



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street, S.E.
Charleston, WV 25304
(304) 926-0450
fax: (304) 926-0452

Harold D. Ward, Cabinet Secretary
www.dep.wv.gov

Monday, December 11, 2023
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

NORTHEAST NATURAL ENERGY LLC
707 VIRGINIA STREET EAST
STE 1200
CHARLESTON, WV 25301

Re: Permit Modification Approval for MIRACLE RUN 14H
47-061-01926-00-00

Extended lateral length

NORTHEAST NATURAL ENERGY LLC

The Office of Oil and Gas has reviewed the attached permit modification for the above referenced permit. The attached modification has been approved and well work may begin. Please be reminded that the oil and gas inspector is to be notified twenty-four (24) hours before permitted well work is commenced.

If there are any questions, please feel free to contact me at (304) 926- 0450.



James A. Martin
Chief

Operator's Well Number: MIRACLE RUN 14H
Farm Name: BYRON LANE RAPP
U.S. WELL NUMBER: 47-061-01926-00-00
Horizontal 6A New Drill
Date Modification Issued: 12/11/2023

Promoting a healthy environment.

12/15/2023

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WELL WORK PERMIT APPLICATION

1) Well Operator: Northeast Natural Energy 494498281 Monongalia Battelle Wadestown
Operator ID County District Quadrangle

2) Operator's Well Number: 14H Well Pad Name: Miracle Run

3) Farm Name/Surface Owner: Byron Lane Rapp Public Road Access: Route 13/Zeb Haught Rd

4) Elevation, current ground: 1,520' Elevation, proposed post-construction: 1,458'

5) Well Type (a) Gas Oil Underground Storage
Other _____
(b) If Gas Shallow Deep
Horizontal

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus, 8,109', 110', 5.200 psi

8) Proposed Total Vertical Depth: 8,107'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 30,031'

11) Proposed Horizontal Leg Length: 20,685'

12) Approximate Fresh Water Strata Depths: 50', 1,262'

13) Method to Determine Fresh Water Depths: offset wells

14) Approximate Saltwater Depths: 1,600', 2,600'

15) Approximate Coal Seam Depths: 500', 1,260'

16) Approximate Depth to Possible Void (coal mine, karst, other): NA

17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes No

(a) If Yes, provide Mine Info: Name: Marion County Coal Company Mine
Depth: 1,260
Seam: Pittsburgh
Owner: Marion Co. Coal Resources Inc.

CK#5168
#2500⁰⁰

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Digitally signed by Gayne Knitowski, Inspector
Date: 2023.11.03 08:15:44 -0400

18) **CASING AND TUBING PROGRAM**

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	24"	New	NA	NA	100	100'	GTS
Fresh Water	13-3/8"	New	J-55	54.5	1,485*	1,455*	CTS
Coal							
Intermediate	9-5/8"	New	J-55	36	2,730'	2,700'	CTS
Production	5-1/2"	New	P-110	20	30,031	30,001'	7,228
Tubing	2-7/8"	New	P-110	6.5	NA		
Liners							

*covering red rock formation

Gayne
Knitowski,
Inspector

Digitally signed by Gayne
Knitowski, Inspector
Date: 2023.11.03 08:16:19
+04'00'

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	24"	28"	0.375	NA	NA	Type 1	1.18
Fresh Water	13-3/8"	17-1/2"	0.380	2,730	500	Class A or L	1.19
Coal							
Intermediate	9-5/8"	12-3/8"	0.395	3,520	2,800	Class A or L	1.19
Production	5-1/2"	8-3/4"	0.361	14,360	11,400	50:50 POZ	1.07
Tubing	2-7/8"	NA	0.271	13,870	NA	NA	NA
Liners							

PACKERS

Kind:					RECEIVED Office of Oil and Gas NOV 20 2023 WV Department of Environmental Protection
Sizes:					
Depths Set:					

19) Describe proposed well work, including the drilling and plugging back of any pilot hole:

Utilize auger rig to set cellar & conductor. The conductor will be grouted with cement to surface. Mobilize top hole drilling rig. Drill surface section on air. Run surface (freshwater & coal string) casing to desired depth. The surface section will not penetrate sea level. Surface casing will be cemented to surface. Drill intermediate section on air. Run intermediate casing to desired depth. Intermediate casing will be cemented to surface. Drill on air the production section to the start of the curve (KOP). The well will be loaded with synthetic oil base drilling mud (SOBM). Demobilize top hole rig. Mobilize horizontal drilling rig. Finish drilling the production section utilizing MWD surveys and geosteering practices to maintain the wellbore in the Marcellus shale and prevent anti-collision. Production casing will be ran to TD and cement top will be inside the intermediate casing.

20) Describe fracturing/stimulating methods in detail, including anticipated max pressure and max rate:

A cement bond log will determine the top of production casing cement. The production casing will be pressure tested. The hydraulic fracturing equipment will then open the toe sleeves and begin pumping the first stage. The plug-and-perf method will be used for the remaining stages. The max anticipated pressure during frac is 11,200psi and a max rate of 90bpm. After frac, the drillout rig will drill all plugs out of the well. Land production tubing at desired depth. Then flowback well until ready to turn in line to production facilities.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 52.95

22) Area to be disturbed for well pad only, less access road (acres): 6.43

23) Describe centralizer placement for each casing string:

Surface: shoe track & every 3rd joint to surface
Intermediate: shoe track & every 3rd joint to surface
Production: Rigid bow centralizers at shoe track & every other joint in the lateral to KOP. Bow springs from KOP to surface every third joint.

