



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

Austin Caperton, Cabinet Secretary
www.dep.wv.gov

Tuesday, February 25, 2020
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 MCCLELLAN 5H
47-061-01819-00-00

Modified lateral for a TMD of 23,390'.

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.

A blue ink signature of James A. Martin, written in a cursive style.

James A. Martin
Chief

Operator's Well Number: MCCLELLAN 5H
Farm Name: ALYCEMARIE MCCLELLAN & MICHELLE D. MC
U.S. WELL NUMBER: 47-061-01819-00-00
Horizontal 6A New Drill
Date Modification Issued: February 25, 2020

Promoting a healthy environment.

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

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

2) Operator's Well Number: McClellan 5H Well Pad Name: McClellan

3) Farm Name/Surface Owner: McClellan Public Road Access: SR 15/7 (Harvey Run Road)

4) Elevation, current ground: 1,440' Elevation, proposed post-construction: 1,408.6'

5) Well Type (a) Gas X Oil NA Underground Storage NA
Other NA

(b) If Gas Shallow X Deep NA
Horizontal X

6) Existing Pad: Yes or No Yes *MSJK 1/27/2020*

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
MARCELLUS, 8,160', 103', 3600 PSI

8) Proposed Total Vertical Depth: 8,160'

9) Formation at Total Vertical Depth: MARCELLUS

10) Proposed Total Measured Depth: 23,390'

11) Proposed Horizontal Leg Length: 14,547'

12) Approximate Fresh Water Strata Depths: 50'; 1,122'

13) Method to Determine Fresh Water Depths: DRILLERS LOG FROM OFFSET WELLS

14) Approximate Saltwater Depths: 1,820'; 2,570'

15) Approximate Coal Seam Depths: 190'; 1,107'

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 X No _____

(a) If Yes, provide Mine Info: Name: Marion County Coal Company Mine
Depth: 1,107'
Seam: Pittsburgh
Owner: Murray Energy Corporation & Consolidation Coal Company

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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	94.71	40'	40'	GTS
Fresh Water	13-3/8"	New	J-55	54.5	1,230'	1,200'	CTS
Coal					NA	NA	
Intermediate	9-5/8"	New	J-55	40	2,680'	2,650'	CTS
Production	5-1/2"	New	P-110	20	23,390'	23,360'	5,533 Cu. Ft.
Tubing	2-3/8"	New	P-110	4.7	NA	8,500'	NA
Liners							

MDK 1/27/2020

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"	30"	.375"	415		4,500 psi Grout	NA
Fresh Water	13-3/8"	17 1/2"	.38"	2,760	2,000	Class A	1.23
Coal							
Intermediate	9-5/8"	12 1/4"	.395"	3,950	3,000	Class A	1.3
Production	5-1/2"	8 3/4"	.361"	12,530	9,700	50:50 Poz	1.21
Tubing	2-7/8"	NA	.217"	10,570	3,600	NA	NA
Liners							

PACKERS

Kind:				
Sizes:				
Depths Set:				

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Environmental Protection

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

Drilling and completion of a horizontal Marcellus well. The well will be drilled on air to an approximate depth of 6,994' TVD/MD. The well will then be horizontally drilled on synthetic based mud from the KOP to approximately 8,160' TVD / 23,390' MD along a 326 degree azimuth.

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

Multi-stage / high-rate slickwater fracture treatment using various size sands as proppant. First stage will be initiated via pressurization against a burst disc ran in the production casing string or perforated with coiled tubing. Subsequent stages will be perforated with pumped down guns ran on wireline. Individual stages will be isolated with composite frac plugs. Maximum pump rate during any stage will be 110 BPM with a maximum allowable surface pressure of 9,500 PSI. Composite bridge plugs will be set at the end of the last stage to isolate the treated formation.

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

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

23) Describe centralizer placement for each casing string:

Surface and intermediate casing strings will have bow spring centralizers placed every third joint (~120') from the shoe joint to surface. Production casing will have rigid body centralizers placed at a minimum of every fourth joint (~160') from TD to surface.

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

Surface string cement will be a Class A + Max 3% bwoc Calcium Chloride Fresh Water blend. Intermediate string cement will be a Class A Cement + Max 3% bwoc Calcium Chloride + Fresh Water. Production string cement will be (50:50) Poz (Fly Ash):Type I Cement with a gas migration additive.

25) Proposed borehole conditioning procedures:

Surface string will use a 25.0 bbls Gel Pill + LCM + 25 lbs Cello Flake + 20 lbs/bbl Bentonite @ 8.4 ppg & 10 bbls fresh water spacer prior to cement. Intermediate string will use a 25.0 bbls Gel Pill + LCM + 25 lbs Cello Flake + 20 lbs/bbl Bentonite @ 8.4 ppg & 10 bbls fresh water spacer prior to cement. Production string will use a 50.0 bbls SealBond 25 + 1 gal/bbl US-40 + 275 lbs/bbl Barite + 1 gal/bbl SS-2 Spacer @ 13.5 ppg prior to cement.

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*Note: Attach additional sheets as needed.

