

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

Thursday, February 25, 2021 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 BUNNER 4H

47-061-01865-00-00

Extend lateral from 24692' to 25285' Total Measured Depth and from 16114' to 16770' Horizontal Length. Update Leases.

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: BUNNER 4H

Farm Name: PATRICIA A. BUNNER

U.S. WELL NUMBER: 47-061-01865-00-00

Horizontal 6A New Drill

Date Modification Issued: 02/25/2021

Promoting a healthy environment.

WW-6B (04/15)

API NO. 47-061	_ 01865
OPERATOR WE	ELL NO. 4H
Well Pad Nam	e. Bunner

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

1) Well Operator	r: Northeast	Natural Ene	ergy	494498281	Monongalia	Clay	Blacksville, WV
•				Operator ID	County	District	Quadrangle
2) Operator's W	ell Number: 4	+		Well Pad	Name: Bunne	er	
3) Farm Name/S	urface Owner:	Patricia A.	Bunn	er Public Road	d Access: Upp	er Days R	un Rd
4) Elevation, cur	rent ground:	1328	El	evation, proposed j	post-construction	on: 1308	
, , ,	(a) Gas X Other	(Dil	Unde	rground Storag	ge	
1	` /	allow X		Deep			
6) Existing Pad:	Yes or No No						
, <u> </u>	get Formation(s 24' (GL), 104', 4		Antic	ipated Thickness ar	nd Expected Pr	ressure(s):	
8) Proposed Tota	al Vertical Dep	th: 8,024'					
9) Formation at '	Total Vertical I	Depth: Mar	cellus				RECEIVED Office of Oil and Gas
10) Proposed To	tal Measured D	epth: 25,2	285' 🗸	,			JAN 2 6 2021
11) Proposed Ho	orizontal Leg Lo	ength: 16,7	770'	✓			WV Department of
12) Approximate	e Fresh Water S	Strata Depths	3:	150', 1100' (GL)	-		Environmental Protection
13) Method to D	etermine Fresh	Water Dept	hs: [Orillers Log from C	Offset Wells		
14) Approximate	e Saltwater Dep	oths: 1500',	2180	(GL)			
15) Approximate	e Coal Seam De	epths: 416',	553',	814', 919' (GL)			
16) Approximate	e Depth to Poss	ible Void (c	oal mi	ne, karst, other): r	ione		
17) Does Propos directly overlyin				ns Yes	No	X	
(a) If Yes, prov	ride Mine Info:	Name:					
() , Fac.		Depth:					
		Seam:					
		Owner:					

OPERATOR WELL NO. 4H
Well Pad Name: Bunner

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	94.7	100'	100'	113/GTS
Fresh Water	13-3/8	New	J-55	54.5	1230'	1200'	961/CTS
Coal							
Intermediate	9-5/8	New	J-55	36	2530'	2500'	864/CTS
Production	5-1/2	New	P-110	20	25,285'	25,255' /	3352/TOC @ 2000'
Tubing	2-7/8	New	P-110	6.5	NA	8000	NA
Liners							

Bryen Harm 1-19.21

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	2730	500	Class A	1.19
Coal							
Intermediate	9-5/8	12-3/8	0.395	3520	2800	Class A	1.19
Production	5-1/2	8-3/4 & 8-1/2	0.361	14,360	11,500 (frac)	50:50 POZ	1.07
Tubing	2-7/8	NA	0.217	13,870	NA	NA	NA
Liners							

PACKERS

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Kind:	NA	JAN 2 6 2021
Sizes:		WV Department of Environmental Protection
Depths Set:		

WW-6B	
(10/14)	

API NO. 47- 061 - 01865	
OPERATOR WELL NO. 4H	
Well Pad Name: Bunner	

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 11,500psi 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): 16.36
- 22) Area to be disturbed for well pad only, less access road (acres): 6.79
- 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
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24) Describe all cement additives associated with each cement type:

Surface string cement will be a Type 1 + Max 3% bwoc Calcium Chloride Fresh Water blen Protection Intermediate at time acceptable will be a Type 1 - Max 3% bwoc Calcium Chloride Fresh Water blen Protection Intermediate string cement will be a Type 1 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 & 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.

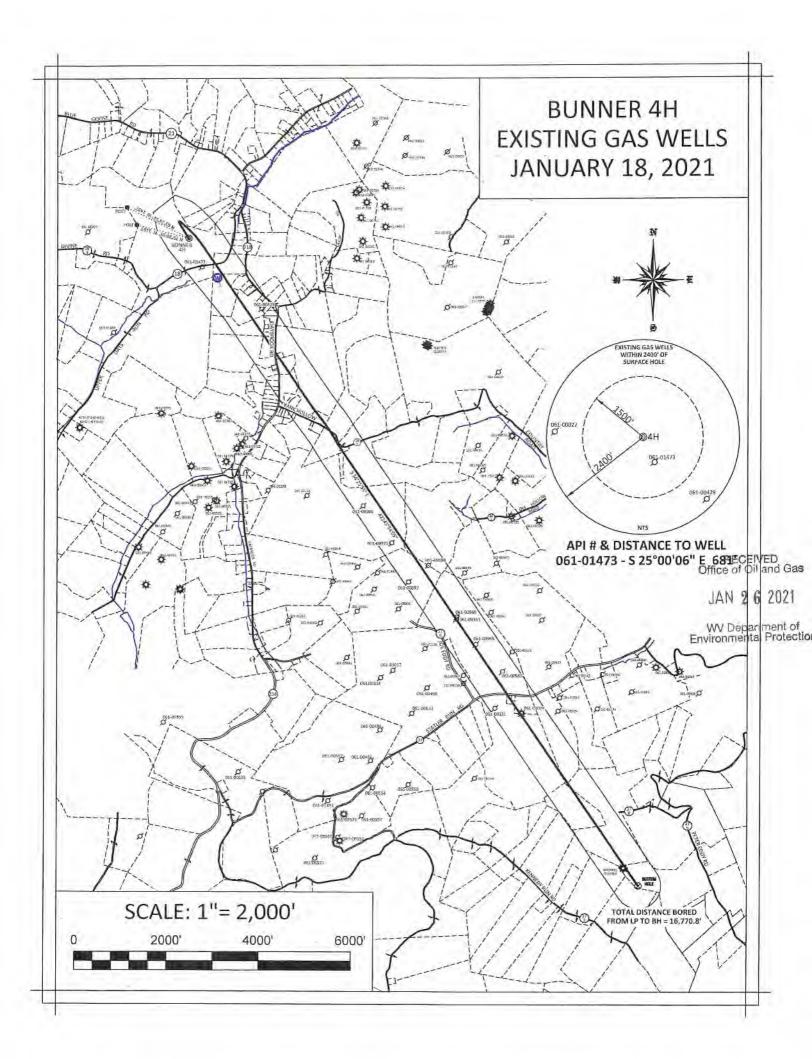
*Note: Attach additional sheets as needed.

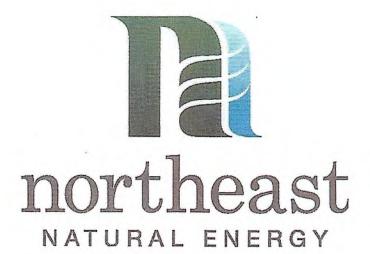
	Bunner 4H Area of Review							
API Number	Well Name	Well Number	Operator	Latitude (NAD 27)	Longitude (NAD 27)	TMP	TVD	Comments
47-061-01473	William Bunner	1	Eastern Associates	39.660801	-80.216572	4-18-32	NA	NA
47-061-00429	Karen Sollars	NA	Peoples Gas LLC	39.658330	-80.21194	4-17-08	3217	Plugged 7/15/19
47-061-00686	Jesse Tennant	2	Consolidation Coal	39.646736	-80.203976	4-17-53	NA	Plugged 6/4/82
47-061-00975	Jesse Tennant	NA	Consolidation Coal	39.644561	-80.201724	4-17-53	NA	Plugged 10/12/90
47-061-00897	H W & M L Hamilton	NA	Consolidation Coal	39.642241	-80.200410	4-20-11	NA	Plugged 5/30/89
47-061-00898	H W & M L Hamilton	NA	Consolidation Coal	39.643256	-80.198910	4-20-12	NA	Plugged 6/21/89
47-061-00968	Bonita Toothman	NA	Consolidation Coal	39.640211	-80.196658	4-20-58.5	NA	Plugged 2/12/91
47-061-00163	Jno L. Tennant	1	South Penn Oil	39.640073	-80.196689	4-20-58.5	2118	NA
47-061-00965	Bonita Toothman	NA	Consolidation Coal	39.638616	-80.195157	4-20-58.5	NA	Plugged 1/24/91
47-061-00966	Bonita Toothman	NA	Consolidation Coal	39.637021	-80.193094	4-20-58.5	NA	Plugged 7/3/91
47-061-00151	Pratt - Tennant	3	East Recources	39.634846	-80.193655	4-20-58	2007	Plugged 6/22/10
47-061-01079	Gary L. Rush	- NA	Consolidation Coal	39.634556	-80.191592	4-20-58.6	NA	NA