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24) Describe all cement additives associated with each cement type:

Surface: Class A or L Cement + Max 3% bwoc Calcium Chloride Fresh Water blend.
Intermediate: Class A or L Cement + Max 3% bwoc Calcium Chloride + Fresh Water.
Production: 50:50 Poz (Fly Ash & Class A or L) plus additives such as defoamer, retarder, & fluid loss to meet well specific requirements

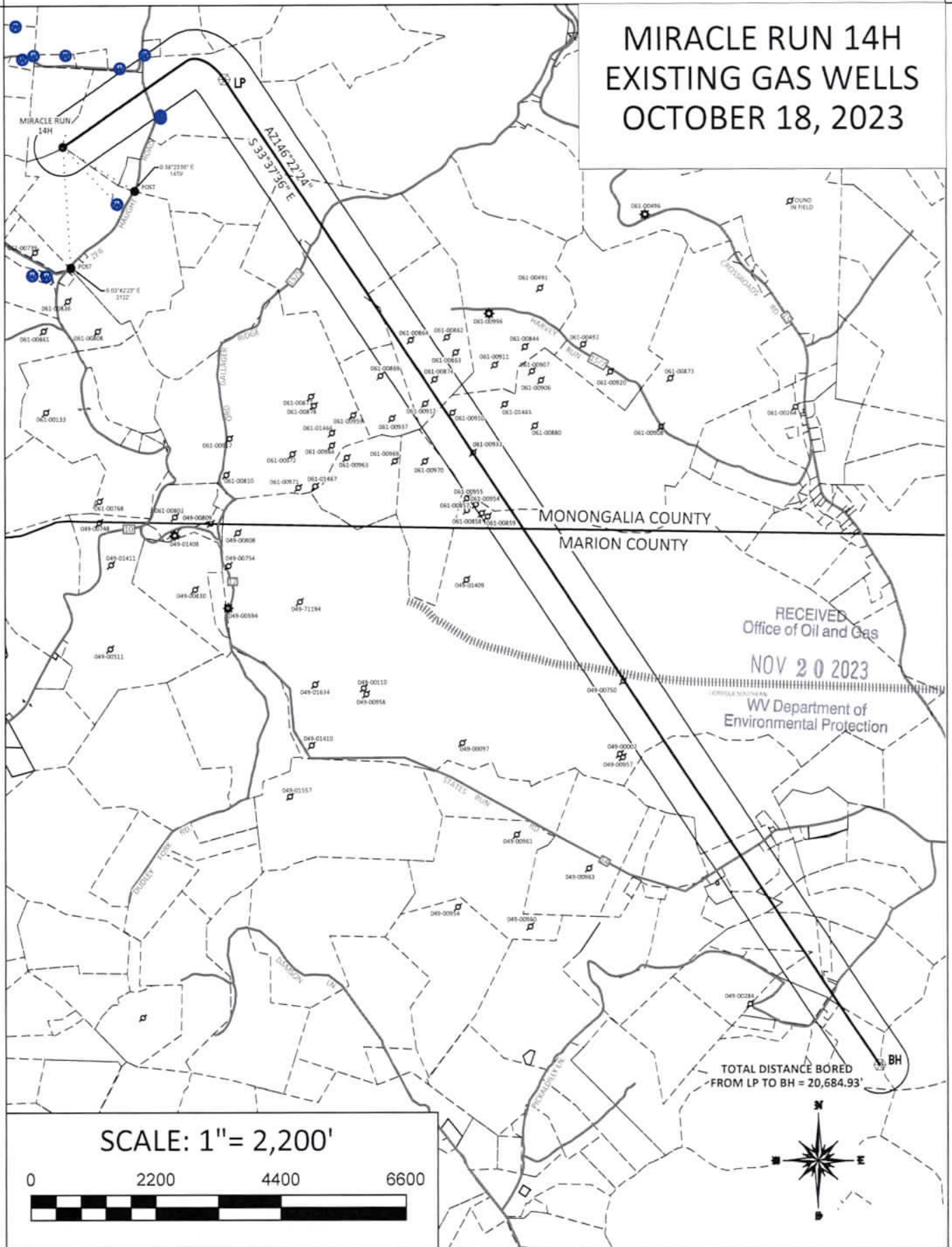
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25) Proposed borehole conditioning procedures:

Surface & intermediate on air will utilize high volumetric flow rates of air to ensure the wellbore is clean prior to TOH. Production section will utilize synthetic oil based drilling mud to properly clean the wellbore. At TD, pump rate and rotation will be maximized and tripping will not begin until shakers flow clean. Production casing will be circulated prior to cementing to ensure a prepared wellbore for cement.

*Note: Attach additional sheets as needed.

