3390.53	-25.71	19.30	-17.40	1749142.21	409466.66	39°37'17.7284"N	80°16'43.4622"W	25.98	317.955	0.23	-0.03	-3.36	
3487.00	5.580	300.190	3485.20	-32.72	23.17	-24.25	1749135.36	409470.53	39°37'17.7660"N	80°16'43.5502"W	33.54	313.693	1.76	1.75	1.81	
3585.00	7.280	291.360	3582.58	-42.08	27.83	-34.15	1749125.46	409475.18	39°37'17.8112"N	80°16'43.6772"W	44.05	309.172	2.00	1.73	-9.01	
3679.00	8.940	286.460	3675.64	-52.56	32.06	-46.70	1749112.91	409479.42	39°37'17.8520"N	80°16'43.8381"W	56.65	304.472	1.91	1.77	-5.21	
3774.00	8.250	279.990	3769.57	-62.93	35.34	-60.50	1749099.12	409482.70	39°37'17.8832"N	80°16'44.0147"W	70.06	300.291	1.25	-0.73	-6.81	
3870.00	9.350	266.080	3864.45	-71.55	36.00	-75.06	1749084.55	409483.36	39°37'17.8885"N	80°16'44.2009"W	83.25	295.623	2.49	1.15	-14.49	
3964.00	10.570	261.830	3957.03	-79.04	34.25	-91.21	1749068.40	409481.61	39°37'17.8699"N	80°16'44.4071"W	97.43	290.582	1.51	1.30	-4.52	





# Actual Wellpath Report

McClellan 2H AWP Proj: 20210'  
Page 4 of 14



REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	McClellan 2H
Field	Monongalia	API/Legal	
Facility	McClellan Pad	Wellbore	McClellan 2H AWB
Slot	Slot #02		

WELLPATH DATA (233 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]	
4059.00	10.600	261.340	4050.42	-86.47	31.70	-108.48	1749051.14	409479.06	39°37'17.8431"N	80°16'44.6275"W	113.01	286.289	0.10	0.03	-0.52	
4153.00	12.010	259.280	4142.59	-93.93	28.58	-126.63	1749032.98	409475.94	39°37'17.8107"N	80°16'44.8591"W	129.82	282.717	1.56	1.50	-2.19	
4248.00	12.820	257.450	4235.37	-101.57	24.45	-146.63	1749012.98	409471.81	39°37'17.7682"N	80°16'45.1143"W	148.66	279.466	0.95	0.85	-1.93	
4342.00	13.130	252.660	4326.97	-108.31	19.00	-167.01	1748992.61	409466.36	39°37'17.7126"N	80°16'45.3740"W	168.08	276.491	1.19	0.33	-5.10	
4437.00	11.780	251.960	4419.74	-113.96	12.78	-186.53	1748973.09	409460.14	39°37'17.6495"W	80°16'45.6227"W	186.96	273.920	1.43	-1.42	-0.74	
4532.00	12.760	252.880	4512.56	-119.53	6.89	-205.77	1748953.85	409454.05	39°37'17.5876"N	80°16'45.8680"W	205.88	271.862	1.05	1.03	0.97	
4629.00	13.930	249.370	4606.94	-125.20	-0.58	-226.94	1748932.68	409446.78	39°37'17.5140"N	80°16'46.1377"W	226.94	269.854	1.47	1.21	-3.62	
4724.00	13.160	243.480	4699.31	-129.12	-9.44	-247.32	1748912.31	409437.93	39°37'17.4247"N	80°16'46.3971"W	247.50	267.815	1.66	-0.81	-6.20	
4818.00	13.890	241.830	4790.70	-131.51	-19.54	-266.84	1748892.79	409427.82	39°37'17.3232"N	80°16'46.6455"W	267.56	265.812	0.88	0.78	-1.76	
4913.00	14.210	242.830	4882.86	-133.91	-30.25	-287.27	1748872.36	409417.11	39°37'17.2156"N	80°16'46.9053"W	288.65	263.989	0.42	0.34	1.05	
5008.00	13.150	244.140	4975.16	-136.68	-40.29	-307.36	1748852.26	409407.08	39°37'17.1147"N	80°16'47.1610"W	309.99	262.533	1.16	-1.12	1.38	