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JAN 2 6 2021

W Department of Environmental Protection





Bunner 4H Site Safety Plan

January 2021

Buyan Harris 1-19-21

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JAN 26 2021

WV Department of Environmental Protection



NORTHEAST NATURAL ENERGY, LLC

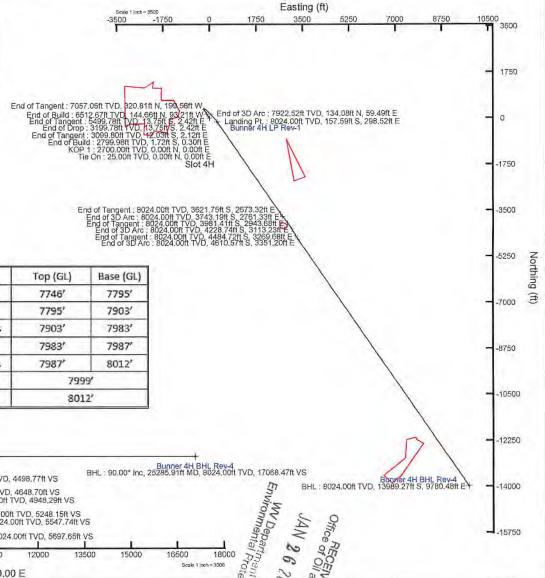
Location: Monongalia County, WV Field: Monongalia

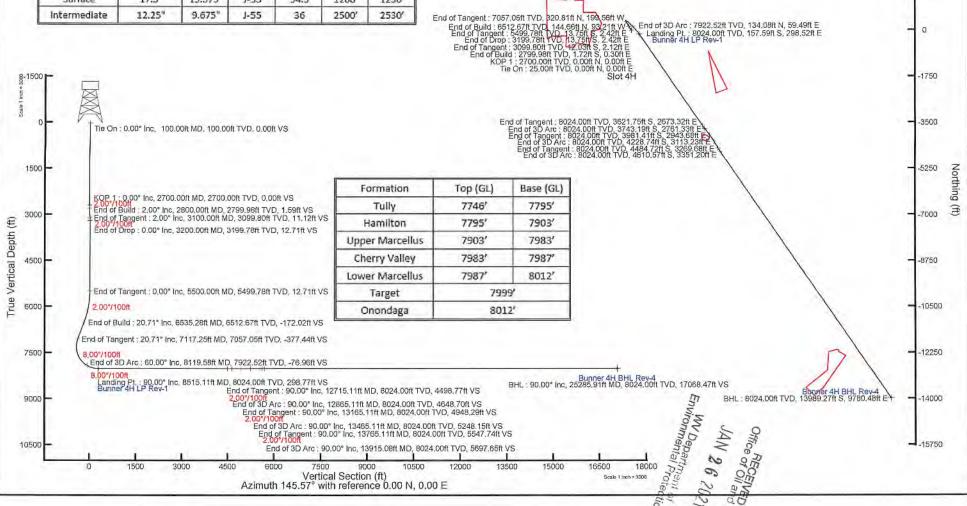
Well: Bunner 4H Wellbore: Bunner 4H PWB



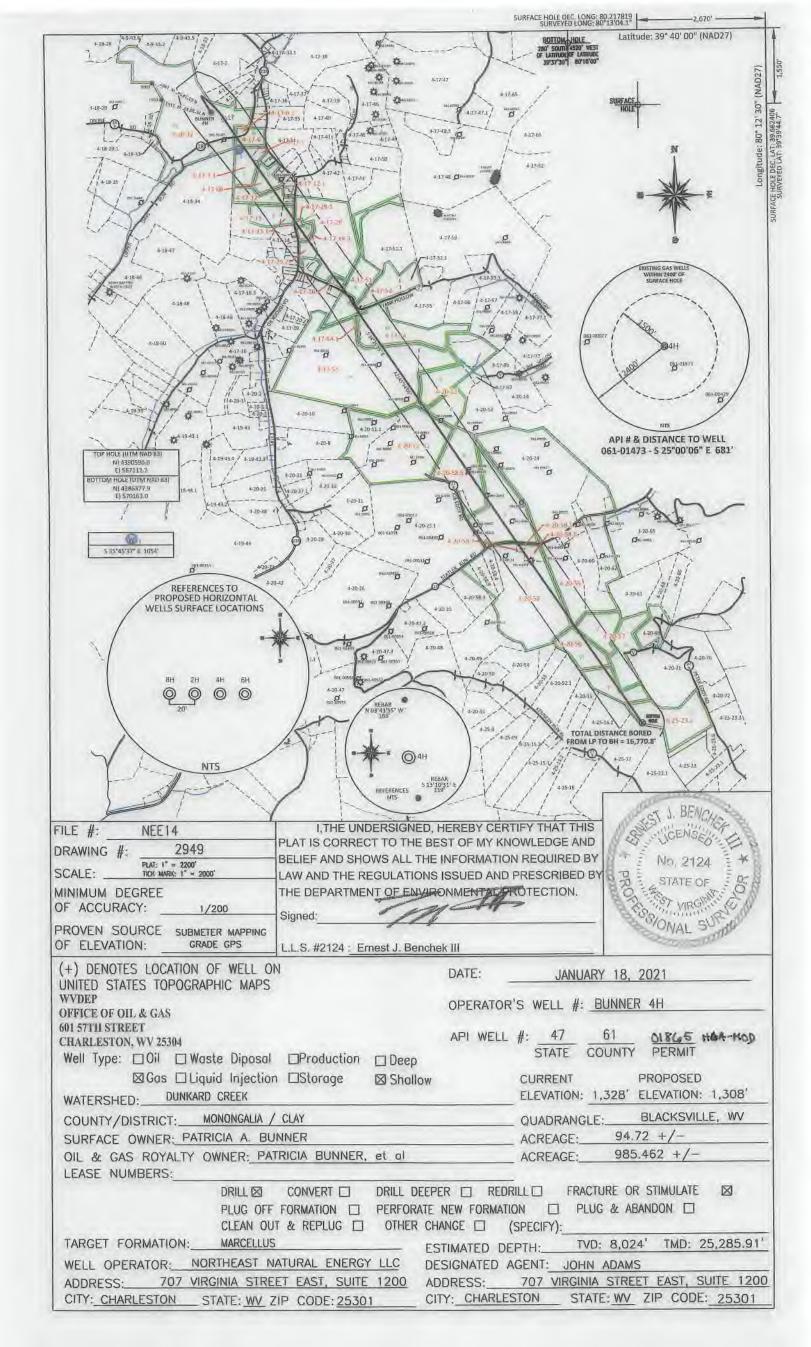
Facility: Bunner Pad Plot reference wellpeth is Burner 4H PVVP Ex-03 Grid System: NAD83 / Lembert West Virginia SP, Northern Zono (4701), US feet True yearcal depths are referenced to Patterson 334 (KB) North Reference: Grid north Reference wellpath measured dopths are referenced to Pathyson 334 (KB) Scale: True distance Patterson 334 (KB) to Mean Sea Level: 1302 feet Coordinates are in feet referenced to 3lot Mean Sea Level to Ground level (At Slot: Slot 419: -1277 feet. Created by hijbburg on 2020-12-03; Database: WA MPL EASTERNUS Defi Offset wellpath MDs are referenced to each path's default MD datum

Casing Type	Hole Size	Casing Size	Grade	Weight	Casing Depth (GL)	Drill Depth (GL)
Conductor	28"	24"	N/A	N/A	100'	100'
Surface	17.5"	13.375"	J-55	54.5	1200'	1230'
Intermediate	12.25"	9.675"	J-55	36	2500'	2530'