MIRACLE RUN 14H EXISTING GAS WELLS OCTOBER 18, 2023



12/15/2023

MIRACLE RUN 14H AREA OF REVIEW

API Number	Well Name	Well Number	Operator	Latitude (NAD 83)	Longitude (NAD 83)	TMP	TVD'	Notes
049-00750	Edgar Fox	1	Consolidation Coal Co.	39.60391	-80.283542	16-01-01	2012'	Plugged 6/7/1983
061-00858	Consol Coal /Shuma	NA	Consolidation Coal Co.	39.611874	-80.292405	16-01-01	NA	Plugged 3/15/1990
061-00859	Consol Coal Co /Shuma	NA	Consolidation Coal Co.	39.611729	-80.29203	16-01-01	NA	Plugged 3/27/1990
061-00864	Consol Coal Co	NA	Consolidation Coal Co.	39.620151	-80.296905	1-26-01	NA	Plugged 6/10/1988
061-00874	Consol Coal Co	NA	Consolidation Coal Co.	39.618266	-80.295405	1-26-01	NA	Plugged 8/24/1988
061-00910	Consolidation Coal	7	Consolidation Coal Co.	39.616671	-80.29428	1-26-05	NA	Plugged 7/19/1989
061-00912	Consol Coal Co	7	Consolidation Coal Co.	39.617106	-80.295967	1-26-01	3427'	Plugged 6/19/1989
061-00933	Consol Coal	NA	Consolidation Coal Co.	39.614786	-80.292968	1-26-05	NA	Plugged 8/16/1989
061-00954	Consol Coal /Shuma	NA	Consolidation Coal Co.	39.612321	-80.29278	16-01-01	NA	Plugged 4/17/1990

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NORTHEAST NATURAL ENERGY, LLC

Location: Monongalia County, WV
 Field: Monongalia
 Facility: Miracle Run Pad

Slot: Slot #14
 Well: Miracle Run 14H
 Wellbore: Miracle Run 14H PWB



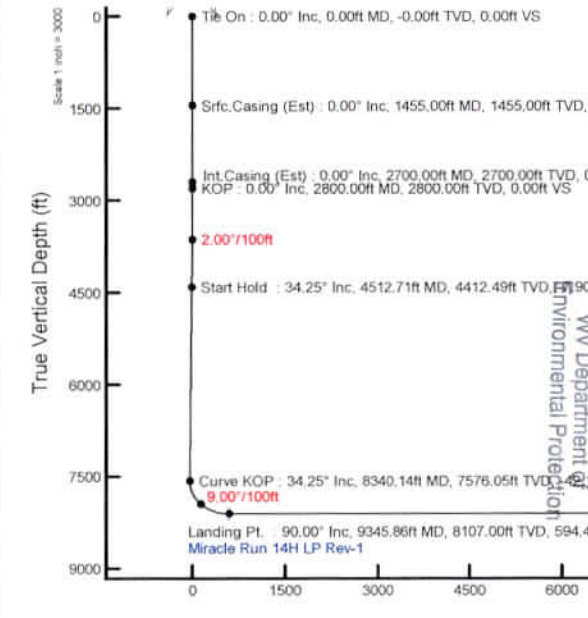
Reference wellbore is Miracle Run 14H PWB	Grid System: NAD83 (Lambert West Virginia 99' Northern Zone 4203), US Feet
This vertical depth is referenced to Ground Level (GL)	North Reference: 2011 State
Reference wellbore measured depths are referenced to Ground Level (GL)	Scale: True depth
Ground Level (GL) is Mean Sea Level + 1022 feet	Coordinates are as best known to the State
Mean Sea Level is Ground level (MSL) Slot #14: -1459 feet	Depth is in feet
Other wellbore MDs are referenced to each party's default MD system	Created by managery on 2023-10-04, Database: 99A_WVS_EASTWVGLS_Data

Location Information					
Facility Name	Grid East (US Ft)	Grid North (US Ft)	Latitude	Longitude	
Miracle Run Pad	1737888.810	412326.340	39°37'45.022174 N	80°19'17.597070 W	
Slot	Local N (Ft)	Local E (Ft)	Grid East (US Ft)	Grid North (US Ft)	Latitude
Slot #14	43.95	43.94	1737932.850	412372.290	39°37'45.400174 N
Ground Level (GL) to Ground level (B) Slot: Slot #14					1022
Mean Sea Level to Ground level (B) Slot: Slot #14					-1459
Ground Level (GL) to Mean Sea Level					-1459

Well Profile Data							
Design Comment	MD (ft)	Inc. (°)	TVD (ft)	Local N (ft)	Local E (ft)	CLS (°/100ft)	VS (ft)
Tie On	0.00	0.000	59.499	0.00	0.00	0.00	0.00
Srfc. Casing (Est)	1455.00	0.000	59.499	1495.00	0.00	0.00	0.00
Int. Casing (Est)	2700.00	0.000	59.499	2700.00	0.00	0.00	0.00
KOP	2800.00	0.000	59.499	2800.00	0.00	0.00	0.00
Start Hold	4512.71	34.254	35.459	4412.49	291.24	409.31	-1.90
Curve KOP	8340.14	34.254	35.459	7576.05	1503.25	2183.86	0.00
Landing Pt	9340.86	90.000	148.373	8107.00	1173.38	3037.42	9.00
BHL	30030.79	90.000	148.373	8107.00	-1492.21	14292.28	0.00