5104.00	12.720	244.970	5068.73	-139.74	-49.52	-326.77	1748832.86	409397.84	39°37'17.0218"N	80°16'47.4080"W	330.50	261.383	0.49	-0.45	0.86	
5198.00	12.480	248.430	5160.46	-143.41	-57.63	-345.59	1748814.04	409389.73	39°37'16.9400"N	80°16'47.6476"W	350.36	260.532	0.84	-0.26	3.68	
5293.00	12.760	250.830	5253.17	-148.17	-64.85	-365.05	1748794.59	409382.51	39°37'16.8670"N	80°16'47.8954"W	370.76	259.926	0.63	0.29	2.53	
5388.00	14.160	251.180	5345.56	-153.77	-72.05	-385.95	1748773.68	409375.32	39°37'16.7941"N	80°16'48.1618"W	392.62	259.426	1.48	1.47	0.37	
5483.00	14.520	249.400	5437.60	-159.42	-79.98	-408.10	1748751.53	409367.38	39°37'16.7137"N	80°16'48.4439"W	415.87	258.911	0.60	0.38	-1.87	
5577.00	13.330	242.950	5528.84	-163.32	-89.06	-428.78	1748730.85	409358.31	39°37'16.6223"N	80°16'48.7072"W	437.94	258.266	2.08	-1.27	-6.86	
5707.00	15.890	248.610	5654.63	-168.81	-102.37	-458.71	1748700.93	409345.00	39°37'16.4882"N	80°16'49.0881"W	469.99	257.420	2.25	1.97	4.35	
5769.00	14.720	245.290	5714.43	-171.83	-108.76	-473.77	1748685.87	409338.61	39°37'16.4237"N	80°16'49.2799"W	486.09	257.071	2.36	-1.89	-5.35	
5862.00	14.690	243.920	5804.41	-175.20	-118.85	-495.02	1748664.62	409328.52	39°37'16.3222"N	80°16'49.5504"W	509.09	256.500	0.40	-0.14	-1.47	
5957.00	15.220	244.240	5896.21	-178.48	-129.53	-517.00	1748642.64	409317.84	39°37'16.2148"N	80°16'49.8300"W	532.98	255.935	0.67	0.66	0.34	
6052.00	15.770	246.310	5987.78	-182.42	-140.13	-540.05	1748619.59	409307.24	39°37'16.1080"N	80°16'50.1234"W	557.94	255.454	0.82	0.58	2.18	
6146.00	13.950	240.100	6078.62	-185.36	-150.91	-561.58	1748598.07	409296.46	39°37'15.9996"N	80°16'50.3973"W	581.50	254.958	2.57	-1.94	-6.61	
6240.00	13.190	241.350	6169.99	-187.03	-161.70	-580.81	1748578.84	409285.67	39°37'15.8913"N	80°16'50.6419"W	602.90	254.442	0.87	-0.81	1.33	
6334.00	13.020	242.950	6261.54	-189.17	-171.66	-599.65	1748559.99	409275.71	39°37'15.7913"N	80°16'50.8815"W	623.74	254.025	0.43	-0.18	1.70	
6429.00	13.210	243.000	6354.06	-191.65	-181.46	-618.85	1748540.79	409265.92	39°37'15.6928"N	80°16'51.1258"W	644.91	253.658	0.20	0.20	0.05	
6525.00	14.070	246.560	6447.36	-194.98	-191.08	-639.33	1748520.31	409256.29	39°37'15.5960"N	80°16'51.3865"W	667.28	253.360	1.25	0.90	3.71	
6624.00	12.160	244.850	6543.77	-198.65	-200.30	-659.82	1748499.83	409247.08	39°37'15.5031"N	80°16'51.6472"W	689.55	253.114	1.97	-1.93	-1.73	
6718.00	12.260	244.080	6635.65	-201.45	-208.87	-677.75	1748481.90	409238.51	39°37'15.4169"N	80°16'51.8755"W	709.21	252.872	0.20	0.11	-0.82	
6813.00	14.080	246.610	6728.14	-204.86	-217.86	-697.43	1748462.22	409229.51	39°37'15.3263"N	80°16'52.1269"W	730.67	252.652	2.01	1.92	2.66	