	PROPERTY OWNER INDEX
4-18-32	PATRICIA A. BUNNER
4-17-6.1	PATRICIA A. BUNNER
4-17-6	PATRICIA A. BUNNER
4-17-7	KAMI D. & JAMES K. ELLIOT
4-17-7.1	ROGER & JOYCE WILLIAMS TRUST
4-17-8	ALEX BRADLEY-JAE WILSON
4-17-12	FREDDIE W. EDDY II & SALLY L. EDDY
4-17-13.1	JOHNNY HERBERT & CRYSTAL RENEE HAMILTON
4-17-13	HARRY D. HAMILTON (LIFE - FRANCES H. HAMILTON)
4-17-29	HERBERT W. HAMILTON ESTATE
4-17-14.3	HERBERT W. HAMILTON ESTATE; JOHN HERBERT HAMILTON & HERBERT E. HAMILTON ET AL
4-17-12.1	FREDDIE W. EDDY II & SALLY L. EDDY
4-17-13	HARRY D. HAMILTON (LIFE - FRANCES H. HAMILTON)
4-17-29.1	HERBERT W. HAMILTON ESTATE; JOHN HERBERT HAMILTON & HERBERT E. HAMILTON ET AL
4-17-29.2	HERBERT W. HAMILTON ESTATE; JOHN HERBERT HAMILTON & HERBERT E. HAMILTON ET AL
4-17-26	STEVEN J. PUHALLA
4-17-51	EARNEST DAVID DILLIE (LIFE-FRANKLIN E & NANCY L DILLE)
4-17-54.1	COLLIN D. TOWNS (LIFE - HENRY DUKE & RUTH ANN TOWNS)
4-17-52	DONALD C. & LINDA D. BEHNER
4-17-54	NORMAN BARR
4-17-53	MARY D., WILLIAM L., LINDSAY J. & GEROGIE E. TENNANT
4-20-12	JOHN PAUL TENNANT ESTATE
4-20-11	HERBERT EARL HAMILTON
4-17-12.1	FREDDIE W. EDDY II & SALLY L EDDY
4-17-54.1	COLIN D TOWNS (LIFE-HENRY DUKE & RUTH ANN TOWNS)
4-20-12	JOHN PAUL TENNANT ESTATE
4-20-58.5	RODNEY A MCVICKER (LIFE BONITA I TOOTHMAN)
4-20-58.1	CONSOL MINING COMPANY LLC
4-20-58.6	GARY L RUSH
4-20-58.7	NEAL ERCOLANO
4-20-59	BUDDY B AMMONS
4-20-58	BRIAN KYLE LEMLEY
4-20-56	WILLIAM W KNISLEY JR & RACHEL L KNISLEY
4-20-57	WILLIAM F MICHAEL JR

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	LEASE INDEX		
A	WV-061-004154-001	0	WV-061-005145-001
В	WV-061-005350-010	P	WV-061-002566-001
C	WV-061-005256-001	Q	WV-061-001052-002
D	WV-061-003845-001	R	WV-061-003457-001
E	WV-061-004249-001	S	WV-061-003457-001
F	WV-061-004249-001	T	WV-061-003457-001
G	WV-061-003860-001	U	WV-061-003566-001
H	WV-061-005466-001	V	WV-061-004348-001
1	WV-061-003860-001	W	WV-061-004246-001
J	WV-061-005270-001	X	WV-061-003749-001
K	WV-061-003680-002	Y	WV-061-003749-001
L	WV-061-003414-006	Z	WV-061-003015-007
M	WV-061-004066-001		
N	WV-061-003539-003		

FILE #: NEE14	DATE: JANUARY 18, 2021
DRAWING #:2949	OPERATOR'S WELL #: BUNNER 4H
SCALE:N/A	API WELL #: 47 61 OLEGS -MAD PERMIT WA

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

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: Office of Oil and Gas

- 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

WV Department of Environmental Protection

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

Tract	Lease Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book	Page
A	WV-061-004154-001	Patricla Bunner	Northeast Natural Energy, LLC	12.5% or Greater	1563	435
В	WV-061-005350-010	Billy Ray Faver	Northeast Natural Energy, LLC	12.5% or Greater	1641	401
В	WV-061-005350-009	Donald Wayne Faver	Northeast Natural Energy, LLC	12.5% or Greater	1641	383
В	WV-061-005350-006	John Wesley Howard	Northeast Natural Energy, LLC	12.5% or Greater	1637	505
В	WV-061-005350-002	Michael Raymond Howard	Northeast Natural Energy, LLC	12.5% or Greater	1637	497
В	WV-061-005350-011	Gregory Allen Howard	Northeast Natural Energy, LLC	12.5% or Greater	1641	403
В	WV-061-005350-007	Cynthia Breedlove	Northeast Natural Energy, LLC	12.5% or Greater	1637	607
В	WV-061-005350-005	Ronald Wood	Northeast Natural Energy, LLC	12.5% or Greater	1637	503
В	WV-061-005350-008	Jeffrey Alan Wood	Northeast Natural Energy, LLC	12.5% or Greater	1637	609
В	WV-061-005350-004	Celorinda Sue Hemphill	Northeast Natural Energy, LLC	12.5% or Greater	1637	501
В	WV-061-005350-003	Marlene L. Grissom	Northeast Natural Energy, LLC	12.5% or Greater	1637	499
В	WV-061-005350-001	Tabitha Sue Merritt	Northeast Natural Energy, LLC	12.5% or Greater	1636	219
В	WV-061-005350-012	Keith D. Watson and Sheila	Northeast Natural Energy, LLC	12.5% or Greater	1690	288
В	WV-061-005420-002	Deborah L. Horkulic	Northeast Natural Energy, LLC	12,5% or Greater	1641	448
В	WV-061-005420-003	Rebecca A. Horkulic	Northeast Natural Energy, LLC	12.5% or Greater	1643	332
В	WV-061-005420-001	Jeanne Levaughn Blackburn	Northeast Natural Energy, LLC	12.5% or Greater	1641	446
C	WV-061-005256-001	Tabitha Simpson	Northeast Natural Energy, LLC	12.5% or Greater	1628	627
C	WV-061-005257-047	Abbey Lynn Price	Northeast Natural Energy, LLC	12.5% or Greater	1657	278
C _	WV-061-005257-049	Anthony Scott Taylor	Northeast Natural Energy, LLC	12.5% or Greater	1657	282
C	WV-061-005257-037	Belva Corene York	Northeast Natural Energy, LLC	12.5% or Greater	1641	373
C	WV-061-005257-051	Beth A. Perchuk	Northeast Natural Energy, LLC	12.5% or Greater	1657	286
C	WV-061-005467-001	Billy Ray Tennant	Northeast Natural Energy, LLC	12.5% or Greater	1645	174
C	WV-061-005430-002	Carney David Hamilton	Northeast Natural Energy, LLC	12.5% or Greater	1648	312
C.	WV-061-005257-003	Carolyn Gail Wilson	Northeast Natural Energy, LLC	12.5% or Greater	1629	266
C	WV-061-005586-001	Cassie P. Parker-Snodgrass	Northeast Natural Energy, LLC	12.5% or Greater	1680	638
С	WV-061-004573-004	Celine B. Tennant Estate	Northeast Natural Energy, LLC	12.5% or Greater	1678	411
С	WV-061-005257-008	Charles Wendell Moore	Northeast Natural Energy, LLC	12.5% or Greater	1631	845
C	WV-061-005257-023	Diana Beth Thomas	Northeast Natural Energy, LLC	12.5% or Greater	1635	458
C	WV-061-005257-009	Dottie L. Moore	Northeast Natural Energy, LLC	12.5% or Greater	1631	847
C	WV-061-005257-025	Eleanor J. Toothman	Northeast Natural Energy, LLC	12.5% or Greater	1636	197
C	WV-061-005257-033	Eric R. Moore	Northeast Natural Energy, LLC	12.5% or Greater	1637	452
C	WV-061-005257-001	Frederick Snodgrass	Northeast Natural Energy, LLC	12.5% or Greater	1628	629
C	WV-061-005257-013	Gary Kendall Moore	Northeast Natural Energy, LLC	12.5% or Greater	1633	412 🖫
C	WV-061-005257-028	Gloria E. Gump	Northeast Natural Energy, LLC	12.5% or Greater	1637	442 ≦€ 9
C	WV-061-005468-001	James David Tennant	Northeast Natural Energy, LLC	12.5% or Greater	1645	178 3 0
С	WV-061-005257-011	Jamie J. Raymond	Northeast Natural Energy, LLC	12.5% or Greater	1633	408 मु ह
C	WV-061-005256-002	Janis J. Douglas, a/k/a Janis J.	Northeast Natural Energy, LLC	12.5% or Greater	1633	403 2
C	WV-061-005257-010	Jaretta Gail Finch	Northeast Natural Energy, LLC	12.5% or Greater	1631	849 3
C	WV-061-005257-030	Jarrod Tyler Williams	Northeast Natural Energy, LLC	12.5% or Greater	1637	446
C	WV-061-005257-032	Jason Timothy Moore	Northeast Natural Energy, LLC	12.5% or Greater	1637	450
С	WV-061-005257-012	Jeanie P. Wise	Northeast Natural Energy, LLC	12.5% or Greater	1633	410