Targets							
Name	MD (ft)	Inc. (°)	TVD (ft)	Local N (ft)	Local E (ft)	CLS (°/100ft)	VS (ft)
Open Hole (B) Slot #14	1455.00	0.000	59.499	1495.00	0.00	0.00	0.00
Open Hole (E) Slot #14	1455.00	0.000	59.499	1495.00	0.00	0.00	0.00
Open Hole (S) Slot #14	1455.00	0.000	59.499	1495.00	0.00	0.00	0.00
Open Hole (W) Slot #14	1455.00	0.000	59.499	1495.00	0.00	0.00	0.00

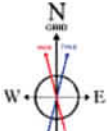
Survey Program							
MD (ft)	VS (ft)	Inc. (°)	TVD (ft)	Local N (ft)	Local E (ft)	CLS (°/100ft)	VS (ft)
0.00	0.00	0.000	59.499	1495.00	0.00	0.00	0.00
1455.00	0.00	0.000	59.499	1495.00	0.00	0.00	0.00
2700.00	0.00	0.000	59.499	2700.00	0.00	0.00	0.00
2800.00	0.00	0.000	59.499	2800.00	0.00	0.00	0.00
4512.71	-1.90	34.254	35.459	4412.49	291.24	409.31	-1.90
8340.14	0.00	34.254	35.459	7576.05	1503.25	2183.86	0.00
9340.86	9.00	90.000	148.373	8107.00	1173.38	3037.42	9.00
30030.79	0.00	90.000	148.373	8107.00	-1492.21	14292.28	0.00



Hole and Casing Sections											
MD (ft)	VS (ft)	Inc. (°)	TVD (ft)	Local N (ft)	Local E (ft)	CLS (°/100ft)	VS (ft)	MD (ft)	VS (ft)	Inc. (°)	TVD (ft)
0.00	0.00	0.000	59.499	1495.00	0.00	0.00	0.00	0.00	0.00	0.000	59.499
1455.00	0.00	0.000	59.499	1495.00	0.00	0.00	0.00	1455.00	0.00	0.000	59.499
2700.00	0.00	0.000	59.499	2700.00	0.00	0.00	0.00	2700.00	0.00	0.000	59.499
2800.00	0.00	0.000	59.499	2800.00	0.00	0.00	0.00	2800.00	0.00	0.000	59.499
4512.71	-1.90	34.254	35.459	4412.49	291.24	409.31	-1.90	4512.71	-1.90	34.254	35.459
8340.14	0.00	34.254	35.459	7576.05	1503.25	2183.86	0.00	8340.14	0.00	34.254	35.459
9340.86	9.00	90.000	148.373	8107.00	1173.38	3037.42	9.00	9340.86	9.00	90.000	148.373
30030.79	0.00	90.000	148.373	8107.00	-1492.21	14292.28	0.00	30030.79	0.00	90.000	148.373

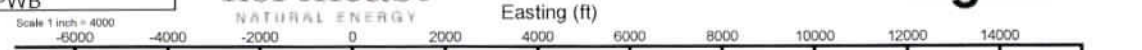
Well Data			
Slot	Well	Wellbore	Wellpath
Slot #02	Miracle Run 2H	Miracle Run 2H PWB	Miracle Run 2H Ex-01
Slot #04	Miracle Run 4H (Pilot)	Miracle Run 4H (Pilot) PWB	Miracle Run 4H (Pilot) Ex-00
Slot #04	Miracle Run 4H (ST01)	Miracle Run 4H (ST01) PWB	Miracle Run 4H (ST01) Ex-01
Slot #06	Miracle Run 8H	Miracle Run 8H PWB	Miracle Run 8H Ex-01
Slot #08	Miracle Run 8H	Miracle Run 8H PWB	Miracle Run 8H Ex-01
Slot #10	Miracle Run 10H	Miracle Run 10H PWB	Miracle Run 10H Ex-01
Slot #11	McClellan 11H	McClellan 11H AWB	McClellan 11H AWP Proj. 23783
Slot #12	McClellan 12H	McClellan 12H AWB	McClellan 12H AWP Proj. 19050
Slot #12	Miracle Run 12H	Miracle Run 12H PWB	Miracle Run 12H Ex-01
Slot #14	Miracle Run 14H	Miracle Run 14H PWB	Miracle Run 14H Ex-01
Slot #15	Miracle Run 16H	Miracle Run 16H PWB	Miracle Run 16H Ex-01

- Do not cross (any limiting boundary); red, bold, solid
- Lease boundary, advisory; black, bold, solid
- Regulatory boundary, advisory; black, bold, dashed
- Geologic boundary, advisory; blue, bold, dashed
- Geologic target boundary, advisory; blue, normal, solid
- Driller's target boundary, advisory; green, normal, solid
- Other type of boundary, advisory; green, bold, dashed



HDM0023 (1900.0 to 2024.0) Dip: 86.34° Field: 51757.7 nT
 Magnetic North is 8.91 degrees West of True North (at 1/30/2023)
 Grid North is 0.52 degrees West of True North
 To correct azimuth from True to Grid add 0.52 degrees
 To correct azimuth from Magnetic to Grid subtract 8.39 degrees

Vertical Section (ft)
 Azimuth 146.37° with reference 0.00 N, 0.00 E



Northing (ft)