# Actual Wellpath Report

McClellan 2H AWP Proj: 20210'  
Page 5 of 14



REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	McClellan 2H
Field	Monongalia	API/Legal	
Facility	McClellan Pad	Wellbore	McClellan 2H AWB
Slot	Slot #02		

WELLPATH DATA (233 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]	
6909.00	15.250	250.220	6821.02	-209.96	-226.77	-720.03	1748439.62	409220.60	39°37'15.2363"N	80°16'52.4137"W	754.90	252.518	1.55	1.22	3.76	
7003.00	14.280	250.370	6911.91	-215.72	-234.85	-742.59	1748417.07	409212.52	39°37'15.1545"N	80°16'52.7010"W	778.84	252.450	1.03	-1.03	0.16	
7097.00	14.850	247.810	7002.89	-220.91	-243.30	-764.66	1748395.00	409204.08	39°37'15.0692"N	80°16'52.9822"W	802.43	252.350	0.91	0.61	-2.72	
7190.00	15.590	241.580	7092.63	-224.41	-253.75	-786.69	1748372.97	409193.63	39°37'14.9640"N	80°16'53.2625"W	826.60	252.123	1.93	0.80	-6.70	
7285.00	14.340	238.500	7184.41	-226.01	-265.97	-807.95	1748351.71	409181.41	39°37'14.6414"N	80°16'53.5328"W	850.60	251.779	1.56	-1.32	-3.24	
7380.00	13.220	223.050	7276.71	-223.94	-280.06	-825.40	1748334.26	409167.32	39°37'14.7006"N	80°16'53.7543"W	871.62	251.258	4.04	-1.18	-16.26	
7474.00	16.420	218.080	7367.57	-217.30	-298.38	-840.93	1748318.73	409149.00	39°37'14.5182"N	80°16'53.9508"W	892.30	250.465	3.66	3.40	-5.29	
7513.00	17.770	214.720	7404.85	-213.37	-307.61	-847.72	1748311.94	409139.77	39°37'14.4264"N	80°16'54.0365"W	901.81	250.056	4.29	3.46	-8.62	
7605.00	18.320	194.520	7492.41	-198.53	-333.17	-859.36	1748300.31	409114.21	39°37'14.1728"N	80°16'54.1823"W	921.68	248.809	6.80	0.60	-21.96	
7699.00	24.230	184.020	7580.00	-173.37	-366.75	-864.42	1748295.24	409080.63	39°37'13.8405"N	80°16'54.2433"W	939.01	247.010	7.46	6.29	-11.17	
7793.00	29.400	170.690	7663.94	-137.01	-408.83	-862.04	1748297.63	409038.55	39°37'13.4249"N	80°16'54.2081"W	954.07	244.827	8.41	5.50	-14.18	
7888.00	36.350	167.420	7743.68	-89.43	-459.39	-852.12	1748307.54	408988.00	39°37'12.9261"N	80°16'54.0758"W	968.06	241.670	7.55	7.32	-3.44	
7983.00	42.360	160.810	7817.14	-32.08	-517.17	-835.44	1748324.22	408930.22	39°37'12.3565"N	80°16'53.8563"W	982.56	238.241	7.71	6.33	-6.96	
8078.00	48.940	158.200	7883.51	34.05	-580.73	-811.59	1748348.07	408866.67	39°37'11.7304"N	80°16'53.5444"W	997.96	234.415	7.20	6.93	-2.75	
8173.00	56.110	151.680	7941.32	108.51	-648.83	-779.52	1748380.13	408798.57	39°37'11.0602"N	80°16'53.1271"W	1014.22	230.228	9.30	7.55	-6.86	
8267.00	64.030	147.860	7988.19	189.75	-719.08	-738.46	1748421.19	408728.32	39°37'10.3694"N	80°16'52.5945"W	1030.73	225.762	9.13	8.43	-4.06	
8362.00	71.190	145.890	8024.36	277.52	-792.57	-690.46	1748469.19	408654.84	39°37'9.6473"N	80°16'51.9730"W	1051.15	221.061	7.78	7.54	-2.07	
8457.00	77.080	144.900	8050.32	368.85	-867.75	-638.58	1748521.07	408579.67	39°37'8.9088"N	80°16'51.3017"W	1077.39	216.350	6.28	6.20	-1.04	
8552.00	82.220	144.000	8067.38	462.22	-943.75	-584.26	1748575.39	408503.67	39°37'8.1623"N	80°16'50.5991"W	1109.96	211.761	5.49	5.41	-0.95	
8646.00	87.200	147.030	8076.05	555.77	-1020.87	-631.29	1748628.35	408426.55	39°37'7.4047"N	80°16'49.9137"W	1150.85	207.494	6.19	5.30	3.22	
8741.00	90.650	147.020	8077.83	650.73	-1100.54	-479.60	1748680.04	408346.88	39°37'6.6218"N	80°16'49.2444"W	1200.51	203.547	3.63	3.63	-0.01	
8835.00	90.460	145.540	8076.92	744.72	-1178.72	-427.43	1748732.21	408268.71	39°37'5.8537"N	80°16'48.5689"W	1253.83	199.931	1.59	-0.20	-1.57	
8930.00	88.650	146.600	8077.65	839.71	-1257.54	-374.40	1748785.23	408189.90	39°37'5.0793"N	80°16'47.8826"W	1312.09	196.580	2.21	-1.91	1.12	
9025.00	88.980	146.940	8079.62	934.69	-1336.99	-322.35	1748837.28	408110.45	39°37'4.2986"N	80°16'47.2087"W	1375.30	193.556	0.50	0.35	0.36	
9120.00	89.820	146.910	8080.61	1029.68	-1416.59	-270.51	1748889.11	408030.86	39°37'3.5164"N	80°16'46.5375"W	1442.19	190.811	0.88	0.88	-0.03	
9214.00	89.690	146.990	8081.02	1123.67	-1495.38	-219.25	1748940.38	407952.07	39°37'2.7421"N	80°16'45.8737"W	1511.37	188.341	0.16	-0.14	0.09	
9310.00	90.180	146.490	8081.13	1219.67	-1575.65	-166.60	1748993.02	407871.80	39°37'1.9533"N	80°16'45.1920"W	1584.44	186.036	0.73	0.51	-0.52	
9405.00	90.250	146.990	8080.77	1314.67	-1655.09	-114.50	1749045.12	407792.37	39°37'1.1728"N	80°16'44.5175"W	1659.05	183.957	0.53	0.07	0.53	
9499.00	90.180	146.420	8080.42	1408.67	-1733.66	-62.90	1749096.72	407713.81	39°37'0.4007"N	80°16'43.8494"W	1734.80	182.078	0.61	-0.07	-0.61	
9594.00	90.060	146.790	8080.22	1503.66	-1812.97	-10.61	1749149.00	407634.50	39°36'59.6213"N	80°16'43.1725"W	1813.01	180.335	0.41	-0.13	0.39	