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Tract	Lease Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book	Page
С	WV-061-005257-052	Jeffrey Dewayne Williams	Northeast Natural Energy, LLC	12.5% or Greater	1658	581
С	WV-061-005257-018	Jeffrey J. Cotter	Northeast Natural Energy, LLC	12.5% or Greater	1633	422
С	WV-061-005257-007	Jeffrey John Moore	Northeast Natural Energy, LLC	12.5% or Greater	1629	274
С	WV-061-005430-001	Jennifer L. Wright	Northeast Natural Energy, LLC	12.5% or Greater	1643	338
С	WV-061-005467-003	Jimmy Randall Tennant	Northeast Natural Energy, LLC	12.5% or Greater	1647	118
С	WV-061-005389-001	Joseph R. Sollars	Northeast Natural Energy, LLC	12.5% or Greater	1638	690
С	WV-061-005257-004	Judith Roberta Sine	Northeast Natural Energy, LLC	12.5% or Greater	1629	268
С	WV-061-005257-014	Karen L. Breedlove	Northeast Natural Energy, LLC	12.5% or Greater	1633	414
С	WV-061-005257-019	Kathy Sue Francis, aka, Kathy S.	Northeast Natural Energy, LLC	12.5% or Greater	1633	424
С	WV-061-005257-044	Kendal Lee Moore	Northeast Natural Energy, LLC	12.5% or Greater	1650	257
С	WV-061-005257-048	Kenneth Edwin Williams	Northeast Natural Energy, LLC	12.5% or Greater	1657	280
С	WV-061-05468-003	Kimberly Dawn Coker	Northeast Natural Energy, LLC	12.5% or Greater	1645	182
С	WV-061-005257-034	Lance Lawrence Wilson	Northeast Natural Energy, LLC	12.5% or Greater	1638	606
С	WV-061-005257-050	Marcy Annette Taylor	Northeast Natural Energy, LLC	12.5% or Greater	1657	284
С	WV-061-005257-026	Mary Jane Shriver	Northeast Natural Energy, LLC	12.5% or Greater	1636	199
С	WV-061-005257-031	Merna Jean Tennant	Northeast Natural Energy, LLC	12.5% or Greater	1637	448
С	WV-061-005257-029	Michelle Dawn Johnson	Northeast Natural Energy, LLC	12.5% or Greater	1637	444
С	WV-061-005256-003	Michelle P. Snodgras	Northeast Natural Energy, LLC	12.5% or Greater	1637	440
С	WV-061-005257-006	Nancy Lee Statler	Northeast Natural Energy, LLC	12.5% or Greater	1629	272
С	WV-061-005468-002	Pamela Lane Tennant	Northeast Natural Energy, LLC	12.5% or Greater	1645	180
C	WV-061-005257-002	Pandora Sue Simmons	Northeast Natural Energy, LLC	12.5% or Greater	1629	264
С	WV-061-005468-004	Patricia Jane Tennant	Northeast Natural Energy, LLC	12.5% or Greater	1645	184
С	WV-061-005257-046	Reginald Kyle Tennant	Northeast Natural Energy, LLC	12.5% or Greater	1654	66
С	WV-061-005257-035	Ricky R. Shriver	Northeast Natural Energy, LLC	12.5% or Greater	1640	631
c	WV-061-005257-016	Robert C. Moore	Northeast Natural Energy, LLC	12.5% or Greater	1633	418
c	WV-061-005390-001	Robert E. Sollars, Jr.	Northeast Natural Energy, LLC	12.5% or Greater	1638	692
c	WV-061-005257-015	Robert Gay Santee, Sr.	Northeast Natural Energy, LLC		1633	416
C	WV-061-005257-045	Robert Jeffrey Wilson	Northeast Natural Energy, LLC	12.5% or Greater 12.5% or Greater	1650	259
c	WV-061-005257-053	Robert Seith Tennant	Northeast Natural Energy, LLC	12.5% or Greater		
c	WV-061-005467-002	Rodney Wayne Tennant	Northeast Natural Energy, LLC		1661	801
C	WV-061-005257-005	Rose Marie Moore		12.5% or Greater	1645	176
C	WV-061-005467-004	Roxana Cahill and Michael Cahill	Northeast Natural Energy, LLC	12.5% or Greater	1629	270
c	WV-061-005257-017	Royal E. Moore	Northeast Natural Energy, LLC	12.5% or Greater	1647	120
C	WV-061-005257-017	Shelia L. Simpson	Northeast Natural Energy, LLC	12.5% or Greater	1633	420
C	WV-061-005257-024		Northeast Natural Energy, LLC	12.5% or Greater	1641	375 460 2
c	WV-061-005388-001	Shirley Jean Foster	Northeast Natural Energy, LLC	12.5% or Greater	1635	
c	WV-061-005257-027	Susan F. Snodgrass	Northeast Natural Energy, LLC	12.5% or Greater	1638	688 OV A
$\frac{c}{c}$	WV-061-005257-027	Susan Louise Stuzen	Northeast Natural Energy, LLC	12.5% or Greater	1636	201 @ @
c	WV-061-005257-041	Tanya Lee Smerdell	Northeast Natural Energy, LLC	12.5% or Greater	1628	330 2 2
c		Terry L. Shriver	Northeast Natural Energy, LLC	12.5% or Greater	1648	332 Pd 20
	WV-061-005257-040	Tina Marie Bragg	Northeast Natural Energy, LLC	12.5% or Greater	1648	
C	WV-061-005257-036	Toby John Williams	Northeast Natural Energy, LLC	12.5% or Greater	1641	371 ਰੰ
C	WV-061-005257-039	William Ray Moore	Northeast Natural Energy, LLC	12.5% or Greater	1643	222
D	WV-061-003845-001	Gary D. Yost	Northeast Natural Energy, LLC	12.5% or Greater	1568	254
D	WV-061-003845-002	Kellie D. Wilson	Northeast Natural Energy, LLC	12.5% or Greater	1559	362

Tract	Lease Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book	Page
D	WV-061-003845-003	Lorrie E. Kuhn	Northeast Natural Energy, LLC	12.5% or Greater	1568	254
E	WV-061-004249-001	Shuman, Inc.	Northeast Natural Energy, LLC	12.5% or Greater	1568	775
F	WV-061-004249-001	Frances F. Hamilton	Northeast Natural Energy, LLC	12.5% or Greater	1496	27
F	WV-061-005540-074	Beverly Ann Dick	Northeast Natural Energy, LLC	12.5% or Greater	1687	220
F	WV-061-005540-046	Nancy Jean Miche	Northeast Natural Energy, LLC	12.5% or Greater	1678	369
F	WV-061-005540-073	Dennis Huffman	Northeast Natural Energy, LLC	12.5% or Greater	1687	218
F	WV-061-005540-077	Randall Huffman	Northeast Natural Energy, LLC	12.5% or Greater	1687	592
F	WV-061-005540-079	Connie Carver Miller	Northeast Natural Energy, LLC	12.5% or Greater	1688	207
F	WV-061-005540-084	William Craig Carver	Northeast Natural Energy, LLC	12.5% or Greater	1694	630
F	WV-061-005540-057	Daphney Locckett	Northeast Natural Energy, LLC	12.5% or Greater	1679	361
P	WV-061-005540-062	Shawnda Payne	Northeast Natural Energy, LLC	12.5% or Greater	1679	371
F	WV-061-005540-051	Chase Wayne Carver	Northeast Natural Energy, LLC	12.5% or Greater	1678	379
F	WV-061-005540-076	Alana Deray Carver	Northeast Natural Energy, LLC	12.5% or Greater	1687	237
F	WV-061-005540-066	Cynthia Carver Foreman	Northeast Natural Energy, LLC	12.5% or Greater	1680	660
F	WV-061-005540-060	Trae Carver	Northeast Natural Energy, LLC	12.5% or Greater	1679	367
F	WV-061-005540-059	Trent Carver	Northeast Natural Energy, LLC	12.5% or Greater	1679	367
F	WV-061-005540-050	Tricia Carver	Northeast Natural Energy, LLC	12.5% or Greater	1678	377
F	WV-061-005540-063	Christi R. Buckingham	Northeast Natural Energy, LLC	12.5% or Greater	1679	373
F	WV-061-005540-054	Suzanne K. Stahl	Northeast Natural Energy, LLC	12.5% or Greater	1678	385
F	WV-061-005540-061	Bruce Stahl	Northeast Natural Energy, LLC	12,5% or Greater	1679	369
F	WV-061-005540-071	Candace R. Shaum	Northeast Natural Energy, LLC	12.5% or Greater	1687	214
F	WV-061-005540-080	Brandy Balder	Northeast Natural Energy, LLC	12.5% or Greater	1690	304
F	WV-061-005540-078	Greta Stahl Estate	Northeast Natural Energy, LLC	12.5% or Greater	1688	205
F	WV-061-005540-072	Gertrude M. Gorey	Northeast Natural Energy, LLC	12.5% or Greater	1687	216
F	WV-061-005540-052	Robert Clay McCulty	Northeast Natural Energy, LLC	12.5% or Greater	1678	381
F	WV-061-005540-045	Duane McCulty	Northeast Natural Energy, LLC	12.5% or Greater	1678	367
F	WV-061-005540-053	James Kelly McCulty	Northeast Natural Energy, LLC	12.5% or Greater	1678	363
F -	WV-061-005540-047	Clifford McCulty	Northeast Natural Energy, LLC	12.5% or Greater	1678	371
F	WV-061-005540-069	Barbara Kelly	Northeast Natural Energy, LLC	12.5% or Greater	1681	737
F	WV-061-005540-070	Patricia Stahl Fortune	Northeast Natural Energy, LLC	12.5% or Greater	1683	314
F	WV-061-005540-055	Janice Carine Sands	Northeast Natural Energy, LLC	12.5% or Greater	1678	401
F	WV-061-005540-068	Douglas Gene Henderson	Northeast Natural Energy, LLC	12.5% or Greater	1680	624 T
F	WV-061-005540-024	William Haser	Northeast Natural Energy, LLC	12.5% or Greater	1671	
F	WV-061-005540-032	Sandra L. Marchesi	Northeast Natural Energy, LLC	12.5% or Greater	1673	290 30 V 331 30 N
F	WV-061-005540-033	Jerriewane Narigon	Northeast Natural Energy, LLC	12.5% or Greater	1673	333 menta &
F	WV-061-005540-025	Gene Metzger	Northeast Natural Energy, LLC	12.5% or Greater	1671	302 8
F	WV-061-005540-035	Laurie Roberts	Northeast Natural Energy, LLC	12.5% or Greater	1673	337 of 202
F	WV-061-005540-027	Clayten Liddicoat	Northeast Natural Energy, LLC	12.5% or Greater	1671	349 2 2
F	WV-061-005540-026	Deidra Liddicoat Morgan	Northeast Natural Energy, LLC	12.5% or Greater	1671	304 9
F	WV-061-005540-056	Kelly Liddocoat Bethke	Northeast Natural Energy, LLC	12.5% or Greater	1679	359
F	WV-061-005540-048	Karen Tennant	Northeast Natural Energy, LLC	12.5% or Greater	1678	373
F	WV-061-005540-064	Mel Tennant	Northeast Natural Energy, LLC	12.5% or Greater	1680	656
F	WV-061-005540-038	Teri Jean Howard	Northeast Natural Energy, LLC	12.5% or Greater	1675	187
F	WV-061-005540-034	Carolyn A. Smith	Northeast Natural Energy, LLC	12.5% or Greater	1673	335