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61-01819MOD

NORTHEAST NATURAL ENERGY, LLC

Location: Monongalia County, WV
 Slot: Slot 5H
 Well: McClellan 5H
 Field: Monongalia
 Facility: McClellan Pad

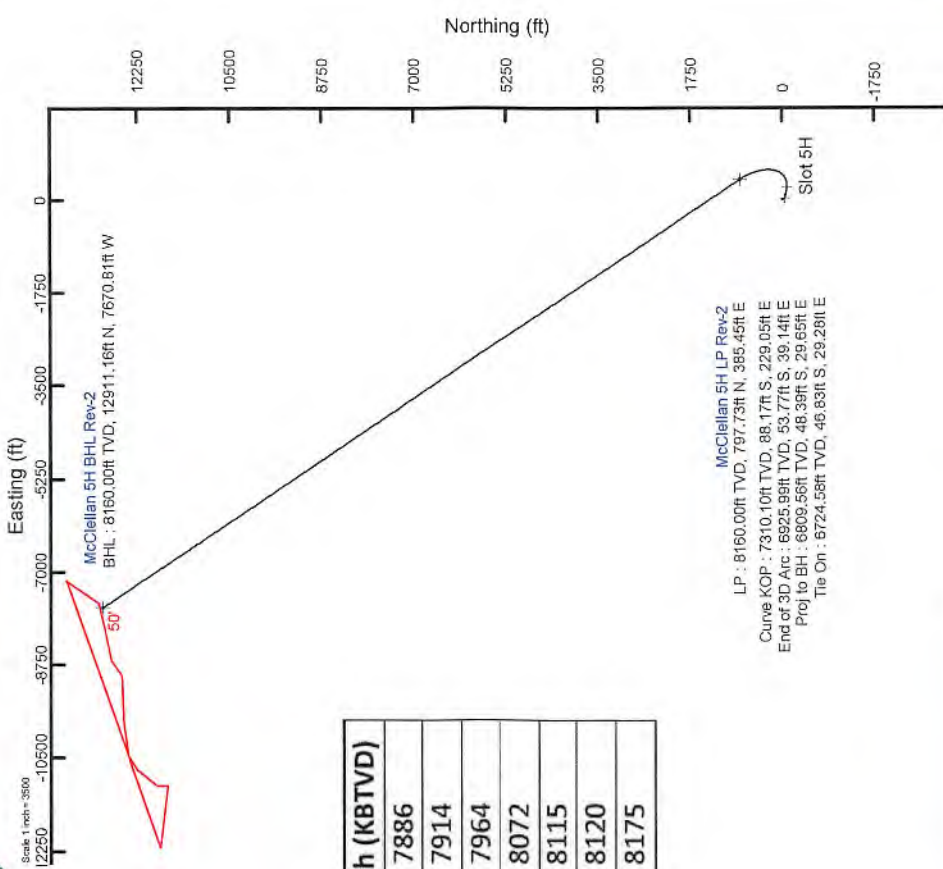
Plat reference wellbore is McClellan 5H FWP #1
 True vertical depths are referenced to Patterson 334 (KB)
 Reference weights measured depths are referenced to Patterson 334 (KB)
 Patterson 334 (KB) to Mean Sea Level (MSL) = 1436ft
 Mean Sea Level to Ground level (At Slot: Slot 5H) = -1411ft
 Coordinates are in feet referenced to NAD 83
 North Reference: GCS NAD 83
 Dips are in feet
 Created by: shirley on 2023-01-10; Database: VA, AP, EASTERNUS, Dcm

Hole and Casing Sections

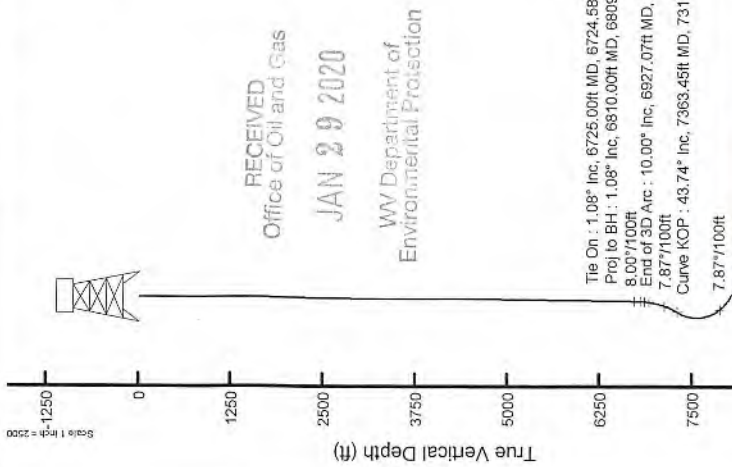
Name	Start MD (ft)	End MD (ft)	Start TVD (ft)	End TVD (ft)	Start Local E (ft)	End Local E (ft)	Start Local N (ft)	End Local N (ft)	Wellbore
2 1/2" Conductor	25.00	50.00	25.00	50.00	0.00	0.01	0.01	-0.01	McClellan 5H AVB
17.5" Open Hole	50.00	128.00	50.00	128.00	-0.01	-0.01	-0.01	2.17	McClellan 5H AVB
13.375" Casing Surface	25.00	103.00	128.00	25.00	0.00	4.09	4.09	2.17	McClellan 5H AVB
12.25" Open Hole	103.00	277.00	103.00	277.00	-0.06	-16.19	-16.19	11.41	McClellan 5H AVB
8.025" Casing Intermediate	25.00	277.00	277.00	277.00	0.00	-16.19	-16.19	11.41	McClellan 5H AVB
8.25" Open Hole	277.00	354.00	277.00	354.00	-16.19	-11.51	-11.51	20.28	McClellan 5H AVB
8.5" Open Hole	354.00	472.00	354.00	472.00	-46.83	1096.12	1096.12	-1967.48	McClellan 5H AVB
5.5" Casing Production	25.00	2292.06	2338.96	25.00	0.00	1291.15	-702.81		McClellan 5H PWB

Location Information

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
McClellan Pad	1749185.000	409495.900	39°37'18.021"N	80°16'42.9186"W
Slot	Local E (ft)	Local N (ft)	Grid East (US ft)	Grid North (US ft)
Slot 5H	-52.23	1749132.770	39°37'18.2817"N	80°16'43.5891"W
Patterson 334 (KB) to Ground level (At Slot: Slot 5H) = 28ft				
Mean Sea Level to Ground level (At Slot: Slot 5H) = -1411ft				
Patterson 334 (KB) to Mean Sea Level = 1436ft				