Scale 1 inch = 3000

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WELL NAME: MIRACLE RUN 14H
MONONGALIA & MARION, WV



WADESTOWN
MANNINGTON

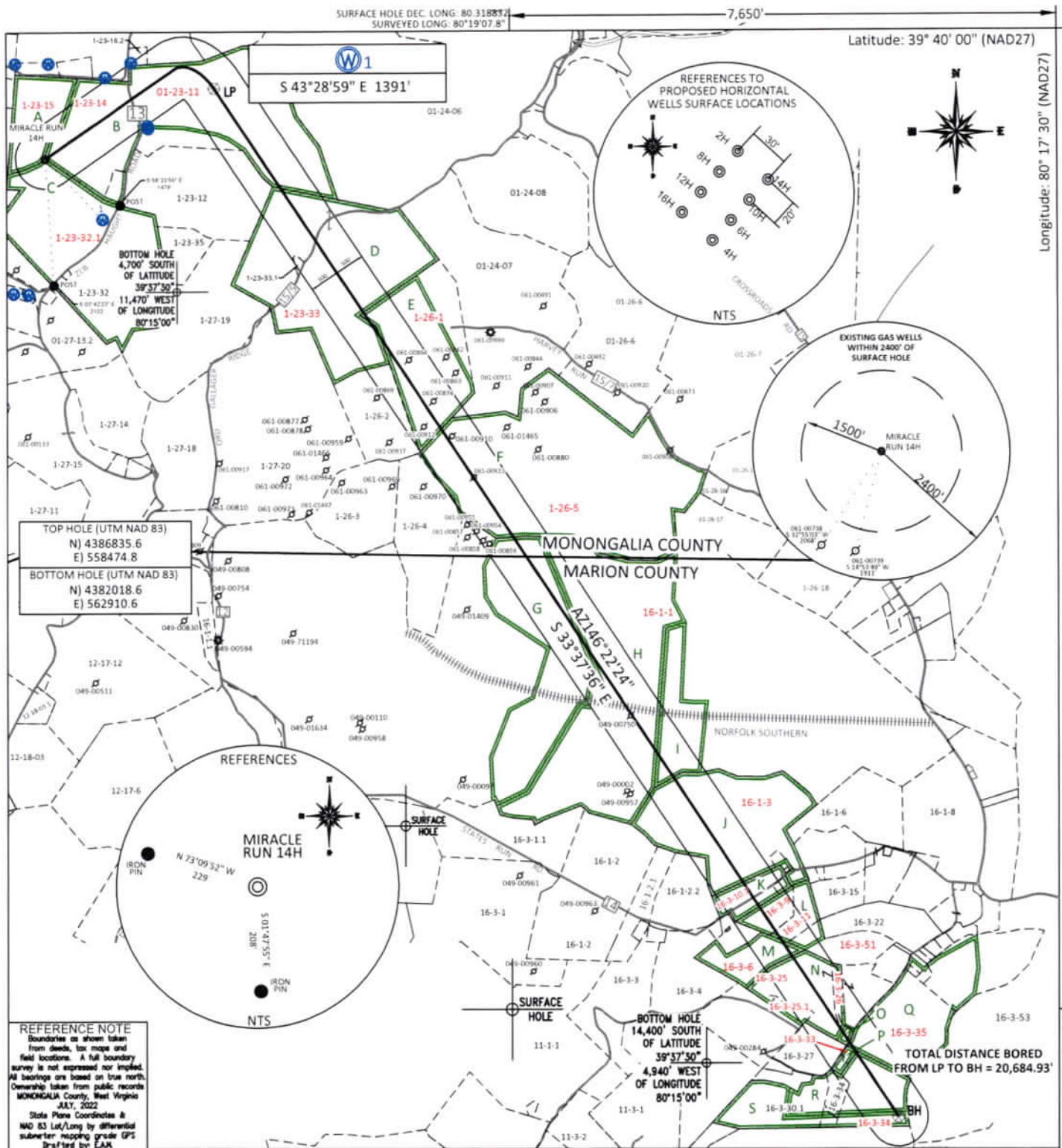
MONONGALIA COUNTY
MARION COUNTY

TOTAL DISTANCE BORED
FROM LP TO BH = 9,337

12/15/2023



GRAPHIC SCALE



FILE #: NNE20
 DRAWING #: 3097
 SCALE: PLAT: 1" = 2400'
 TCK: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY: 1/200
 PROVEN SOURCE OF ELEVATION: SUBMETER MAPPING GRADE GPS

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



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 WVDEP
 OFFICE OF OIL & GAS
 601 57TH STREET
 CHARLESTON, WV 25304

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

WATERSHED: DUNKARD CREEK
 COUNTY/DISTRICT: MONONGALIA / BATTELLE
 SURFACE OWNER: BYRON LANE RAPP
 OIL & GAS ROYALTY OWNER:
 LEASE NUMBERS:

DATE: NOVEMBER 15, 2023
 OPERATOR'S WELL #: MIRACLE RUN 14H
 API WELL #: 47 61 01926
 STATE COUNTY PERMIT
 CURRENT ELEVATION: 1,522'
 PROPOSED ELEVATION: 1,458'