Tract	Lease Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book	Page
F	WV-061-005540-041	Loretta Lutsch	Northeast Natural Energy, LLC	12.5% or Greater	1675	193
F	WV-061-005540-018	Melissa R. Whitt	Northeast Natural Energy, LLC	12.5% or Greater	1666	95
F	WV-061-005540-031	John R. Novak	Northeast Natural Energy, LLC	12.5% or Greater	1673	329
F	WV-061-005540-044	David Williamson	Northeast Natural Energy, LLC	12.5% or Greater	1678	327
F	WV-061-005540-019	Judith Ann Waddell	Northeast Natural Energy, LLC	12.5% or Greater	1666	97
(F)	WV-061-005540-020	Bettie Louise Mancini	Northeast Natural Energy, LLC	12.5% or Greater	1671	352
F	WV-061-005540-030	Starlind Little	Northeast Natural Energy, LLC	12.5% or Greater	1671	356
F	WV-061-005540-021	Christina Hoskins	Northeast Natural Energy, LLC	12.5% or Greater	1665	768
F	WV-061-005540-028	Holly H. Huffstutler	Northeast Natural Energy, LLC	12.5% or Greater	1671	352
F	WV-061-005540-017	Amber Olliverio	Northeast Natural Energy, LLC	12.5% or Greater	1666	93
F	WV-061-005540-040	Patsy M. Head	Northeast Natural Energy, LLC	12.5% or Greater	1675	191
F	WV-061-005540-023	Patricia Heintzman	Northeast Natural Energy, LLC	12.5% or Greater	1670	126
F	WV-061-005540-004	Larry Gene Hoskins	Northeast Natural Energy, LLC	12.5% or Greater	1662	25
F	WV-061-005540-006	Lois Kay Ross	Northeast Natural Energy, LLC	12.5% or Greater	1662	743
F	WV-061-005540-007	Valerie D. Goodman	Northeast Natural Energy, LLC	12.5% or Greater	1662	745
F	WV-061-005540-015	Crystal L. Rossiter	Northeast Natural Energy, LLC	12.5% or Greater	1664	739
F	WV-061-005540-013	Richard M. Rossiter II	Northeast Natural Energy, LLC	12.5% or Greater	1664	735
F	WV-061-005540-012	Joyce Fetrow	Northeast Natural Energy, LLC	12.5% or Greater	1664	733
F	WV-061-005540-042	Barry F. Hoskins	Northeast Natural Energy, LLC	12.5% or Greater	1675	195
F	WV-061-005540-016	Marilyn Davis	Northeast Natural Energy, LLC	12.5% or Greater	1664	741
F	WV-061-005540-014	Barbara Schwartz	Northeast Natural Energy, LLC	12.5% or Greater	1664	737
F	WV-061-005540-058	Robyn Renee Hoskins	Northeast Natural Energy, LLC	12.5% or Greater	1679	363
F	WV-061-005540-067	Lisa Anne Hoskins Clark	Northeast Natural Energy, LLC	12.5% or Greater	1680	662
F	WV-061-005540-075	Christine Hoskins	Northeast Natural Energy, LLC	12.5% or Greater	1687	235
F	WV-061-005540-065	Kenneth Hoskins	Northeast Natural Energy, LLC	12.5% or Greater	1680	658
F	WV-061-005540-043	Ruth P. Hoskins Schuckert	Northeast Natural Energy, LLC	12.5% or Greater	1675	197
F	WV-061-005540-003	Wandalee F. Tipper	Northeast Natural Energy, LLC	12.5% or Greater	1662	23
F	WV-061-005540-049	Edward Herrnberger	Northeast Natural Energy, LLC	12.5% or Greater	1678	375
F	WV-061-005540-022	Rodney Ray Tipper	Northeast Natural Energy, LLC	12.5% or Greater	1665	770
F	WV-061-005540-011	Aaron Scott Tipper	Northeast Natural Energy, LLC	12.5% or Greater	1664	731
F	WV-061-005540-036	Joseph Dwain Tipper	Northeast Natural Energy, LLC	12.5% or Greater	1673	339
F	WV-061-005540-009	Toni K. Markowski	Northeast Natural Energy, LLC	12.5% or Greater	1662	749
F	WV-061-005540-010	Kimberly C. Keller	Northeast Natural Energy, LLC	12.5% or Greater	1662	751
F	WV-061-005540-008	Sandra K. Mitchell	Northeast Natural Energy, LLC	12.5% or Greater	1662	747 m
F	WV-061-005540-005	Larry Neil Gray	Northeast Natural Energy, LLC	12.5% or Greater	1662	
F	WV-061-005540-002	Leland Gray	Northeast Natural Energy, LLC	12.5% or Greater	1662	27 VIV J
F	WV-061-005540-001	Pamela Gray Coffman	Northeast Natural Energy, LLC	12.5% or Greater	1662	19 nepg 2
F	WV-061-005540-029	Judith Kay Webb	Northeast Natural Energy, LLC	12.5% or Greater	1671	354 = 3
F	WV-061-005540-037	William Rudolph Berdine	Northeast Natural Energy, LLC	12.5% or Greater	1673	341 2 3 0
F	WV-061-005540-039	Shirley Robertson	Northeast Natural Energy, LLC	12.5% or Greater	1675	189 0 2
G	WV-061-003860-001	Shuman, Inc.	Northeast Natural Energy, LLC	12.5% or Greater	1551	101 9
G	WV-061-005534-001	William K. Boylen	Northeast Natural Energy, LLC	12.5% or Greater	1658	704
G	WV-061-005332-001	CNX Gas Company LLC	Northeast Natural Energy, LLC	12.5% or Greater	1632	789
Н	WV-061-005466-001	CNX Gas Company LLC	Northeast Natural Energy, LLC	12.5% or Greater	1645	166