Formation	Depth (KB TVD)
Genesee	7886
Tully	7914
Hamilton	7964
Upper Marcellus	8072
Cherry Valley	8115
Lower Marcellus	8120
Onondaga	8175



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Vertical Section (ft)

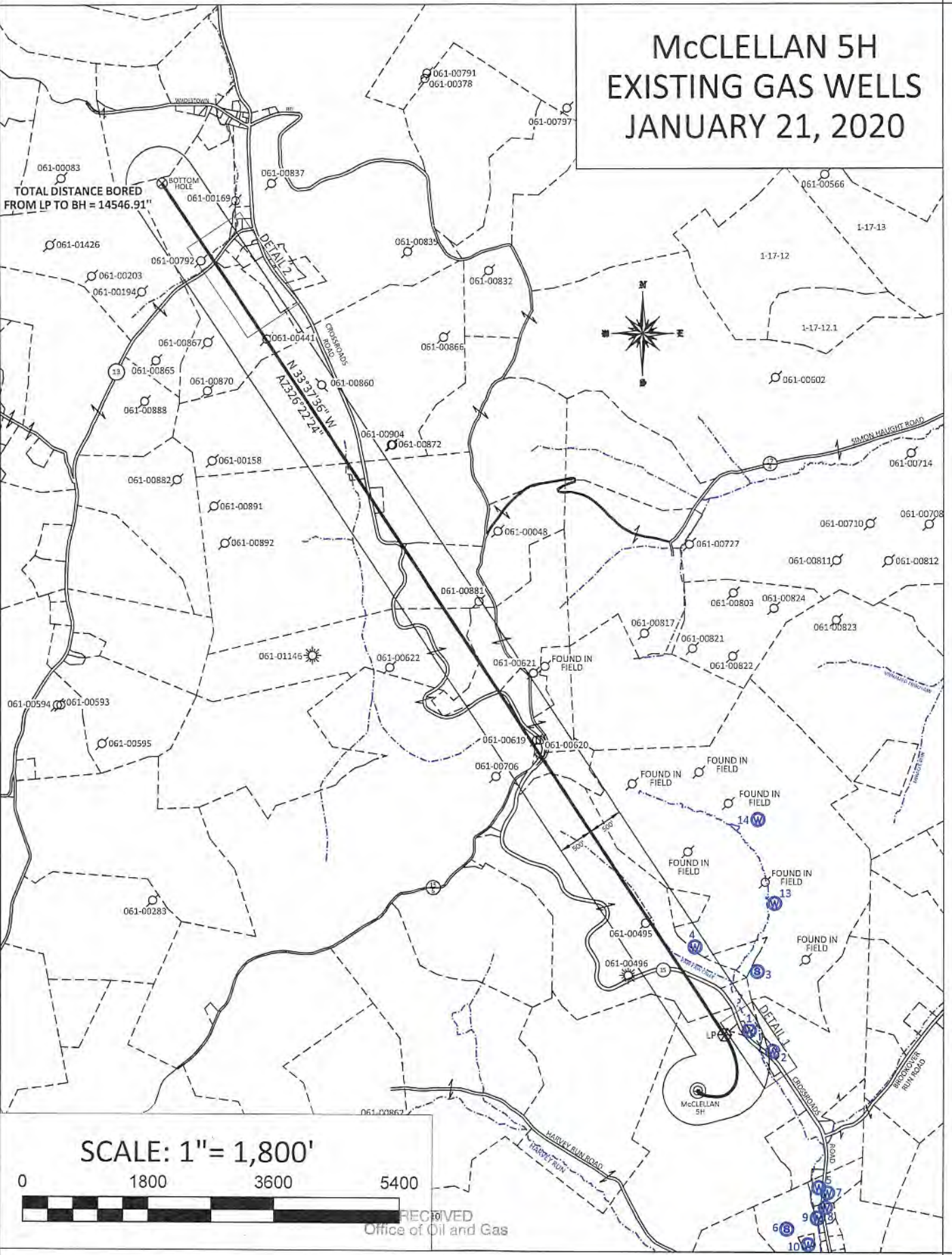
Azimuth 326.37° with reference 0.00 N, 0.00 E

Scale 1 inch = 2500

61-01819 MOD

MCCLELLAN 5H EXISTING GAS WELLS JANUARY 21, 2020

TOTAL DISTANCE BORED
FROM LP TO BH = 14546.91"



SCALE: 1" = 1,800'



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McClellan 5H Area of Review

API Number	Well Name	Well Number	Operator	Latitude (NAD 27)	Longitude (NAD 27)	TMP	TVD	Comments
061-00495	Agnes L Tennant	4	East Resources, Inc.	39.628321	-80.28149	1-24-9	3173'	Plugged - 7/9/2010
061-00881	John Mason	NA	Eastern Associated / Peabody Coal Company	39.640791	-80.290123	1-24-3	NA	Plugged - 9/30/1988
061-00620	C A Anderson/Swisher	2(4098)	South Penn Oil	39.635426	-80.286932	1-24-13.1	3593	Plugged - 5/15/1981
061-00619	C A Anderson/Swisher	1(4097)	South Penn Oil	39.635426	-80.28712	1-24-13.1	3532	Plugged - 7/1/1981
061-00860	A J Carrothers	2	South Penn Oil	39.649202	-80.298219	1-17-9.1	3050	Plugged - 3/31/1988
061-00441	A K Michaels	5	Consolidation Coal Company	39.65927	-80.149844	1-17-7	NA	Plugged 12/23/2013
061-00792	Thomas L. Walls	1	South Penn Oil	39.653987	-80.30441	1-18-15	NA	Plugged - 9/16/1985