# Actual Wellpath Report

McClellan 2H AWP Proj: 20210'  
Page 6 of 14



REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	McClellan 2H
Field	Monongalia	API/Legal	
Facility	McClellan Pad	Wellbore	McClellan 2H AWB
Slot	Slot #02		

WELLPATH DATA (233 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]	
9688.00	90.740	146.960	8079.56	1597.66	-1891.70	40.76	1749200.37	407555.78	39°36'58.8478"N	80°16'42.5074"W	1892.13	178.766	0.75	0.72	0.18	
9783.00	90.580	146.880	8078.47	1692.65	-1971.29	92.61	1749252.21	407476.19	39°36'58.0656"N	80°16'41.8361"W	1973.47	177.310	0.19	-0.17	-0.08	
9878.00	90.580	147.170	8077.50	1787.64	-2050.98	144.31	1749303.91	407396.50	39°36'57.2825"N	80°16'41.1666"W	2056.05	175.975	0.31	0.00	0.31	
9972.00	90.830	146.380	8076.35	1881.63	-2129.61	195.81	1749355.41	407317.88	39°36'56.5098"N	80°16'40.4998"W	2138.59	174.747	0.88	0.27	-0.84	
10067.00	90.710	146.800	8075.07	1976.62	-2208.90	248.12	1749407.71	407236.59	39°36'55.7307"N	80°16'39.8227"W	2222.80	173.591	0.46	-0.13	0.44	
10160.00	90.680	146.270	8073.94	2069.61	-2286.48	299.39	1749458.99	407161.02	39°36'54.9684"N	80°16'39.1589"W	2306.00	172.540	0.57	-0.03	-0.57	
10256.00	90.890	146.850	8072.63	2165.60	-2366.58	352.29	1749511.88	407080.92	39°36'54.1813"N	80°16'38.4741"W	2392.66	171.533	0.64	0.22	0.60	
10350.00	90.090	144.110	8071.82	2259.57	-2444.02	405.55	1749565.14	407003.49	39°36'53.4206"N	80°16'37.7850"W	2477.44	170.578	3.04	-0.85	-2.91	
10445.00	90.120	147.320	8071.65	2354.56	-2522.50	459.06	1749618.64	406925.01	39°36'52.6495"N	80°16'37.0926"W	2563.93	169.686	3.38	0.03	3.38	
10539.00	89.820	146.660	8071.70	2448.55	-2601.33	510.27	1749669.85	406846.19	39°36'51.8749"N	80°16'36.4296"W	2650.90	168.902	0.77	-0.32	-0.70	
10634.00	90.550	146.410	8071.39	2543.55	-2680.58	562.66	1749722.23	406766.95	39°36'51.0962"N	80°16'35.7515"W	2738.99	168.146	0.81	0.77	-0.26	
10728.00	90.680	146.960	8070.38	2637.54	-2759.13	614.28	1749773.85	406688.40	39°36'50.3243"N	80°16'35.0832"W	2826.68	167.449	0.60	0.14	0.59	
10823.00	90.740	146.670	8069.21	2732.53	-2838.63	666.27	1749825.84	406608.91	39°36'49.5431"N	80°16'34.4100"W	2915.77	166.791	0.31	0.06	-0.31	
10918.00	90.860	146.750	8067.88	2827.52	-2918.03	718.41	1749877.98	406529.51	39°36'48.7629"N	80°16'33.7351"W	3005.16	166.169	0.15	0.13	0.08	
11013.00	90.800	146.150	8066.50	2922.51	-2997.19	770.91	1749930.47	406450.35	39°36'47.9850"N	80°16'33.0556"W	3094.75	165.576	0.63	-0.06	-0.63	
11107.00	90.620	146.590	8065.34	3016.50	-3075.46	822.97	1749982.53	406372.09	39°36'47.2160"N	80°16'32.3818"W	3183.66	165.019	0.51	-0.19	0.47	
11201.00	90.800	146.580	8064.17	3110.49	-3153.91	874.73	1750034.28	406293.64	39°36'46.4451"N	80°16'31.7118"W	3272.97	164.499	0.19	0.19	-0.01	
11296.00	90.830	146.320	8062.82	3205.48	-3233.08	927.23	1750086.78	406214.48	39°36'45.6672"N	80°16'31.0323"W	3363.41	163.997	0.28	0.03	-0.27	
11391.00	90.770	146.260	8061.50	3300.47	-3312.10	979.94	1750139.49	406135.47	39°36'44.8908"N	80°16'30.3499"W	3454.02	163.518	0.09	-0.06	-0.06	
11486.00	90.830	146.280	8060.17	3395.47	-3391.10	1032.69	1750192.24	406056.47	39°36'44.1145"N	80°16'29.6673"W	3544.85	163.063	0.07	0.06	0.02	
11581.00	91.050	146.960	8058.61	3490.45	-3470.41	1084.95	1750244.49	405977.16	39°36'43.3351"N	80°16'28.9908"W	3636.05	162.639	0.75	0.23	0.72	
11676.00	90.120	146.410	8057.64	3585.44	-3549.80	1137.13	1750296.67	405897.78	39°36'42.5551"N	80°16'28.3154"W	3727.48	162.238	1.14	-0.98	-0.58	
11770.00	90.310	146.200	8057.29	3679.44	-3628.00	1189.27	1750348.81	405818.58	39°36'41.7866"N	80°16'27.6405"W	3817.96	161.851	0.30	0.20	-0.22	
11865.00	90.280	146.580	8056.80	3774.44	-3707.12	1241.86	1750401.39	405740.47	39°36'41.0092"N	80°16'26.9599"W	3909.80	161.480	0.40	-0.03	0.40	
11958.00	90.310	146.380	8056.32	3867.44	-3784.65	1293.22	1750452.75	405662.94	39°36'40.2474"N	80°16'26.2952"W	3999.50	161.135	0.22	0.03	-0.22	
12052.00	90.460	146.530	8055.69	3961.44	-3863.00	1345.16	1750504.69	405584.60	39°36'39.4776"N	80°16'25.6229"W	4090.50	160.801	0.23	0.16	0.16	
12147.00	90.800	146.730	8054.64	4056.43	-3942.33	1397.41	1750556.93	405505.27	39°36'38.6980"N	80°16'24.9466"W	4182.67	160.482	0.42	0.36	0.21	
12242.00	91.020	146.650	8053.14	4151.42	-4021.71	1449.57	1750609.09	405425.90	39°36'37.9179"N	80°16'24.2713"W	4274.98	160.179	0.25	0.23	-0.08	
12336.00	90.740	146.420	8051.69	4245.40	-4100.12	1501.40	1750660.92	405347.49	39°36'37.1474"N	80°16'23.6005"W	4366.37	159.888	0.39	-0.30	-0.24	
12431.00	90.800	146.410	8050.42	4340.40	-4179.25	1553.95	1750713.46	405268.36	39°36'36.3699"N	80°16'22.9204"W	4458.80	159.604	0.06	0.06	-0.01	



# Actual Wellpath Report

McClellan 2H AWP Proj: 20210'  
Page 7 of 14



REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	McClellan 2H
Field	Monongalia	API/Legal	
Facility	McClellan Pad	Wellbore	McClellan 2H AWB
Slot	Slot #02		