Tract	Lease Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book	Page
1	WV-061-003860-001	Shuman, Inc.	Northeast Natural Energy, LLC	12.5% or Greater	1551	101
1	WV-061-003769-004	Herbert E. Hamilton	Northeast Natural Energy, LLC	12.5% or Greater	1523	411
11	WV-061-003769-003	Jason P. Hamilton	Northeast Natural Energy, LLC	12.5% or Greater	1526	68
1	WV-061-003769-002	Britten E. Hamilton	Northeast Natural Energy, LLC	12.5% or Greater	1517	407
	WV-061-003769-001	John L. Hamilton	Northeast Natural Energy, LLC	12.5% or Greater	1517	419
1	WV-061-005270-001	Shuman, Inc.	Northeast Natural Energy, LLC	12,5% or Greater	1628	674
J	WV-061-003769-004	Herbert E. Hamilton	Northeast Natural Energy, LLC	12.5% or Greater	1554	463
1	WV-061-003769-003	Jason P. Hamilton	Northeast Natural Energy, LLC	12.5% or Greater	1554	473
1	WV-061-003769-002	Britten E. Hamilton	Northeast Natural Energy, LLC	12.5% or Greater	1564	558
J	WV-061-003769-001	John L. Hamilton	Northeast Natural Energy, LLC	12.5% or Greater	1517	419
K	WV-061-003680-002	Wilma Williams	Northeast Natural Energy, LLC	12.5% or Greater	1538	408
K	WV-061-003656-009	Adrian Kyle Wells II	Northeast Natural Energy, LLC	12.5% or Greater	1562	393
K	WV-061-003646-006	Brian Davis, a/k/a Brian E. Davis	Northeast Natural Energy, LLC	12.5% or Greater	1554	453
K	WV-061-003680-001	Charles A. Filbey	Northeast Natural Energy, LLC	12.5% or Greater	1538	294
K	WV-061-003698-004	Charles B. Davis a/k/a Charles	Northeast Natural Energy, LLC	12.5% or Greater	1555	366
K	WV-061-003861-001	Charles R. Miller	Northeast Natural Energy, LLC	12.5% or Greater	1553	124
K	WV-061-004072-004	Charlotta M. Simpson	Northeast Natural Energy, LLC	12.5% or Greater	1566	1
K	WV-061-003867-001	Cliff Wilson a/k/a Cliff Evan Wilson	Northeast Natural Energy, LLC	12.5% or Greater	1566	5
K	WV-061-004072-009	Conrad Tennant Jr.	Northeast Natural Energy, LLC	12.5% or Greater	1566	733
K	WV-061-003934-002	Daniel G. Dinius	Northeast Natural Energy, LLC	12.5% or Greater	1566	3
K	WV-061-003656-008	David Lee Wells	Northeast Natural Energy, LLC	12.5% or Greater	1562	395
К	WV-061-004072-008	David Nicholson	Northeast Natural Energy, LLC	12.5% or Greater	1566	696
K	WV-061-004072-002	Deborah A. Haught	Northeast Natural Energy, LLC	12.5% or Greater	1565	513
K	WV-061-004072-007	Diana S. Walsh	Northeast Natural Energy, LLC	12.5% or Greater	1566	741
K	WV-061-003861-002	Donald L. Miller	Northeast Natural Energy, LLC	12.5% or Greater	1564	223
K	WV-061-005628-001	Stone Hill Minerals Holdings, LLC	Northeast Natural Energy, LLC	12.5% or Greater	1693	230
K	WV-061-003646-002	Gary Filbey a/k/a Gary R. Filbey	Northeast Natural Energy, LLC	12.5% or Greater	1454	448
K	WV-061-003643-001	Gayle Moore	Northeast Natural Energy, LLC	12.5% or Greater	1538	264
K	WV-061-003646-001	Jack L, Yost	Northeast Natural Energy, LLC	12.5% or Greater	1536	620
K	WV-061-003757-001	James E. Kallas	Northeast Natural Energy, LLC	12.5% or Greater	1557	492
K	WV-061-004072-001	James Nicholson	Northeast Natural Energy, LLC	12.5% or Greater	1565	515
K	WV-061-005328-002	Janet D. Crabtree	Northeast Natural Energy, LLC		1635	
K	WV-061-003646-004	Janet L. McMillen	Northeast Natural Energy, LLC	12.5% or Greater 12.5% or Greater	1538	492 520
К	WV-061-004072-003	Jeffrey L. Nicholson				
K	WV-061-003656-006	Jerry Wayne Moore	Northeast Natural Energy, LLC Northeast Natural Energy, LLC	12.5% or Greater	1565	849 _m
K	WV-061-005349-001	Jo Statler	Northeast Natural Energy, LLC	12.5% or Greater 12.5% or Greater	1545	3405. W
K	WV-061-005328-001	John C. Jones	Northeast Natural Energy, LLC		1642	
К	WV-061-003934-001	John W. Stiegemeier	Northeast Natural Energy, LLC	12.5% or Greater	1635	490g-g
К	WV-061-003656-001	Joseph Anthony Haught	Northeast Natural Energy, LLC Northeast Natural Energy, LLC	12.5% or Greater	1568	109 6
К	WV-061-004072-005	Joseph B. Nicholson	Northeast Natural Energy, LLC Northeast Natural Energy, LLC	12.5% or Greater	1539	4755 20 5140 20
К	WV-061-003694-002	Judy Rose		12.5% or Greater	1565	518 0 2
K	WV-061-003698-001		Northeast Natural Energy, LLC	12.5% or Greater	1539	3/5
K	WV-061-003656-010	Larry Rush	Northeast Natural Energy, LLC	12.5% or Greater	1538	268
K	WV-061-003697-002	Lelia kimberly Wells Fournet	Northeast Natural Energy, LLC	12.5% or Greater	1566	723
IX.	** *-001-002037-002	Linda L. Barker	Northeast Natural Energy, LLC	12.5% or Greater	1564	564

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K	WV-061-004072-006	Linda Lee Brown	Northeast Natural Energy, LLC	12.5% or Greater	1566	333
K	WV-061-005328-004	Loruma B. Brokaw	Northeast Natural Energy, LLC	12.5% or Greater	1636	227
K	WV-061-003747-001	Mabel Cummins	Northeast Natural Energy, LLC	12.5% or Greater	1542	98
K	WV-061-003694-001	Malorie Jane Evans	Northeast Natural Energy, LLC	12.5% or Greater	1539	39
K	WV-061-003984-001	Marilyn Moore	Northeast Natural Energy, LLC	12.5% or Greater	1565	519
K	WV-061-003680-003	Mark Tennant	Northeast Natural Energy, LLC	12.5% or Greater	1566	735
K	WV-061-003656-002	Mary V. Cole	Northeast Natural Energy, LLC	12.5% or Greater	1538	584
K	WV-061-003656-007	Olivia Keth Wells Sullivan	Northeast Natural Energy, LLC	12.5% or Greater	1566	743
K	WV-061-005372-001	Randall E. Dinius	Northeast Natural Energy, LLC	12.5% or Greater	1637	593
K	WV-061-003697-006	Rhonda E. Taylor	Northeast Natural Energy, LLC	12.5% or Greater	1564	568
K	WV-061-003646-003	Richard L. Filbey	Northeast Natural Energy, LLC	12.5% or Greater	1550	308
K	WV-061-003656-004	Richard Lane Moore	Northeast Natural Energy, LLC	12.5% or Greater	1547	830
K	WV-061-004702-001	Robert C. Filbey	Northeast Natural Energy, LLC	12.5% or Greater	1605	317
K	WV-061-003697-004	Robert D. Gump	Northeast Natural Energy, LLC	12.5% or Greater	1560	123
K	WV-061-003656-003	Robert Lynn Moore	Northeast Natural Energy, LLC	12.5% or Greater	1545	478
K	WV-061-003698-003	Russle D. Yost	Northeast Natural Energy, LLC	12.5% or Greater	1560	266
K	WV-061-003850-001	Shirley Marlene Hollandsworth	Northeast Natural Energy, LLC	12.5% or Greater	1563	127
K	WV-061-005547-001	Stephen A. Jones	Northeast Natural Energy, LLC	12.5% or Greater	1662	755
K	WV-061-003656-005	Susan Gail Moore	Northeast Natural Energy, LLC	12.5% or Greater	1545	342
К	WV-061-003680-005	Susan L. James	Northeast Natural Energy, LLC	12.5% or Greater	1565	511
K	WV-061-003697-005	Susan R. Edwards	Northeast Natural Energy, LLC	12.5% or Greater	1564	547
K	WV-061-003698-002	Tana Butler	Northeast Natural Energy, LLC	12.5% or Greater	1539	339
K	WV-061-005328-003	Thomas D. Jones	Northeast Natural Energy, LLC	12.5% or Greater	1636	217
K	WV-061-003680-007	Todd Rupert	Northeast Natural Energy, LLC	12.5% or Greater	1641	320
K	WV-061-005328-005	Trisha McGill	Northeast Natural Energy, LLC	12.5% or Greater	1638	642
L	WV-061-003414-006	Steven Burl Britvec	Northeast Natural Energy LLC	12.5% or Greater	1628	311
L	WV-061-003414-008	Mary Ann Raley	Northeast Natural Energy LLC	12.5% or Greater	1628	315
L.	WV-061-003414-007	Barbara Kay Brookover	Northeast Natural Energy LLC	12.5% or Greater	1628	313
1.	WV-061-003414-013	David Marko	Northeast Natural Energy LLC	12.5% or Greater	1517	30
L	WV-061-003414-010	Krista Burke	Northeast Natural Energy LLC	12.5% or Greater	1687	592
M	WV-061-004066-001	William L. Tennant	Northeast Natural Energy LLC	12.5% or Greater	1563	773
M	WV-061-001756-029	Lindsay John Tennant	Northeast Natural Energy LLC	12.5% or Greater	1687	186
M	WV-061-004066-002	Jesse Thomas Tennant Jr.	Northeast Natural Energy LLC	12.5% or Greater	1563	83
M	WV-061-001756-026	Herbert Earl Hamilton	Northeast Natural Energy LLC	12.5% or Greater	1679	23611
M		Susan Rose Price	Northeast Natural Energy LLC	12.5% or Greater	1397	523€ ≶ ∟
M	WV-061-001756-020	David L. and Susan Rose Price,	Northeast Natural Energy LLC	12.5% or Greater	1612	52% L
М	WV-061-005412-003	Betty Louise Tennant	Northeast Natural Energy LLC	12.5% or Greater	1643	3249 %
M	WV-061-001756-022	Rosemary M. Saunders	Northeast Natural Energy LLC	12.5% or Greater	1675	1712 6
М	WV-061-001756-028	Georgia Ellen Tennant a/k/a	Northeast Natural Energy LLC	12.5% or Greater	1687	1845 20
M	WV-061-001756-021	Jesse Martin Tennant	Northeast Natural Energy LLC	12.5% or Greater	1673	2728 0
M	WV-061-001756-027	Robert D. Kerns	Northeast Natural Energy LLC	12.5% or Greater	1681	6719
M	WV-061-004066-006	Brandi Rubeshaw	Northeast Natural Energy LLC	12.5% or Greater	1564	145
М	WV-061-005412-004	James Paul Rush	Northeast Natural Energy LLC	12.5% or Greater	1564	34
М	WV-061-001756-024	Nancy Joe Wilson Dille	Northeast Natural Energy LLC	12.5% or Greater	1678	271