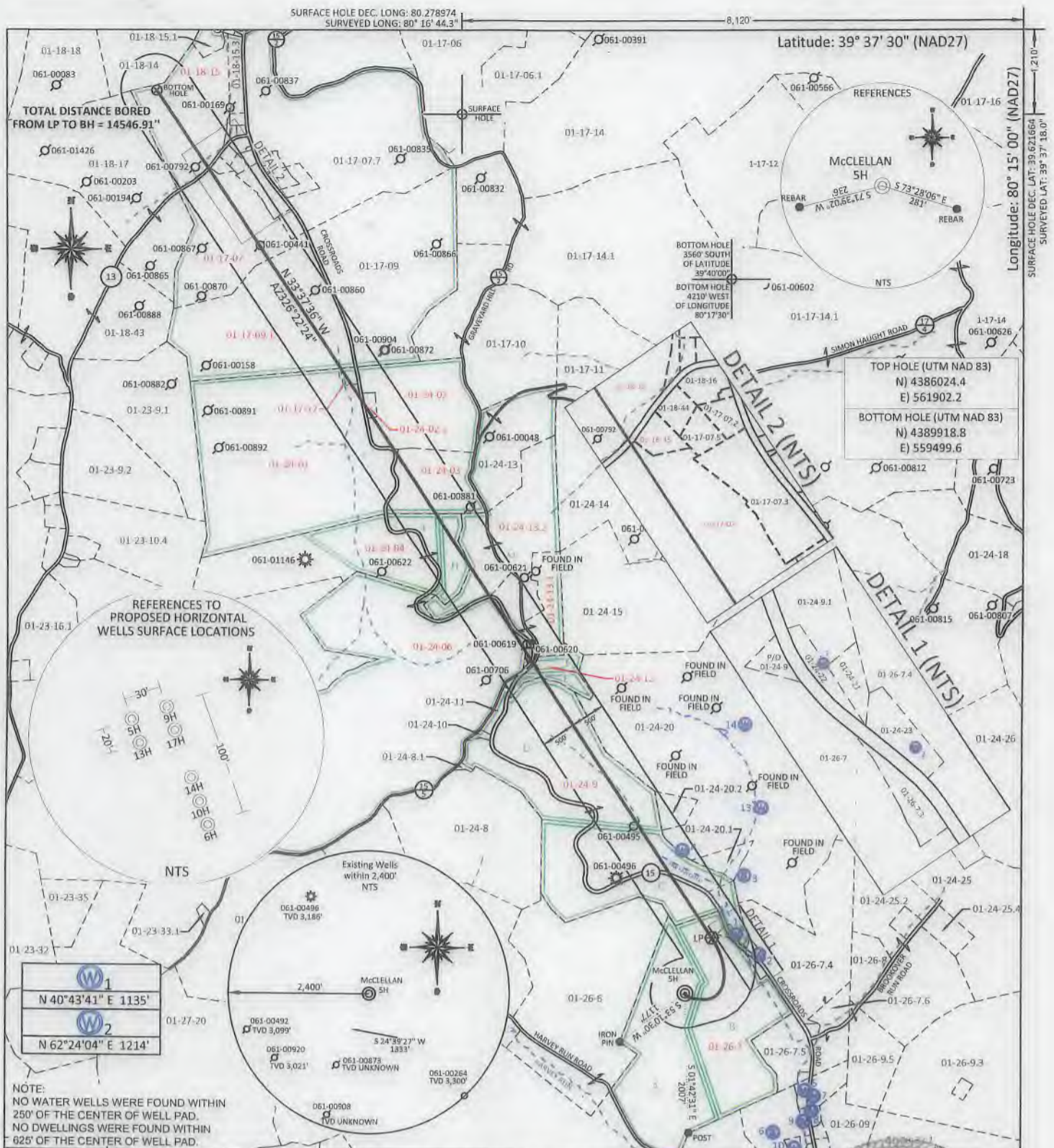
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61-01819 MOD

WELL: McCLELLAN 5H
QUAD: MANNINGTON, WV

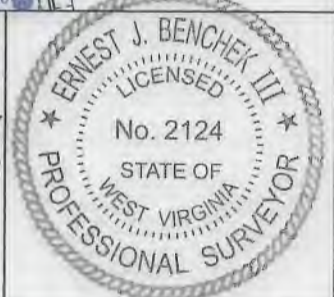
TOTAL DISTANCE BORED
FROM LP TO BH = 14546.91'





FILE #: NNE14
 DRAWING #: 2970
 SCALE: PLAT: 1" = 2000'
TICK: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY: 1/200
 PROVEN SOURCE 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: JANUARY 27, 2020
 OPERATOR'S WELL #: McCLELLAN 5H
 API WELL #: 47 61 01819 MBO
 STATE COUNTY PERMIT

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

WATERSHED: UPPER MONONGAHELA
 COUNTY/DISTRICT: MONONGALIA / BATTELLE
 SURFACE OWNER: ALYCEMARIE MCCLELLAN & MICHELLE D. MOORE
 OIL & GAS ROYALTY OWNER: Barbara June Sutton, et al
 LEASE NUMBERS: _____

AS-BUILT ELEVATION: 1,411.7'
 QUADRANGLE: MANNINGTON
 ACREAGE: 1044.18 +/-
 ACREAGE: 129.4 +/-

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

TARGET FORMATION: MARCELLUS
 ESTIMATED DEPTH: TVD: 8,160' TMD: 23,390.96'
 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