WELLPATH DATA (233 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]	
12525.00	90.370	144.030	8049.46	4434.37	-4256.45	1607.56	1750767.07	405191.17	39°36'35.6115"N	80°16'22.2269"W	4549.90	159.310	2.57	-0.46	-2.53	
12619.00	90.120	145.960	8049.05	4528.33	-4333.44	1661.48	1750820.99	405114.18	39°36'34.8552"N	80°16'21.5296"W	4641.04	159.023	2.07	-0.27	2.05	
12714.00	90.090	146.400	8048.88	4623.33	-4412.37	1714.36	1750873.86	405035.26	39°36'34.0797"N	80°16'20.8453"W	4733.71	158.767	0.48	-0.03	0.46	
12809.00	90.310	146.750	8048.55	4718.33	-4491.65	1766.69	1750926.19	404955.98	39°36'33.3006"N	80°16'20.1680"W	4826.61	158.529	0.44	0.23	0.37	
12903.00	90.520	146.580	8047.87	4812.33	-4570.19	1818.34	1750977.84	404877.45	39°36'32.5289"N	80°16'19.4994"W	4918.63	158.304	0.29	0.22	-0.18	
12998.00	90.650	146.820	8046.90	4907.32	-4649.58	1870.50	1751029.99	404798.06	39°36'31.7487"N	80°16'18.8243"W	5011.72	158.085	0.29	0.14	0.25	
13092.00	90.740	146.490	8045.76	5001.31	-4728.10	1922.16	1751081.65	404719.55	39°36'30.9771"N	80°16'18.1556"W	5103.89	157.876	0.36	0.10	-0.35	
13188.00	91.020	146.660	8044.28	5097.30	-4808.21	1975.04	1751134.53	404639.44	39°36'30.1898"N	80°16'17.4713"W	5198.05	157.669	0.34	0.29	0.18	
13283.00	91.020	146.150	8042.59	5192.28	-4887.33	2027.59	1751187.08	404560.33	39°36'29.4124"N	80°16'16.7911"W	5291.24	157.468	0.54	0.00	-0.54	
13377.00	90.980	146.400	8040.95	5286.27	-4965.50	2079.77	1751239.26	404482.16	39°36'28.6443"N	80°16'16.1158"W	5383.46	157.274	0.27	-0.04	0.27	
13471.00	90.830	146.580	8039.47	5380.26	-5043.87	2131.66	1751291.14	404403.80	39°36'27.8742"N	80°16'15.4443"W	5475.82	157.090	0.25	-0.16	0.19	
13566.00	90.950	146.520	8037.99	5475.25	-5123.12	2184.02	1751343.50	404324.55	39°36'27.0954"N	80°16'14.7666"W	5569.23	156.911	0.14	0.13	-0.06	
13662.00	90.860	146.360	8036.47	5571.23	-5203.11	2237.09	1751396.56	404244.57	39°36'26.3095"N	80°16'14.0799"W	5663.65	156.735	0.19	-0.09	-0.17	
13757.00	90.920	146.370	8035.00	5666.22	-5282.20	2289.70	1751449.17	404165.49	39°36'25.5323"N	80°16'13.3990"W	5757.11	156.564	0.06	0.06	0.01	
13851.00	90.830	146.600	8033.56	5760.21	-5360.56	2341.60	1751501.06	404087.13	39°36'24.7623"N	80°16'12.7274"W	5849.67	156.403	0.26	-0.10	0.24	
13943.00	90.830	146.720	8032.23	5852.20	-5437.41	2392.15	1751551.62	404010.28	39°36'24.0071"N	80°16'12.0730"W	5940.36	156.253	0.13	0.00	0.13	
14038.00	90.150	146.240	8031.42	5947.20	-5516.61	2444.61	1751604.07	403931.09	39°36'23.2289"N	80°16'11.3941"W	6034.00	156.100	0.88	-0.72	-0.51	
14132.00	90.180	146.380	8031.15	6041.20	-5594.82	2496.76	1751656.21	403852.88	39°36'22.4603"N	80°16'10.7194"W	6126.65	155.951	0.15	0.03	0.15	
14227.00	90.340	146.790	8030.72	6136.19	-5674.12	2549.07	1751708.53	403773.59	39°36'21.6811"N	80°16'10.0424"W	6220.40	155.808	0.46	0.17	0.43	
14321.00	90.180	146.570	8030.29	6230.19	-5752.66	2600.71	1751760.16	403695.05	39°36'20.9092"N	80°16'9.3741"W	6313.23	155.673	0.29	-0.17	-0.23	
14417.00	90.680	146.820	8029.57	6326.19	-5832.89	2653.42	1751812.87	403614.82	39°36'20.1208"N	80°16'8.6919"W	6408.06	155.539	0.58	0.52	0.26	
14512.00	90.860	146.660	8028.29	6421.18	-5912.33	2705.51	1751864.96	403535.40	39°36'19.3402"N	80°16'8.0176"W	6501.95	155.411	0.25	0.19	-0.17	
14607.00	90.950	146.380	8026.79	6516.16	-5991.55	2757.91	1751917.36	403456.17	39°36'18.5617"N	80°16'7.3395"W	6595.82	155.283	0.31	0.09	-0.29	
14701.00	90.920	146.560	8025.26	6610.15	-6069.90	2809.83	1751969.27	403377.83	39°36'17.7918"N	80°16'6.6676"W	6688.71	155.160	0.19	-0.03	0.19	
14796.00	90.950	146.620	8023.71	6705.14	-6149.19	2862.13	1752021.57	403298.55	39°36'17.0126"N	80°16'5.9907"W	6782.65	155.040	0.07	0.03	0.06	
14891.00	90.830	146.590	8022.23	6800.13	-6228.50	2914.42	1752073.85	403219.24	39°36'16.2333"N	80°16'5.3141"W	6876.63	154.924	0.13	-0.13	-0.03	
14984.00	90.280	146.300	8021.33	6893.12	-6305.99	2965.82	1752125.25	403141.75	39°36'15.4717"N	80°16'4.6490"W	6968.62	154.812	0.67	-0.59	-0.31	
15079.00	90.550	146.950	8020.64	6988.12	-6385.33	3018.08	1752177.50	403062.43	39°36'14.6922"N	80°16'3.9727"W	7062.66	154.702	0.74	0.28	0.68	
15174.00	90.520	146.080	8019.76	7083.11	-6464.55	3070.49	1752229.91	402983.20	39°36'13.9136"N	80°16'3.2944"W	7156.70	154.594	0.92	-0.03	-0.92	
15269.00	90.430	146.250	8018.97	7178.11	-6543.46	3123.38	1752282.80	402904.30	39°36'13.1382"N	80°16'2.6101"W	7250.68	154.484	0.20	-0.09	0.18	

REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	McClellan 2H
Field	Monongalia	API/Legal	
Facility	McClellan Pad	Wellbore	McClellan 2H AWB
Slot	Slot #02		