Tract	Lease Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book	Page
M	WV-061-001756-025	Amber Lou Wilson Kavlick	Northeast Natural Energy LLC	12.5% or Greater	1678	273
M	WV-061-001756-023	Amanda Jo Wilson Tennant	Northeast Natural Energy LLC	12.5% or Greater	1678	269
M	WV-061-003969-003	Steven Burl Britvec	Northeast Natural Energy LLC	12.5% or Greater	1562	414
М	WV-061-003969-002	Mary Ann Raley	Northeast Natural Energy LLC	12.5% or Greater	1564	40
M	WV-061-003989-001	Barbara Kay Brookover	Northeast Natural Energy LLC	12.5% or Greater	1564	321
M	WV-061-003969-004	David Marko	Northeast Natural Energy LLC	12.5% or Greater	1564	545
M	WV-061-003969-001	Krista Burke	Northeast Natural Energy LLC	12.5% or Greater	1564	562
N	WV-061-003539-003	Charles Edward Bennett Jr.	Northeast Natural Energy LLC	12.5% or Greater	1538	348
N	WV-061-003539-012	Georgia Ellen Tennant a/k/a	Northeast Natural Energy LLC	12.5% or Greater	1684	434
N	WV-061-003539-004	Amy Lynn Trickett	Northeast Natural Energy LLC	12.5% or Greater	1568	246
N	WV-061-002472-004	Daniel M. Copeland	Northeast Natural Energy LLC	12.5% or Greater	1427	190
N	WV-061-002472-002	Jimmie Dell Copeland	Northeast Natural Energy LLC	12.5% or Greater	1427	130
N	WV-061-003539-006	John Max Copeland III	Northeast Natural Energy LLC	12.5% or Greater	1641	314
N	WV-061-002472-005	Mary. L Copeland	Northeast Natural Energy LLC	12.5% or Greater	1425	682
N	WV-061-002472-001	Robert Lyle Copeland	Northeast Natural Energy LLC	12.5% or Greater	1426	117
N	WV-061-001552-020	Janie Louis Gram	Northeast Natural Energy LLC	12.5% or Greater	1635	528
N	WV-061-003539-007	Deborah S. Hayhurt	Northeast Natural Energy LLC	12.5% or Greater	1647	23
N	WV-061-001552-018	Judy Ann Heston	Northeast Natural Energy LLC	12.5% or Greater	1630	187
N	WV-061-001552-021	Denzil Ray Hibbs	Northeast Natural Energy LLC	12.5% or Greater	1647	11
N	WV-061-001552-019	Donnie Fay Hibbs	Northeast Natural Energy LLC	12.5% or Greater	1635	340
N	WV-061-001552-023	John W. Higgins	Northeast Natural Energy LLC	12.5% or Greater	1647	15
N	WV-061-001552-012;	Paula E. Higgins	Northeast Natural Energy LLC	12.5% or Greater	1395	96
N	WV-061-001552-022	Mary L. Ogawa	Northeast Natural Energy LLC	12.5% or Greater	1647	13
N	WV-061-002479-001	Ruby Jane Simpson	Northeast Natural Energy LLC	12.5% or Greater	1426	777
N	WV-061-003539-005	Joan Sinclair	Northeast Natural Energy LLC	12.5% or Greater	1641	312
N	WV-061-003539-013	Robin Delgado	Northeast Natural Energy LLC	12.5% or Greater	140	371
N	WV-061-003539-009	Cristy Acree	Northeast Natural Energy LLC	12.5% or Greater	139	448
N	WV-061-003539-014	Brandon Stokes	Northeast Natural Energy LLC	12.5% or Greater	140	375
N	WV-061-003539-008	Bradley Stokes	Northeast Natural Energy LLC	12.5% or Greater	1671	366
N	WV-061-003539-011	Jesse Thomas Tennant Jr.	Northeast Natural Energy LLC	12.5% or Greater	1684	432
N	WV-061-003539-010	Lindsay J. Tennant	Northeast Natural Energy LLC	12.5% or Greater	1684	430
N	WV-061-001552-017	William L. Tennant	Northeast Natural Energy LLC	12.5% or Greater	1568	248
N	WV-061-001552-024	Sarah E. Thompson	Northeast Natural Energy LLC	12.5% or Greater	1650	66
N	WV-061-005629-001	Mary Lou Verbosky	Northeast Natural Energy LLC	12.5% or Greater	1557	501
N	WV-061-005145-001	Ruth Ann Burns	Northeast Natural Energy LLC	12.5% or Greater	1620	88
0	WV-061-005145-002	Nancy B. Lawler	Northeast Natural Energy LLC	12.5% or Greater	1620	90 म
0	WV-061-005244-001	Burns Family General Partnership	Northeast Natural Energy LLC	12.5% or Greater	1627	2
0	WV-061-005244-004	Franciscan Monastery USA, Inc.	Northeast Natural Energy LLC	12.5% or Greater	1661	534 RW JAN
0	WV-061-005244-006	Mike Ross, Inc.	Northeast Natural Energy LLC	12.5% or Greater	1681	729 nepa 2
0	WV-061-005244-005	Waco Oil and Gas, Inc.	Northeast Natural Energy LLC	12.5% or Greater	1679	288 75 55
0	WV-061-005244-007	David Marko	Northeast Natural Energy LLC	12.5% or Greater	1694	200
0	WV-061-002337-006	American Mineral Holdings, LLC	Northeast Natural Energy LLC	12.5% or Greater	1682	622 OZ1
0	WV-061-002337-004	Stephen Tennant	Northeast Natural Energy LLC	12.5% or Greater	1422	465
0	WV-061-005145-008	Steven Burl Britvec	Northeast Natural Energy LLC	12.5% or Greater	1645	244