PROPERTY OWNER INDEX	
1-26-7	NETTIEALYCE McCLELLAN
1-24-9	MARY C. WALLS
1-24-6	ALLEGHENY FORESTLANDS LLC
1-24-12	HILDA JEAN DONALDSON
1-24-13.1	DOUGLAS ALAN SWISHER
1-24-4	FRANCIS G. SWISHER & THERESA TUTTLE
1-24-13.2	FRANCIS G. SWISHER & THERESA IRENE SWISHER
1-24-3	JOHN A. & KAREN J. MASON
1-24-1	NELSON DALE & CHERYL LISBETH GALLAGHER
1-24-2	ERIC DALE CHISLER
1-24-2.1	ROY DALE & TWYLA CHISLER
1-17-17	LISA D. RABER-AMMONS
1-17-9.1	JASON L. SHRIVER
1-17-7	RONALD AMMONS
1-18-45	ALICE B. & TERRY JOE GUMP, KAREN SUE NICHOLSON & MELISSA ANN RABER
1-18-15	DAVID & JESSICA L. AMMONS

LEASE INDEX			
A	WV-061-04172-001	F	WV-061-00119-001-LA
B	WV-061-00109-002-LA	G	WV-061-00119-001-LA
C	WV-061-00111-002-LA	H	WV-061-00113-001-LA
D	WV-061-00113-001-LA	I	WV-061-00113-001-LA
E	WV-061-00119-001-LA	J	WV-061-00119-001-LA
		K	WV-061-00113-001-LA

FILE #: NEE14

DRAWING #: 2970

SCALE: N/A

DATE: JANUARY 27, 2020

OPERATOR'S WELL #: McCLELLAN 5H

API WELL #: 47 61 01819 MOD
STATE COUNTY PERMIT

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E	WV-061-00119-001-LA	J	WV-061-00119-001-LA
		K	WV-061-00113-001-LA

FILE #: NEE14

DRAWING #: 2970

SCALE: N/A

DATE: JANUARY 27, 2020

OPERATOR'S WELL #: McCLELLAN 5H

API WELL #: 47 61 01819MDD
STATE COUNTY PERMIT

WW-6A1
(5/13)

Operator's Well No. McClellan 5H

**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

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 LLC
 By: Hollie Medley
 Its: Regulatory Manager

WW-6A1

McClellan 5H

Tract ID	NNE LEASE NUMBER	LESSOR NAME	LESSEE NAME	ROYALTY	BOOK/	PAGE
A	WV 061 004172 001	Barbara June Sutton	Northeast Natural Energy LLC	0.125 or Greater	1560	233
	WV 061 004172 011	Jerry D. Atwood and Shirley L. Atwood	Northeast Natural Energy LLC	0.125 or Greater	1568	137
	WV 061 004172 054	Linda Austin	Northeast Natural Energy LLC	0.125 or Greater	1578	385
	WV 061 004172 068	Larry S. Barr	Northeast Natural Energy LLC	0.125 or Greater	1581	297
	WV 061 004172 055	Michael P. Barr	Northeast Natural Energy LLC	0.125 or Greater	1578	387
	WV 061 004172 061	Patrick C. Barr	Northeast Natural Energy LLC	0.125 or Greater	1579	232
	WV 061 004172 021	Danielle S. Blalock	Northeast Natural Energy LLC	0.125 or Greater	1570	350
	WV 061 004172 017	Maxine G. Morton, f/k/a Maxine G. Sutton, Life Estate Interest	Northeast Natural Energy LLC	0.125 or Greater	1567	497
	WV 061 004172 028	Claudia Brown	Northeast Natural Energy LLC	0.125 or Greater	1573	5
	WV 061 004172 092	Deena Brown	Northeast Natural Energy LLC	0.125 or Greater	1590	331
	WV 061 004172 015	Garold L. Brown and Mary P. Brown	Northeast Natural Energy LLC	0.125 or Greater	1565	727
	WV 061 004172 099	Douglas E. Browning and Denise Browning	Northeast Natural Energy LLC	0.125 or Greater	1592	617
	WV 061 004172 004	Peggy Lee Burchett and John Burchett	Northeast Natural Energy LLC	0.125 or Greater	1566	353
	WV 061 004172 013	Eleanor Carroll	Northeast Natural Energy LLC	0.125 or Greater	1565	734
	WV 061 004172 060	Lisa D. Carroll	Northeast Natural Energy LLC	0.125 or Greater	1579	229
	WV 061 004172 104	Erin Chacon	Northeast Natural Energy LLC	0.125 or Greater	1595	421
	WV 061 004172 014	Patricia S. Christian and Clayton Christian	Northeast Natural Energy LLC	0.125 or Greater	1565	729
	WV 061 004172 094	Robin Cornett	Northeast Natural Energy LLC	0.125 or Greater	1591	138
	WV 061 004172 081	Becki L. Deskin	Northeast Natural Energy LLC	0.125 or Greater	1585	266
	WV 061 004172 039	Rodona A. Dunfee	Northeast Natural Energy LLC	0.125 or Greater	1575	457
	WV 061 004172 067	Debra C. Edwards	Northeast Natural Energy LLC	0.125 or Greater	1580	574
	WV 061 004172 103	Maria Evanoff and Dusty Evanoff	Northeast Natural Energy LLC	0.125 or Greater	1595	263
	WV 061 004172 072	John Fincke	Northeast Natural Energy LLC	0.125 or Greater	1581	315
	WV 061 004172 065	Linda S. Frankford	Northeast Natural Energy LLC	0.125 or Greater	1580	46
	WV 061 004172 036	Coralee Garrett	Northeast Natural Energy LLC	0.125 or Greater	1575	292
	WV 061 004172 023	Robert A. Garrett	Northeast Natural Energy LLC	0.125 or Greater	1570	356
	WV 061 004172 040	Ruth A. Garrett	Northeast Natural Energy LLC	0.125 or Greater	1575	497
	WV 061 004172 034	William D. Garrett and Linda Garrett	Northeast Natural Energy LLC	0.125 or Greater	1575	288
	WV 061 004172 100	Avis Anita Gilpin Adkins	Northeast Natural Energy LLC	0.125 or Greater	1593	672
	WV 061 004172 046	Sharon K. Gustina and John Gustina	Northeast Natural Energy LLC	0.125 or Greater	1577	39
	WV 061 004172 108	James Hawk, and His Unknown, Missing, and Abandoning Heirs, S	Northeast Natural Energy LLC	0.125 or Greater	1616	495
	WV 061 004172 095	Kevin Hawk	Northeast Natural Energy LLC	0.125 or Greater	1598	375
	WV 061 004172 106	Billie J. Hodges, fka Billie J. Hawk	Northeast Natural Energy LLC	0.125 or Greater	1600	75
	WV 061 004172 098	Steven Hawk and Marcia H. Hawk	Northeast Natural Energy LLC	0.125 or Greater	1592	615
	WV 061 004172 031	Dorothy Mae Johnson	Northeast Natural Energy LLC	0.125 or Greater	1575	254
	WV 061 004172 035	Donna Jean Kelley	Northeast Natural Energy LLC	0.125 or Greater	1575	290
	WV 061 005411 108	Jerry Lee Johnson	Northeast Natural Energy LLC	0.125 or Greater	1670	120
	WV 061 005411 107	James A. Johnson	Northeast Natural Energy LLC	0.125 or Greater	1670	88
	WV 061 004172 035	Donna M. Kelley	Northeast Natural Energy LLC	0.125 or Greater	1575	290