WELLPATH DATA (233 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]
15363.00	90.120	146.450	8018.52	7272.11	-8621.71	3175.47	1752334.88	402826.05	39°36'12.3693"N	80°16'1.9361"W	7343.75	154.380	0.39	-0.33	0.21
15458.00	89.660	146.630	8018.70	7367.11	-8700.97	3227.85	1752387.26	402746.80	39°36'11.5905"N	80°16'1.2583"W	7437.87	154.280	0.52	-0.48	0.19
15553.00	89.690	146.900	8019.24	7462.10	-8780.43	3279.91	1752439.32	402667.35	39°36'10.8096"N	80°16'0.5844"W	7532.06	154.185	0.29	0.03	0.28
15647.00	89.350	145.000	8020.03	7556.09	-8858.30	3332.54	1752491.95	402589.48	39°36'10.0444"N	80°15'59.9036"W	7625.10	154.084	2.05	-0.36	-2.02
15742.00	88.460	145.760	8021.84	7651.06	-8936.47	3386.50	1752545.90	402511.32	39°36'9.2765"N	80°15'59.2057"W	7719.00	153.978	1.25	-0.94	0.80
15836.00	88.490	146.210	8024.34	7745.02	-7014.35	3439.07	1752598.47	402433.44	39°36'8.5112"N	80°15'58.5257"W	7812.06	153.882	0.48	0.03	0.48
15931.00	88.860	145.780	8026.54	7839.99	-7093.09	3492.18	1752651.58	402354.71	39°36'7.7376"N	80°15'57.8385"W	7906.15	153.787	0.60	0.39	-0.45
16025.00	89.380	145.230	8027.98	7933.97	-7170.55	3545.41	1752704.81	402277.25	39°36'6.9766"N	80°15'57.1501"W	7999.17	153.690	0.81	0.55	-0.59
16119.00	89.570	144.910	8028.85	8027.94	-7247.61	3599.23	1752758.62	402200.19	39°36'6.2195"N	80°15'56.4541"W	8092.12	153.591	0.40	0.20	-0.34
16214.00	88.650	145.440	8030.32	8122.91	-7325.59	3653.48	1752812.86	402122.22	39°36'5.4585"N	80°15'55.7526"W	8186.09	153.493	1.12	-0.97	0.56
16308.00	88.710	145.060	8032.49	8216.87	-7402.80	3707.04	1752866.43	402045.01	39°36'4.6949"N	80°15'55.0599"W	8279.11	153.400	0.41	0.06	-0.40
16402.00	88.490	145.410	8034.78	8310.82	-7480.00	3760.63	1752920.01	401967.82	39°36'3.9365"N	80°15'54.3670"W	8372.14	153.309	0.44	-0.23	0.37
16497.00	88.710	145.570	8037.10	8405.78	-7558.26	3814.43	1752973.81	401889.56	39°36'3.1676"N	80°15'53.6711"W	8466.24	153.221	0.29	0.23	0.17
16591.00	88.770	144.980	8039.17	8499.74	-7635.50	3867.97	1753027.34	401812.33	39°36'2.4088"N	80°15'52.9788"W	8559.32	153.134	0.63	0.06	-0.63
16687.00	88.460	145.120	8041.49	8595.69	-7714.16	3922.94	1753082.31	401733.67	39°36'1.6860"N	80°15'52.2679"W	8654.35	153.045	0.35	-0.32	0.15
16781.00	89.480	144.780	8043.18	8689.64	-7791.10	3976.92	1753136.28	401656.74	39°36'0.8802"N	80°15'51.5700"W	8747.41	152.958	1.14	1.09	-0.36
16875.00	89.420	145.600	8044.08	8783.62	-7868.27	4030.58	1753189.94	401579.57	39°36'0.1220"N	80°15'50.8761"W	8840.55	152.876	0.87	-0.06	0.87
16970.00	89.420	145.390	8045.05	8878.60	-7946.56	4084.39	1753243.75	401501.29	39°35'59.3529"N	80°15'50.1802"W	8934.76	152.798	0.22	0.00	-0.22
17065.00	88.150	145.480	8047.06	8973.56	-8024.77	4138.27	1753297.63	401423.08	39°35'58.5845"N	80°15'49.4833"W	9028.97	152.720	1.34	-1.34	0.09
17160.00	88.610	145.310	8051.40	9068.45	-8102.88	4192.17	1753351.52	401344.98	39°35'57.8171"N	80°15'48.7864"W	9123.10	152.644	1.63	-1.62	-0.18
17254.00	86.740	145.310	8056.85	9162.27	-8180.04	4245.57	1753404.92	401267.82	39°35'57.0590"N	80°15'48.0957"W	9216.18	152.570	0.14	0.14	0.00
17349.00	87.810	145.530	8061.37	9257.15	-8258.17	4299.43	1753458.78	401189.70	39°35'56.2914"N	80°15'47.3992"W	9310.34	152.497	1.15	1.13	0.23
17444.00	87.480	145.130	8065.27	9352.06	-8336.23	4353.43	1753512.77	401111.64	39°35'55.5245"N	80°15'46.7010"W	9404.52	152.425	0.55	-0.35	-0.42
17539.00	87.110	146.210	8069.76	9446.94	-8414.60	4406.94	1753566.28	401033.28	39°35'54.7545"N	80°15'46.0088"W	9498.77	152.358	1.20	-0.39	1.14
17634.00	87.290	146.910	8074.40	9541.83	-8493.77	4459.23	1753618.57	400954.11	39°35'53.9764"N	80°15'45.3323"W	9593.17	152.301	0.76	0.19	0.74
17728.00	87.540	146.560	8078.64	9635.73	-8572.29	4510.74	1753670.07	400875.59	39°35'53.2048"N	80°15'44.6658"W	9686.64	152.247	0.46	0.27	-0.37
17823.00	86.670	144.870	8083.44	9730.60	-8650.68	4564.18	1753723.51	400797.21	39°35'52.4346"N	80°15'43.9746"W	9780.90	152.183	2.00	-0.92	-1.78
17917.00	86.740	147.250	8088.84	9824.43	-8728.53	4616.57	1753775.90	400719.36	39°35'51.6696"N	80°15'43.2968"W	9874.21	152.125	2.53	0.07	2.53
18011.00	86.370	146.360	8094.49	9918.26	-8807.05	4667.94	1753827.27	400640.85	39°35'50.8979"N	80°15'42.6321"W	9967.64	152.075	1.02	-0.39	-0.95
18105.00	86.400	146.430	8100.42	10012.07	-8885.18	4719.86	1753879.19	400562.72	39°35'50.1301"N	80°15'41.9604"W	10060.98	152.022	0.08	0.03	0.07



# Actual Wellpath Report

McClellan 2H AWP Proj: 20210'  
Page 9 of 14



REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	McClellan 2H
Field	Monongalia	API/Legal	
Facility	McClellan Pad	Wellbore	McClellan 2H AWB
Slot	Slot #02		