QUADRANGLE: WADESTOWN
 ACREAGE: 1414.02 +/-
 ACREAGE: 56.46 **12/15/2023**

TARGET FORMATION: MARCELLUS
 WELL OPERATOR: NORTHEAST NATURAL ENERGY LLC
 ADDRESS: 707 VIRGINIA STREET EAST, SUITE 1200
 CITY: CHARLESTON STATE: WV ZIP CODE: 25301

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 PLUG OFF FORMATION PERFORATE NEW FORMATION PLUG & ABANDON
 CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY):
 ESTIMATED DEPTH: TVD: 8,107' TMD: 20,684.93'
 DESIGNATED AGENT: JOHN ADAMS
 ADDRESS: 707 VIRGINIA STREET EAST, SUITE 1200
 CITY: CHARLESTON STATE: WV ZIP CODE: 25301

SURFACE HOLE DEC. LAT. 39° 6' 29.313" SURVEYED LAT. 39° 37' 45.2"

PROPERTY INDEX	
1-23-11	CLAUDE S & JONI L ANDERSON
1-23-14	CLAUDE S & JONI L ANDERSON
1-23-15	CLAUDE S & JONI L ANDERSON
1-23-32.1	BYRON LANE RAPP
1-23-33	CONSOL MINING COMPANY LLC
1-26-1	CONSOL MINING COMPANY LLC
1-26-5	CONSOL MINING COMPANY LLC
16-1-1	MARION COUNTY COAL RESOURCES INC
16-1-3	MICHAEL A & DOROTHY K DEMARY
16-3-10.1	MARLA KETTINGER ETAL
16-3-9	MARLA KETTINGER ETAL
16-3-11	MARJORIE ROSE & FRANCIS D GUMP; DARWIN R GUMP
16-3-51	DONALD & PATRICIA PYLES
16-3-6	JUDITH A PRICE
16-3-25	CHARLES L & SUSAN L UNDERWOOD
16-3-25.1	CHARLES L & SUSAN L UNDERWOOD
16-3-33	CHARLES UNDERWOOD II
16-3-35	CHARLES L & SUSAN L UNDERWOOD
16-3-34	CHARLES L & SUSAN L UNDERWOOD
16-3-26	CHARLES L & SUSAN L UNDERWOOD

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LEASE INDEX			
A	WV-061-003830-005	K	WV-049-006439-008
B	WV-061-003828-007	L	WV-049-094055-001
C	WV-061-005463-023	M	WV-049-106467-001
D	WV-061-005633-015	N	WV-049-106467-001
E	WV-061-005781-001	O	WV-049-106467-001
F	WV-061-005781-001	P	WV-049-086171-001
G	WV-049-106389-002	Q	049-006401-001
H	WV-049-004839-001	R	WV-049-106436-001
I	WV-049-006487-001	S	WV-049-106436-001
J	WV-049-005194-004		

12/15/2023

FILE #: NEE20

DRAWING #: 3097

SCALE: N/A

DATE: NOVEMBER 15, 2023

OPERATOR'S WELL #: MIRACLE RUN 14H

API WELL #: 47 61 D1926
STATE COUNTY PERMIT

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE
Chapter 22, Article 6A, Section 5(a)(5)
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)**

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
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See Attached

**Acknowledgement of Possible Permitting/Approval
In Addition to the Office of Oil and Gas**

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

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The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

Well Operator: Northeast Natural Energy
 By: Hollie Medley *Hollie Medley*
 Its: Regulatory Manager