61-0184 MOD

WW-6A1

McClellan 5H

Tract ID	NNE LEASE NUMBER	LESSOR NAME	LESSEE NAME	ROYALTY	BOOK/	PAGE
	WV 061 004172 087	Kelley Kueck	Northeast Natural Energy LLC	0.125 or Greater	1589	230
	WV 061 004172 032	Patti L. Leasure	Northeast Natural Energy LLC	0.125 or Greater	1575	256
	WV 061 004172 006	Cindy Russell Lee	Northeast Natural Energy LLC	0.125 or Greater	1566	357
	WV 061 004172 030	Cynthia K. Leininger	Northeast Natural Energy LLC	0.125 or Greater	1575	284
	WV 061 004172 008	Tamaree Beatrice Littlefield	Northeast Natural Energy LLC	0.125 or Greater	1566	375
	WV 061 004172 043	Constance Louthen	Northeast Natural Energy LLC	0.125 or Greater	1575	716
	WV 061 004172 044	William D. Louthen Jr.	Northeast Natural Energy LLC	0.125 or Greater	1575	718
	WV 061 004172 022	Erick C. Malmgren	Northeast Natural Energy LLC	0.125 or Greater	1570	352
	WV 061 004172 056	Joyce L. Masser	Northeast Natural Energy LLC	0.125 or Greater	1578	389
	WV 061 004172 057	Keith A. Myers and Carol Myers	Northeast Natural Energy LLC	0.125 or Greater	1579	234
	WV 061 004172 053	Patrick K. Myers	Northeast Natural Energy LLC	0.125 or Greater	1578	379
	WV 061 004172 007	Karen A. Palencar	Northeast Natural Energy LLC	0.125 or Greater	1566	381
	WV 061 004172 059	Paula L. Picon	Northeast Natural Energy LLC	0.125 or Greater	1579	227
	WV 061 004172 018	Karen Anita Powers, Remainder Interest	Northeast Natural Energy LLC	0.125 or Greater	1567	499
	WV 061 004172 052	Frances C. Richie and Clifford F. Richie	Northeast Natural Energy LLC	0.125 or Greater	1578	375
	WV 061 004172 005	David Harold Russell and Pamela Russell	Northeast Natural Energy LLC	0.125 or Greater	1566	355
	WV 061 004172 009	Iris J. Russell	Northeast Natural Energy LLC	0.125 or Greater	1566	385
	WV 061 004172 016	Paulette A. Sawvel	Northeast Natural Energy LLC	0.125 or Greater	1567	495
	WV 061 004172 085	Todd E. Long and Kathy Long	Northeast Natural Energy, LLC	0.125 or Greater	1587	288
	WV 061 004172 033	Barbara A. Stover and Jack Stover	Northeast Natural Energy LLC	0.125 or Greater	1575	286
	WV 061 004172 001	Barbara June Sutton	Northeast Natural Energy LLC	0.125 or Greater	1560	233
	WV 061 004172 019	Dave Sutton and Alison Sutton, Remainder Interest	Northeast Natural Energy LLC	0.125 or Greater	1570	346
	WV 061 004172 002	Douglas B. Sutton	Northeast Natural Energy LLC	0.125 or Greater	1560	235
	WV 061 004172 051	Judy K. Sutton	Northeast Natural Energy LLC	0.125 or Greater	1578	373
	WV 061 004172 003	Stephen R. Sutton and Barbara H. Sutton	Northeast Natural Energy LLC	0.125 or Greater	1560	237
	WV 061 004172 073	Barbara Uhrig	Northeast Natural Energy LLC	0.125 or Greater	1581	317
	WV 061 004172 012	Darlene W. Vorhies	Northeast Natural Energy LLC	0.125 or Greater	1565	736
	WV 061 004172 083	Jeremy B. Watson	Northeast Natural Energy LLC	0.125 or Greater	1586	540
	WV 061 004172 102	Kevin P. Watson	Northeast Natural Energy LLC	0.125 or Greater	1593	675
	WV 061 004172 010	Debra S. Wells	Northeast Natural Energy LLC	0.125 or Greater	1568	135
	WV 061 004172 064	Jack Williams	Northeast Natural Energy LLC	0.125 or Greater	1580	44
	WV 061 004172 066	James A. Williams	Northeast Natural Energy LLC	0.125 or Greater	1580	48
	WV 061 004172 069	Jaye Ann Williams	Northeast Natural Energy LLC	0.125 or Greater	1581	299
	WV 061 004172 070	Jennifer Williams	Northeast Natural Energy LLC	0.125 or Greater	1581	301
	WV 061 004172 047	Charles A. Winland	Northeast Natural Energy LLC	0.125 or Greater	1577	41
	WV 061 004172 048	Thomas L. Winland and Martha Winland	Northeast Natural Energy LLC	0.125 or Greater	1577	43
	WV 061 004172 071	William B. Winland	Northeast Natural Energy LLC	0.125 or Greater	1581	313
	WV 061 004172 082	Ora K. Yarbrough aka Katie Yarbrough	Northeast Natural Energy LLC	0.125 or Greater	1585	268
B	WV 061 000109 002 LA	XTO Energy Inc.	Northeast Natural Energy LLC	0.125 or Greater	1620	424