WELLPATH DATA (233 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]
18199.00	87.480	146.550	8105.43	10105.94	-8963.45	4771.69	1753931.00	400484.46	39°35'49.3610"N	80°15'41.2899"W	10154.42	151.971	1.16	1.15	0.13
18293.00	87.290	146.260	8109.72	10199.84	-9041.66	4823.64	1753982.96	400406.25	39°35'48.5924"N	80°15'40.6177"W	10247.89	151.920	0.37	-0.20	-0.31
18388.00	87.390	146.540	8114.13	10294.74	-9120.71	4876.16	1754035.47	400327.21	39°35'47.8156"N	80°15'39.9383"W	10342.35	151.870	0.31	0.11	0.29
18483.00	87.420	147.010	8118.43	10389.64	-9200.09	4928.16	1754087.47	400247.83	39°35'47.0354"N	80°15'39.2655"W	10436.88	151.824	0.50	0.03	0.49
18578.00	87.970	147.640	8122.25	10484.55	-9279.99	4979.40	1754138.71	400167.93	39°35'46.2501"N	80°15'38.6022"W	10531.51	151.783	0.88	0.58	0.66
18673.00	88.400	147.270	8125.26	10579.48	-9360.04	5030.48	1754189.79	400087.90	39°35'45.4633"N	80°15'37.9410"W	10626.20	151.745	0.60	0.45	-0.39
18767.00	89.230	147.520	8127.21	10673.44	-9439.20	5081.12	1754240.42	400008.73	39°35'44.6852"N	80°15'37.2856"W	10719.91	151.706	0.92	0.88	0.27
18861.00	89.780	148.020	8128.02	10767.41	-9518.72	5131.25	1754290.55	399929.23	39°35'43.9036"N	80°15'36.6366"W	10813.68	151.672	0.79	0.59	0.53
18957.00	89.450	147.820	8128.66	10863.37	-9600.06	5182.24	1754341.53	399847.89	39°35'43.1040"N	80°15'35.9765"W	10909.48	151.639	0.40	-0.34	-0.21
19051.00	89.420	147.750	8129.59	10957.34	-9679.58	5232.35	1754391.64	399766.37	39°35'42.3222"N	80°15'35.3278"W	11003.26	151.606	0.08	-0.03	-0.07
19146.00	89.380	147.720	8130.58	11052.31	-9759.91	5283.06	1754442.35	399688.05	39°35'41.5326"N	80°15'34.6714"W	11098.04	151.573	0.05	-0.04	-0.03
19240.00	89.320	147.540	8131.65	11146.28	-9839.30	5333.38	1754492.67	399606.67	39°35'40.7523"N	80°15'34.0200"W	11191.81	151.540	0.20	-0.06	-0.19
19335.00	89.170	147.370	8132.90	11241.26	-9919.37	5384.48	1754543.76	399528.60	39°35'39.9652"N	80°15'33.3586"W	11286.57	151.506	0.24	-0.16	-0.18
19430.00	89.570	146.680	8133.95	11336.24	-9999.06	5436.19	1754595.46	399448.91	39°35'39.1819"N	80°15'32.6895"W	11381.27	151.468	0.84	0.42	-0.73
19525.00	89.540	146.550	8134.69	11431.24	-10078.38	5488.46	1754647.73	399369.59	39°35'38.4024"N	80°15'32.0132"W	11475.93	151.428	0.14	-0.03	-0.14
19620.00	89.350	146.590	8135.61	11526.23	-10157.66	5540.79	1754700.07	399290.32	39°35'37.6233"N	80°15'31.3362"W	11570.59	151.388	0.20	-0.20	0.04
19715.00	89.290	146.740	8136.73	11621.23	-10237.03	5593.00	1754752.26	399210.96	39°35'36.8433"N	80°15'30.6608"W	11665.26	151.350	0.17	-0.06	0.16
19810.00	89.170	146.120	8138.01	11716.22	-10316.17	5645.52	1754804.79	399131.82	39°35'36.0655"N	80°15'29.9813"W	11759.91	151.310	0.66	-0.13	-0.65
19905.00	89.540	147.000	8139.08	11811.21	-10395.44	5697.87	1754857.13	399052.55	39°35'35.2865"N	80°15'29.3041"W	11854.57	151.272	1.00	0.39	0.93
20001.00	90.830	146.620	8138.77	11907.20	-10475.78	5750.42	1754909.68	398972.22	39°35'34.4969"N	80°15'28.6242"W	11950.28	151.237	1.40	1.34	-0.40
20096.00	90.460	146.750	8137.70	12002.20	-10555.16	5802.59	1754961.85	398892.84	39°35'33.7168"N	80°15'27.9491"W	12044.98	151.201	0.41	-0.39	0.14
20185.00	90.310	146.380	8137.10	12091.19	-10629.43	5851.63	1755010.88	398818.58	39°35'32.9869"N	80°15'27.3148"W	12133.69	151.167	0.45	-0.17	-0.42
20210.00	90.310	146.380	8136.97	12116.16	-10650.25	5865.47	1755024.72	398797.76	39°35'32.7823"N	80°15'27.1357"W	12158.60	151.157	0.00	0.00	0.00



# Actual Wellpath Report

McClellan 2H AWP Proj: 20210'  
Page 10 of 14



REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	McClellan 2H
Field	Monongalia	API/Legal	
Facility	McClellan Pad	Wellbore	McClellan 2H AWB
Slot	Slot #02		

HOLE & CASING SECTIONS - Ref Wellbore: McClellan 2H AWB    Ref Wellpath: McClellan 2H AWP Proj: 20210'										
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]	
32in Open Hole	28.00	128.00	100.00	28.00	128.00	0.00	0.00	0.12	0.57	
24in Conductor	28.00	128.00	100.00	28.00	128.00	0.00	0.00	0.12	0.57	
17.5in Open Hole	128.00	1468.00	1340.00	128.00	1467.95	0.12	0.57	-1.50	2.07	
13.375in Casing Surface	28.00	1438.00	1410.00	28.00	1437.95	0.00	0.00	-1.38	2.00	
12.25in Open Hole	1468.00	2738.00	1270.00	1467.95	2737.73	-1.50	2.07	-6.98	7.93	
9.625in Casing Intermediate	28.00	2708.00	2680.00	28.00	2707.74	0.00	0.00	-7.06	7.19	
8.75in Open Hole	2738.00	7578.00	4840.00	2737.73	7466.75	-6.98	7.93	-325.16	-856.85	
8.5in Open Hole	7578.00	20210.00	12632.00	7466.75	8136.97	-325.16	-856.85	-10650.25	5865.47	
5.5in Casing Production	28.00	20210.00	20182.00	28.00	8136.97	0.00	0.00	-10650.25	5865.47	