WW-6A1

Operators Well No. Miracle Run 14H

Tract	Lease Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book	Page
A	WV-061-003830-005	Claude S. Anderson and Joni L. Anderson	Northeast Natural Energy, LLC	12.5% or Greater	1578	343
A	WV-061-004540-003	Jerry Yost	Northeast Natural Energy, LLC	12.5% or Greater	1591	124
A	WV-061-004540-004	Gene Yost	Northeast Natural Energy, LLC	12.5% or Greater	1591	126
A	WV-061-004540-006	Eilene Kucix	Northeast Natural Energy, LLC	12.5% or Greater	1591	130
A	WV-061-004540-001	Gary Yost	Northeast Natural Energy, LLC	12.5% or Greater	1591	146
A	WV-061-004540-002	Mary Marlene Miller	Northeast Natural Energy, LLC	12.5% or Greater	1591	122
A	WV-061-004540-007	Roger Yost	Northeast Natural Energy, LLC	12.5% or Greater	1591	132
A	WV-061-004540-005	Larry Yost	Northeast Natural Energy, LLC	12.5% or Greater	1591	128
B	WV-061-003828-007	Ethel Aldene Efaw	Northeast Natural Energy, LLC	12.5% or Greater	1794	596
C	WV-061-005463-023	Michael Ray Efaw	Northeast Natural Energy, LLC	12.5% or Greater	1793	300
D	WV-061-005633-015	George Birklein	Northeast Natural Energy, LLC	12.5% or Greater	1702	19
E	WV-061-005781-001	Ridgetop Appalachia LLC	Northeast Natural Energy, LLC	12.5% or Greater	1745	609
F	WV-061-005781-001	Ridgetop Appalachia (Haymaker Properties, LP)	Northeast Natural Energy, LLC	12.5% or Greater	1745	609
G	WV-049-106389-002	Jeanne R. Allen	Marion Natural Energy LLC	12.5% or Greater	1324	27
H	WV-049-004839-001	CNX Gas Company LLC	Northeast Natural Energy, LLC	12.5% or Greater	1226	918
H	WV-049-004839-002	CSX Transportation, Inc.	Northeast Natural Energy, LLC	12.5% or Greater	1226	927
I	WV-049-006487-001	Harry Lyle Trussell, Jr. (Bessie Mae Owens Trussell Whetzel heir)	Northeast Natural Energy, LLC	12.5% or Greater	1330	511
J	WV-049-005194-004	Deanna Leach	Northeast Natural Energy, LLC	12.5% or Greater	1228	448
J	WV-049-005194-004	Debra Boykin	Northeast Natural Energy, LLC	12.5% or Greater	1228	448
J	WV-049-005194-007	Larry Ratliff	Northeast Natural Energy, LLC	12.5% or Greater	1228	454
J	WV-049-005194-016	Sharolyn Mathews	Northeast Natural Energy, LLC	12.5% or Greater	1229	888
J	WV-049-005194-003	Kathryn Griesel	Northeast Natural Energy, LLC	12.5% or Greater	1228	446
J	WV-049-005194-014	Jeanne Heinrichs	Northeast Natural Energy, LLC	12.5% or Greater	1229	876
J	WV-049-005194-005	Judy Mathews Riley	Northeast Natural Energy, LLC	12.5% or Greater	1228	450
J	WV-049-005194-073	Susan Matthews	Northeast Natural Energy, LLC	12.5% or Greater	1261	132
J	WV-049-005194-048	Faye Young	Northeast Natural Energy, LLC	12.5% or Greater	1233	259
J	WV-049-005194-010	Joanne Michael Slavik	Northeast Natural Energy, LLC	12.5% or Greater	1228	461
J	WV-049-005247-007	John P. Wood	Northeast Natural Energy, LLC	12.5% or Greater	1264	1012
J	WV-049-005247-008	Jerome C. Wood	Northeast Natural Energy, LLC	12.5% or Greater	1265	175
J	WV-049-005247-009	Pauline June Elliott	Northeast Natural Energy, LLC	12.5% or Greater	1265	177
J	WV-049-005194-042	Charles R. Michael Jr.	Northeast Natural Energy, LLC	12.5% or Greater	1232	793
J	WV-049-005194-034	Judith Lynn Michael	Northeast Natural Energy, LLC	12.5% or Greater	1232	212
J	WV-049-005194-041	Billie J. McCall	Northeast Natural Energy, LLC	12.5% or Greater	1232	795
J	WV-049-005194-043	Nancy A. Parmley	Northeast Natural Energy, LLC	12.5% or Greater	1232	781
J	WV-049-005194-035	Sandy Anderson	Northeast Natural Energy, LLC	12.5% or Greater	1232	214
J	WV-049-005194-013	Kimberly Lee	Northeast Natural Energy, LLC	12.5% or Greater	1229	874
J	WV-049-005194-013	Kitty Moore	Northeast Natural Energy, LLC	12.5% or Greater	1229	874
J	WV-049-005194-013	Bruce Lee	Northeast Natural Energy, LLC	12.5% or Greater	1229	874
J	WV-049-005194-002	Joseph Parrish Jr.	Northeast Natural Energy, LLC	12.5% or Greater	1228	444
J	WV-049-005194-006	Barbara L. Yost	Northeast Natural Energy, LLC	12.5% or Greater	1228	452
J	WV-049-005194-001	Luella R. Conaway	Northeast Natural Energy, LLC	12.5% or Greater	1228	442
J	WV-049-005194-008	John Robert Wright	Northeast Natural Energy, LLC	12.5% or Greater	1228	457