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C	WV 061 005560 003	Marliesa Yost	Northeast Natural Energy LLC	0.125 or Greater	1692	319
D	WV 061 000113 001-LA	SWN Production Company, LLC	Northeast Natural Energy LLC	0.125 or Greater	1623	482
	WV 061 005455 001	MC Mineral Company	SWN Production Company, LLC	0.125 or Greater	1512	200
E	WV 061 000113 001-LA	SWN Production Company, LLC	Northeast Natural Energy LLC	0.125 or Greater	1623	482
	WV 061 005452 001	Chesapeake Appalachia, LLC	SWN Production Company, LLC	0.125 or Greater	126	140
	WV 061 005452 001	John L. Donaldson and Hilda J. Donaldson	Chesapeake Appalachia, LLC	0.125 or Greater	1418	752
F	WV 061 000113 001-LA	SWN Production Company, LLC	Northeast Natural Energy LLC	0.125 or Greater	1623	482
	WV 061 005460 001	Chesapeake Appalachia, LLC	SWN Production Company, LLC	0.125 or Greater	1512	206
	WV 061 005460 001	Equinor USA Onshore Properties	Northeast Natural Energy LLC	0.125 or Greater	1640	801
	WV 061 005460 001	James S. King	Northeast Natural Energy LLC	0.125 or Greater	1578	208
	WV 061 000111 002-LA	EQT Production Company	Northeast Natural Energy LLC	0.125 or Greater	1617	375
G	WV 061 000113 001-LA	SWN Production Company, LLC	Northeast Natural Energy LLC	0.125 or Greater	1623	482
	WV 061 005460 001	Chesapeake Appalachia, LLC	SWN Production Company, LLC	0.125 or Greater	1512	206
	WV 061 005460 001	Equinor USA Onshore Properties	Northeast Natural Energy LLC	0.125 or Greater	1640	801
	WV 061 005460 001	Chesapeake Appalachia, LLC	SWN Production Company, LLC	0.125 or Greater	124	224
	WV 061 005460 001	James S. King	Chesapeake Appalachia, LLC	0.125 or Greater	1418	778
H	WV 061 004410 013	Steven E. Bowman	Northeast Natural Energy LLC	0.125 or Greater	1605	721
	WV 061 004410 001	Gini Lynn Hoover	Northeast Natural Energy LLC	0.125 or Greater	1579	271
	WV 061 004410 015	Flora C. Acker	Northeast Natural Energy, LLC	0.125 or Greater	1609	383
	WV 061 004410 009	Barbara Mounts	Northeast Natural Energy, LLC	0.125 or Greater	1595	130
	WV 061 004410 010	Mabel Jean Porter	Northeast Natural Energy, LLC	0.125 or Greater	1595	132
	WV 061 004410 003	Barbara K. Hoover	Northeast Natural Energy, LLC	0.125 or Greater	1591	177
	WV 061 004410 004	Deborah L. DeGarmo and Kenneth L. DeGarmo	Northeast Natural Energy, LLC	0.125 or Greater	1591	179
	WV 061 004410 002	Ruby W. Verno	Northeast Natural Energy, LLC	0.125 or Greater	1591	175
	WV 061 000113 001-LA	SWN Production Company, LLC	Northeast Natural Energy, LLC	0.125 or Greater	1623	482
	WV 061 004410 006	Salena R. Baumgartner and Donald L. Baumgartner	Northeast Natural Energy, LLC	0.125 or Greater	1591	183
	WV 061 004410 014	Willard L. Dorsey, Jr.	Northeast Natural Energy, LLC	0.125 or Greater	1608	832
	WV 061 004410 012	Jonathan D. Dorsey	Northeast Natural Energy, LLC	0.125 or Greater	1596	753
	WV 061 004410 007	Natalie C. Durbin and Ray A. Durbin	Northeast Natural Energy, LLC	0.125 or Greater	1591	185
	WV 061 004410 005	Joseph G. Dorsey	Northeast Natural Energy, LLC	0.125 or Greater	1591	181
	WV 061 004905 001	Francis Gregory Swisher and Theresa Irene Swisher	Northeast Natural Energy, LLC	0.125 or Greater	1618	340
I	WV 061 004358 003	Kathleen Atha	Northeast Natural Energy, LLC	0.125 or Greater	1576	478
	WV 061 004099 002	John M. Barrickman	Northeast Natural Energy, LLC	0.125 or Greater	1567	476
	WV 061 004099 004	James K. Barrickman	Northeast Natural Energy, LLC	0.125 or Greater	1567	507
	WV 061 004099 006	Doris J. Rhodes	Northeast Natural Energy, LLC	0.125 or Greater	1567	474
	WV 061 004099 023	James H. Campbell	Northeast Natural Energy, LLC	0.125 or Greater	1629	128
	WV 061 004099 021	James E. Nicholas	Northeast Natural Energy, LLC	0.125 or Greater	1588	404
	WV 061 004099 012	Joseph E. Hall, II	Northeast Natural Energy, LLC	0.125 or Greater	1567	676
	WV 061 004099 027	Joseph A. Hall	Northeast Natural Energy, LLC	0.125 or Greater	1650	137