# Actual Wellpath Report

McClellan 2H AWP Proj: 20210'  
Page 11 of 14



REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	McClellan 2H
Field	Monongalia	API/Legal	
Facility	McClellan Pad	Wellbore	McClellan 2H AWB
Slot	Slot #02		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
McClellan 2H BHL Rev-9	8000.00	-10649.64	5867.13	1755026.38	398798.37	39°35'32.7885"N	80°15'27.1146"W	point
McClellan 2H LP Rev-6	8000.00	-976.88	-565.90	1748593.74	408470.54	39°37'7.8365"N	80°16'50.3609"W	point
McClellan Hardline #1 (8.31.21)	8529.00	-1245.11	1556.08	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	-12553.09	3151.12	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	-10564.90	6967.79	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	-10004.04	8237.41	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	-10091.03	4235.12	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	-1552.98	1766.87	1750926.37	407894.48	39°37'2.3424"N	80°16'20.4885"W	polygon
	2D Polygon: dimensions not calculated							





# Actual Wellpath Report

McClellan 2H AWP Proj: 20210'  
Page 12 of 14



REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	McClellan 2H
Field	Monongalia	API/Legal	
Facility	McClellan Pad	Wellbore	McClellan 2H AWB
Slot	Slot #02		

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	-1741.58	5595.36	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	-3117.58	2983.93	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	-4607.09	3228.31	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	-7570.99	7068.01	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	-10214.07	3025.67	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	-10256.79	2979.36	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	-10919.01	3007.61	1752167.03	398529.02	39°35'29.8865"N	80°16'3.6114"W	polygon
	2D Polygon: dimensions not calculated							



# Actual Wellpath Report

McClellan 2H AWP Proj: 20210'  
Page 13 of 14



REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	McClellan 2H
Field	Monongalia	API/Legal	
Facility	McClellan Pad	Wellbore	McClellan 2H AWB
Slot	Slot #02		

WELLPATH COMPOSITION - Ref Wellbore: McClellan 2H AWB    Ref Wellpath: McClellan 2H AWP Proj: 20210'					
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 2H AWB	13/Oct/2021
1450.00	7513.00	OWSG MWD rev2 + HRGM	02_Tally MWD <8-3/4">(1450')(1468'-7513')	McClellan 2H AWB	13/Oct/2021
7513.00	20210.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	03_BH AT Curve <8-1/2">(7513')(7605'-20185')	McClellan 2H AWB	13/Oct/2021



# Actual Wellpath Report

McClellan 2H AWP Proj: 20210'  
Page 14 of 14



REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	McClellan 2H
Field	Monongalia	API/Legal	
Facility	McClellan Pad	Wellbore	McClellan 2H AWB
Slot	Slot #02		

COMMENTS
<p><b>Wellpath general comments</b> API: 47-061-01883-0000 BH Job #: 111066126 Rig: Patterson 277 Duration: 10/14/2021-10/18/2021 Javins Gyro &lt;12-1/4"&gt; (50'-1450') Tally MWD &lt;8-3/4"&gt; (1450')(1468'-7513') BH AT Curve &lt;8-1/2"&gt; (7513')(7605'-20185') Projected MD at TD: 20210'</p>







# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	3/13/2022
Job End Date:	3/27/2022
State:	West Virginia
County:	Monongalia
API Number:	47-061-01883-00-00
Operator Name:	Northeast Natural Energy LLC
Well Name and Number:	McClellan 2H
Latitude:	39.62154600
Longitude:	-80.27868000
Datum:	NAD27
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	8,066
Total Base Water Volume (gal):	24,807,258
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	87.44611	None
Sand (100 Mesh Proppant)	ProFrac	Proppant					
			Silica Substrate	14808-60-7	100.00000	9.71500	None
Sand (40/70 White Proppant)	ProFrac	Proppant					
			Silica Substrate	14808-60-7	100.00000	2.54258	None
Hydrochloric Acid (7.5%)	CNR	Acidizing					
			Water	7732-18-5	85.00000	0.15126	None
			Hydrochloric Acid (Hydrogen Chloride)	7647-01-0	37.00000	0.06584	None
StimSTREAM SC 405	Chemstream	Scale Control					
			Non-Hazardous Substances	Proprietary	70.00000	0.02655	None
			Citric Acid	77-92-9	10.00000	0.00379	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

Clearal 268	Chemstream	Biocide					
			Non-Hazardous Substances	Proprietary	80.00000	0.01960	None
			Glutaraldehyde	111-30-8	20.00000	0.00490	None
			Didecyl dimethyl ammonium chloride	7173-51-5	3.00000	0.00074	None
			Quaternary Ammonim Compounds	68424-85-1	3.00000	0.00074	None
			Ethanol	64-17-5	1.50000	0.00037	None
StimSTREAM FR 2800	Chemstream	Friction Reducer					
			Distillates (petroleum), hydrotreated light	64742-47-8	25.00000	0.01067	None
			Alcohols, C11-14-iso, C13-rich, ethoxylated	78330-21-9	5.00000	0.00213	None
StimSTREAM FR 9800	Chemstream	Friction Reducer					
			Alkanes, C16-20-iso-	90622-59-6	25.00000	0.00304	None
			Butene, homopolymer	9003-29-6	25.00000	0.00304	None
			Ethoxylated alcohols (C12-18)	68213-23-0	3.00000	0.00037	None
ProHib 100	CNR	Acid Inhibitor					
			2-Butoxyethanol	111-76-2	60.00000	0.00037	None
			Proprietary material	Proprietary	30.00000	0.00018	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	0.00009	None
			Acetic Acid	64-19-7	5.00000	0.00002	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	0.15126	
			Non-Hazardous Substances	Proprietary	70.00000	0.02655	
			Non-Hazardous Substances	Proprietary	80.00000	0.01960	
			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	0.00304	
			Alcohols, C11-14-iso, C13-rich, ethoxylated	78330-21-9	5.00000	0.00213	
			Quaternary Ammonim Compounds	68424-85-1	3.00000	0.00074	
			Didecyl dimethyl ammonium chloride	7173-51-5	3.00000	0.00074	
			Ethanol	64-17-5	1.50000	0.00037	
			Ethoxylated alcohols (C12-18)	68213-23-0	3.00000	0.00037	
			Proprietary material	Proprietary	30.00000	0.00018	
			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	0.00002
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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)