Tract	Lease Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book	Page
J	WV-049-005194-009	Michael J. Wright	Northeast Natural Energy, LLC	12.5% or Greater	1228	459
J	WV-049-005194-028	Kimberly D. Cain	Northeast Natural Energy, LLC	12.5% or Greater	1231	514
J	WV-049-005194-015	Lynn Franklin Wright	Northeast Natural Energy, LLC	12.5% or Greater	1229	886
J	WV-049-005194-056	Joan C. Nader	Northeast Natural Energy, LLC	12.5% or Greater	1234	324
J	WV-049-005194-050	Barry W. Collins	Northeast Natural Energy, LLC	12.5% or Greater	1233	263
J	WV-049-005194-049	Beverly C. Danley	Northeast Natural Energy, LLC	12.5% or Greater	1233	261
J	WV-049-005194-052	Barbara L. Jones	Northeast Natural Energy, LLC	12.5% or Greater	1233	267
J	WV-049-005194-074	Kay Mardelle Lepeter	Northeast Natural Energy, LLC	12.5% or Greater	1259	396
J	WV-049-005194-027	Sandra J. Inghram	Northeast Natural Energy, LLC	12.5% or Greater	1231	512
J	WV-049-005194-077	Craig Henderson	Northeast Natural Energy, LLC	12.5% or Greater	1260	475
J	WV-049-005194-075	Jackie Toothman	Northeast Natural Energy, LLC	12.5% or Greater	1259	398
J	WV-049-005194-076	Frances Eads	Northeast Natural Energy, LLC	12.5% or Greater	1259	400
J	WV-049-005194-061	Elkton Ambulance Fund	Northeast Natural Energy, LLC	12.5% or Greater	1235	161
J	WV-049-005194-052	Singerly Fire Company	Northeast Natural Energy, LLC	12.5% or Greater	1235	163
J	WV-049-005194-023	Beth Butcher	Northeast Natural Energy, LLC	12.5% or Greater	1231	502
J	WV-049-005194-030	David Haught	Northeast Natural Energy, LLC	12.5% or Greater	1231	516
J	WV-049-005194-051	Stanley Haught	Northeast Natural Energy, LLC	12.5% or Greater	1233	265
J	WV-049-005194-058	Warren Haught	Northeast Natural Energy, LLC	12.5% or Greater	1234	328
J	WV-049-005194-044	Connie Leary	Northeast Natural Energy, LLC	12.5% or Greater	1232	783
J	WV-049-005194-037	James Haught	Northeast Natural Energy, LLC	12.5% or Greater	1234	322
J	WV-049-005194-046	Mary Denise Ohms Mount	Northeast Natural Energy, LLC	12.5% or Greater	1232	787
J	WV-049-005194-011	Louella Woods	Northeast Natural Energy, LLC	12.5% or Greater	1229	870
J	WV-049-005194-040	Robert N. Tennant	Northeast Natural Energy, LLC	12.5% or Greater	1232	797
J	WV-049-005194-034	Rejester Dale Haught	Northeast Natural Energy, LLC	12.5% or Greater	1231	504
J	WV-049-005194-038	Bellela K. Haught	Northeast Natural Energy, LLC	12.5% or Greater	1232	805
J	WV-049-005194-064	Donald J. Haught	Northeast Natural Energy, LLC	12.5% or Greater	1237	889
J	WV-049-005194-055	James B. Haught	Northeast Natural Energy, LLC	12.5% or Greater	1234	322
J	WV-049-005194-063	Jason L. Haught	Northeast Natural Energy, LLC	12.5% or Greater	1235	165
J	WV-049-005505-012	James Aldon Wiley	Northeast Natural Energy, LLC	12.5% or Greater	1261	677
J	WV-049-005505-011	Sandra Pazdric	Northeast Natural Energy, LLC	12.5% or Greater	1256	311
J	WV-049-005505-008	Cathy Boylen	Northeast Natural Energy, LLC	12.5% or Greater	1254	267
J	WV-049-005505-009	Bernadetta Fleeman	Northeast Natural Energy, LLC	12.5% or Greater	1254	269
J	WV-049-005505-010	David Toothman	Northeast Natural Energy, LLC	12.5% or Greater	1254	271
J	WV-049-005741-001	Jennifer Troy-Black	Northeast Natural Energy, LLC	12.5% or Greater	1277	154
J	WV-049-005194-053	Heather L. Hay	Northeast Natural Energy, LLC	12.5% or Greater	1233	269
J	WV-049-005194-036	Donald P. Betman	Northeast Natural Energy, LLC	12.5% or Greater	1232	216
K	WV-049-006439-008	Donald P. Betman	Northeast Natural Energy, LLC	12.5% or Greater	1328	607
L	WV-049-094055-001	West Virginia University Foundation, Inc.	Northeast Natural Energy, LLC	12.5% or Greater	1177	281
M	WV-049-106467-001	Diane Market Gaston	Marion Natural Energy LLC	12.5% or Greater	1328	541
		Marion Natural Energy LLC	Northeast Natural Energy	Assignment book	1330	528
N	WV-049-106467-001	Diane Market Gaston	Marion Natural Energy LLC	12.5% or Greater	1328	541
		Marion Natural Energy LLC	Northeast Natural Energy	Assignment book	1330	528
O	WV-049-106467-001	Diane Market Gaston	Marion Natural Energy LLC	12.5% or Greater	1328	541
		Marion Natural Energy LLC	Northeast Natural Energy	Assignment book	1330	528

Tract	Lease Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book	Page
P	WV-049-086171-001	Basnett Oil and Gas	NNE Land	12.5% or Greater	1314	949
		NNE Land LLC	Marion Natural Energy LLC	Assignment book	64	938
		Marion Natural Energy LLC	Northeast Natural Energy	Assignment book	1330	528
Q	049-006401-001	Waco Oil and Gas, Inc (I.L. Morris interest)	Northeast Natural Energy, LLC	12.5% or Greater	1327	755
Q	049-006401-002	Mike Ross, Inc.	Northeast Natural Energy, LLC	12.5% or Greater	1328	599
R	WV-049-106436-001	Pamela Whisler Cox	Marion Natural Energy LLC (75%) NNE Land (25%)	12.5% or Greater	1327	653
		NNE Land LLC	Marion Natural Energy LLC	Assignment book	64	938
		Marion Natural Energy LLC	Northeast Natural Energy	Assignment book	1330	528
S	WV-049-106436-001	Pamela Whisler Cox	Marion Natural Energy LLC (75%) NNE Land (25%)	12.5% or Greater	1327	653
		NNE Land LLC	Marion Natural Energy LLC	Assignment book	64	938
		Marion Natural Energy LLC	Northeast Natural Energy	Assignment book	1330	528