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	WV 061 004099 017	Jeffrey J. Rigby	Northeast Natural Energy LLC	0.125 or Greater	1571	584
	WV 061 004099 019	Joel E. Rigby	Northeast Natural Energy LLC	0.125 or Greater	1572	846
	WV 061 004099 020	Jerry R. Rigby	Northeast Natural Energy LLC	0.125 or Greater	1585	187
	WV 061 004099 015	Janice Marie Page	Northeast Natural Energy LLC	0.125 or Greater	1570	701
	WV 061 004099 016	Janine A. Peek	Northeast Natural Energy LLC	0.125 or Greater	1570	699
	WV 061 004099 014	Jack A. Graham	Northeast Natural Energy LLC	0.125 or Greater	1567	501
	WV 061 004099 013	James M. Graham	Northeast Natural Energy LLC	0.125 or Greater	1568	575
	WV 061 004099 022	Jean Ann Gaunce	Northeast Natural Energy LLC	0.125 or Greater	1640	464
	WV 061 004099 011	Susan A. Graham	Northeast Natural Energy LLC	0.125 or Greater	1567	674
	WV 061 004099 007	Betty Jean Bernstein	Northeast Natural Energy LLC	0.125 or Greater	1566	537
	WV 061 004358 014	Susan K. Skinner	Northeast Natural Energy LLC	0.125 or Greater	1602	201
	WV 061 004358 011	Linda L. Belile-Banks	Northeast Natural Energy LLC	0.125 or Greater	1601	502
	WV 061 004358 012	Pamela Harris	Northeast Natural Energy LLC	0.125 or Greater	1601	504
	WV 061 004358 013	Teena Cook	Northeast Natural Energy LLC	0.125 or Greater	1602	25
	WV 061 004358 007	The Robert and Lou Atha Trust	Northeast Natural Energy LLC	0.125 or Greater	1580	435
	WV 061 004358 002	William H. Atha II	Northeast Natural Energy LLC	0.125 or Greater	1576	476
	WV 061 004358 008	Kerry M. Atha	Northeast Natural Energy LLC	0.125 or Greater	1580	611
	WV 061 004358 001	Thomas M. Atha	Northeast Natural Energy LLC	0.125 or Greater	1576	474
	WV 061 004358 005	Rafferty A. Jackson	Northeast Natural Energy LLC	0.125 or Greater	1579	317
	WV 061 004358 004	Rebel Leigh W. Clair	Northeast Natural Energy LLC	0.125 or Greater	1576	566
	WV 061 004358 009	Dawn M. Fry	Northeast Natural Energy LLC	0.125 or Greater	1581	343
	WV 061 004358 006	Kristina Dow	Northeast Natural Energy LLC	0.125 or Greater	1580	438
	WV 061 000113 001-LA	SMN Production Company, LLC	Northeast Natural Energy LLC	0.125 or Greater	1623	482
	WV 061 004099 003	Lenna L. Leeson	Northeast Natural Energy LLC	0.125 or Greater	1567	518
	WV 061 004099 005	Frances P. Bakewell	Northeast Natural Energy LLC	0.125 or Greater	1567	509
	WV 061 004716 001	Francis Gregory Swisher and Theresa Irene Swisher	Northeast Natural Energy LLC	0.125 or Greater	1618	264
	WV 061 004410 015	Flora C. Acker	Northeast Natural Energy, LLC	0.125 or Greater	1609	383
	WV 061 004410 009	Barbara Mounts	Northeast Natural Energy LLC	0.125 or Greater	1595	130
	WV 061 004410 010	Mabel Jean Porter	Northeast Natural Energy LLC	0.125 or Greater	1595	132
	WV 061 004410 013	Steven E. Bowman	Northeast Natural Energy LLC	0.125 or Greater	1605	721
	WV 061 004410 001	Gini Lynn Hoover	Northeast Natural Energy LLC	0.125 or Greater	1579	271
	WV 061 004410 003	Barbara K. Hoover	Northeast Natural Energy LLC	0.125 or Greater	1591	177
	WV 061 004410 004	Deborah L. DeGarmo and Kenneth L. DeGarmo	Northeast Natural Energy, LLC	0.125 or Greater	1591	179
	WV 061 004410 002	Ruby W. Verno	Northeast Natural Energy LLC	0.125 or Greater	1591	175
	WV 061 004410 006	Salena R. Baumgartner and Donald L. Baumgartner	Northeast Natural Energy LLC	0.125 or Greater	1591	183
	WV 061 004410 014	Willard L. Dorsey, Jr.	Northeast Natural Energy LLC	0.125 or Greater	1608	832
	WV 061 004410 012	Jonathan D. Dorsey	Northeast Natural Energy LLC	0.125 or Greater	1596	753
	WV 061 004410 007	Natalie C. Durbin and Ray A. Durbin	Northeast Natural Energy LLC	0.125 or Greater	1591	185
	WV 061 004410 005	Joseph G. Dorsey	Northeast Natural Energy, LLC	0.125 or Greater	1591	181

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J	WV 061 000113 001-LA	SWN Production Company, LLC	Northeast Natural Energy LLC	0.125 or Greater	1623	482
	WV 061 005459 000	Chesapeake Appalachia, LLC	SWN Production Company, LLC	0.125 or Greater	124	224
	WV 061 005459 000	Nelson D. Gallagher and Cheryl L. Gallagher	Chesapeake Appalachia, LLC	0.125 or Greater	1422	207
K	WV 061 000317 001-LA	SWN Production Company, LLC	Northeast Natural Energy LLC	0.125 or Greater	1689	320
	WV 061 000317 001-LA	Chesapeake Appalachia, LLC	SWN Production Company, LLC	0.125 or Greater	1434	507