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0	WV-061-005145-009	Mary Ann Raley	Northeast Natural Energy LLC	12.5% or Greater	1645	246
0	WV-061-005145-010	Barbara Kay Brookover	Northeast Natural Energy LLC	12.5% or Greater	1645	248
0	WV-061-005145-011	Nancy Jo Wilson	Northeast Natural Energy LLC	12.5% or Greater	1652	243
0	WV-061-005145-012	Amber Lou Wilson	Northeast Natural Energy LLC	12.5% or Greater	1652	245
0	WV-061-005145-013	Amanda Jo Wilson	Northeast Natural Energy LLC	12.5% or Greater	1652	247
0	WV-061-005145-005	Krista Burke	Northeast Natural Energy LLC	12.5% or Greater	1637	746
0	WV-061-005145-007	Rosemary M. Saunders	Northeast Natural Energy LLC	12.5% or Greater	1643	129
0	WV-061-002337-005	Jesse Martin Tennant	Northeast Natural Energy LLC	12.5% or Greater	1456	609
0	WV-061-004841-001	Herbert E. Hamilton	Northeast Natural Energy LLC	12.5% or Greater	1612	189
0	WV-061-004784-001	Susan Price	Northeast Natural Energy LLC	12.5% or Greater	1607	634
0	WV-061-004784-001	David Price and Susan R. Price	Northeast Natural Energy LLC	12.5% or Greater	1607	634
0	WV-061-002467-002	Lindsay J. Tennant	Northeast Natural Energy LLC	12.5% or Greater	1421	389
0	WV-061-004710-003	Brandi Rubeshaw	Northeast Natural Energy LLC	12.5% or Greater	1605	522
0	WV-061-004710-007	James Paul Rush	Northeast Natural Energy LLC	12.5% or Greater	1612	140
0	WV-061-005342-001	Robert D. Kerns	Northeast Natural Energy LLC	12.5% or Greater	1636	235
0	WV-061-005145-004	Virginia Tennant	Northeast Natural Energy LLC	12.5% or Greater	1628	515
0	WV-061-005145-003	Jane C. Vieweg	Northeast Natural Energy LLC	12.5% or Greater	1623	137
0	WV-061-002566-001	SIERS, ROSE	Chesapeake Appalachia, L.L.C.	12.5% or Greater	1429	711
P		Chesapeake Appalachia, L.L.C.	Northeast Natural Energy LLC		120	769
Р	WV-061-002332-015	TENNANT, EDWARD	Chesapeake Appalachia, L.L.C.	12.5% or Greater	1422	517
P		Chesapeake Appalachia, L.L.C.	Northeast Natural Energy LLC		120	769
Р	WV-061-002332-014	TENNANT, STEPHEN	Chesapeake Appalachia, L.L.C.	12.5% or Greater	1422	521
Р		Chesapeake Appalachia, L.L.C.	Northeast Natural Energy LLC		120	769
P	WV-061-004152-001	BUTCHER, RICHAR	Northeast Natural Energy LLC	12.5% or Greater	1579	584
Р	WV-061-002332-013	TENNANT, DELILA	Chesapeake Appalachia, L.L.C.	12.5% or Greater	120	769
Р		Chesapeake Appalachia, L.L.C.	Northeast Natural Energy LLC		120	769
P	WV-061-002332-020	TENNANT, RUSSEL	Northeast Natural Energy LLC	12.5% or Greater	1612	626
Р	WV-061-002332-019	VARNER, GERALDI	Northeast Natural Energy LLC	12.5% or Greater	1613	316
P	WV-061-002332-035	TROY, JENNIFER	Northeast Natural Energy LLC	12.5% or Greater	1660	392
P	WV-061-002332-036	TROY, VERNON	Northeast Natural Energy LLC	12.5% or Greater	1671	358
Р	WV-061-002332-028	TAYLOR, HOPE L.	Northeast Natural Energy LLC	12.5% or Greater	1628	391
P	WV-061-002332-029	ROBEY, JASON D	Northeast Natural Energy LLC	12.5% or Greater	1628	393
Р	WV-061-002332-021	WHITE, LISA D.	Northeast Natural Energy LLC	12.5% or Greater	1620	469
Р	WV-061-002332-032	ROBEY, ROBERT B	Northeast Natural Energy LLC	12.5% or Greater	1630	191
Р	WV-061-004153-001	BRUMMAGE, TERRY	Northeast Natural Energy LLC	12.5% or Greater	1579	58€
Р	WV-061-002566-002	TENNANT, BERNIC	Chesapeake Appalachia, L.L.C.	12.5% or Greater	1426	
Р		Chesapeake Appalachia, L.L.C.	Northeast Natural Energy LLC		120	76 A 6
Р	WV-061-002332-008	SIERS, RICHARD	Chesapeake Appalachia, L.L.C.	12.5% or Greater	1425	1748 N
Р		Chesapeake Appalachia, L.L.C.	Northeast Natural Energy LLC		120	JAN 2 6 20
Р	WV-061-002332-009	GABELMAN, JANET	Chesapeake Appalachia, L.L.C.	12.5% or Greater	1425	1709 20 30
Р		Chesapeake Appalachia, L.L.C.	Northeast Natural Energy LLC		120	768 2 G
Р	WV-061-002332-011	FLINT, RONALD	Chesapeake Appalachia, L.L.C.	12.5% or Greater	1425	169
Р		Chesapeake Appalachia, L.L.C.	Northeast Natural Energy LLC	200000000000000000000000000000000000000	120	769
Р	WV-061-002332-010	BESS, BARBARA	Chesapeake Appalachia, L.L.C.	12.5% or Greater	1425	166

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Р		Chesapeake Appalachia, L.L.C.	Northeast Natural Energy LLC		120	769
Р	WV-061-002332-017	RILEY, JUDY K.	Northeast Natural Energy LLC	12.5% or Greater	1605	674
Р	WV-061-002332-018	TENNANT, DANIEL	Northeast Natural Energy LLC	12.5% or Greater	1605	676
P	WV-061-002332-005	TENNANT, DAVID	Chesapeake Appalachia, L.L.C.	12.5% or Greater	1407	308
Р		Chesapeake Appalachia, L.L.C.	Northeast Natural Energy LLC		120	769
P	WV-061-002332-007	TENNANT, JERRY	Chesapeake Appalachia, L.L.C.	12.5% or Greater	1425	307
Р		Chesapeake Appalachia, L.L.C.	Northeast Natural Energy LLC		120	769
P	WV-061-002332-006	TENNANT, FLOYD	Chesapeake Appalachia, L.L.C.	12.5% or Greater	1454	702
Р		Chesapeake Appalachia, L.L.C.	Northeast Natural Energy LLC		120	769
Р	WV-061-002332-012	MOORE, RUBY & R	Chesapeake Appalachia, L.L.C.	12.5% or Greater	1421	355
Р		Chesapeake Appalachia, L.L.C.	Northeast Natural Energy LLC		120	769
Р	WV-061-002514-001	FRANCIS, SANDRA	Chesapeake Appalachia, L.L.C.	12.5% or Greater	1415	849
Р		Chesapeake Appalachia, L.L.C.	Northeast Natural Energy LLC		120	769
Р	WV-061-002332-022	TENNANT, EDGAR	Northeast Natural Energy LLC	12.5% or Greater	1623	1
P	WV-061-002332-025	TENNANT, WILLIA	Northeast Natural Energy LLC	12.5% or Greater	1628	385
Р	WV-061-002332-034	TENNANT, LLOYD	Northeast Natural Energy LLC	12.5% or Greater	1638	484
Р	WV-061-002332-030	HARRIS, LOUISE	Northeast Natural Energy LLC	12.5% or Greater	1628	395
Р	WV-061-002332-031	ATHEY, SHELBY	Northeast Natural Energy LLC	12.5% or Greater	1634	494
Р	WV-061-002332-027	ATHEY, DESTINY	Northeast Natural Energy LLC	12.5% or Greater	1628	389
Р	WV-061-002332-026	JEWELL, DAWN ET	Northeast Natural Energy LLC	12.5% or Greater	1628	387
Р	WV-061-002332-023	WILSON, LYNETTE	Northeast Natural Energy LLC	12.5% or Greater	1623	3
Р	WV-061-002332-024	TENNANT, DOUGLA	Northeast Natural Energy LLC	12.5% or Greater	1623	5
Р	WV-061-001052-002	YOST HERITAGE	Northeast Natural Energy LLC	12.5% or Greater	1670	16
Q	WV-061-003457-001	MM-MARCELLUS II	Northeast Natural Energy LLC	12.5% or Greater	1513	613
R	WV-061-005416-001	H3 LLC	Northeast Natural Energy LLC	12.5% or Greater	1641	432
R	WV-061-005127-001	KILLIMAYER, JOSEPH	Northeast Natural Energy LLC	12.5% or Greater	1629	788
R	WV-061-003457-003	FORTUNE DEVELOP	Northeast Natural Energy LLC	12.5% or Greater	1613	329
R	WV-061-004661-002	SHRINERS HOSPITAL	Northeast Natural Energy LLC	12.5% or Greater	136	40
R	WV-061-003457-002	THORNE, JAMES E	Northeast Natural Energy LLC	12.5% or Greater	1605	591
R	WV-061-004621-001	WESTHAWK MINERALS	Gulfport Energy Corporation	12.5% or Greater	1595	73
R		Gulfport Energy Corporation	Northeast Natural Energy LLC		134	217
R	WV-061-003457-001	MM-MARCELLUS II	Northeast Natural Energy LLC	12.5% or Greater	1513	613
S	WV-061-005416-001	H3 LLC	Northeast Natural Energy LLC	12.5% or Greater	1641	432
S	WV-061-005127-001	KILLIMAYER, JOSEPH	Northeast Natural Energy LLC	12.5% or Greater	1629	788
S	WV-061-003457-003	FORTUNE DEVELOP	Northeast Natural Energy LLC	12.5% or Greater	1613	329
5	WV-061-004661-002	SHRINERS HOSPITAL	Northeast Natural Energy LLC	12.5% or Greater	136	40€.<
S	WV-061-003457-002	THORNE, JAMES E	Northeast Natural Energy LLC	12.5% or Greater	1605	40. V AN
S	WV-061-004621-001	WESTHAWK MINERALS	Gulfport Energy Corporation	12.5% or Greater	1595	73@p
S		Gulfport Energy Corporation	Northeast Natural Energy LLC		134	2125 6
S	WV-061-003457-001	MM-MARCELLUS II	Northeast Natural Energy LLC	12.5% or Greater	1513	613 8
T	WV-061-005416-001	H3 LLC	Northeast Natural Energy LLC	12.5% or Greater	1641	43200 2 6
T	WV-061-005127-001	KILLIMAYER, JOSEPH	Northeast Natural Energy LLC	12.5% or Greater	1629	7880
T	WV-061-003457-003	FORTUNE DEVELOP	Northeast Natural Energy LLC	12.5% or Greater	1613	329
J	WV-061-004661-002	SHRINERS HOSPITAL	Northeast Natural Energy LLC	12.5% or Greater	136	40

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T	WV-061-003457-002	THORNE, JAMES E	Northeast Natural Energy LLC	12.5% or Greater	1605	591
T	WV-061-004621-001	WESTHAWK MINERALS	Gulfport Energy Corporation	12.5% or Greater	1595	73
T		Gulfport Energy Corporation	Northeast Natural Energy LLC		134	217
T	WV-061-003566-001	HUMPHREY, CATHERINE	Northeast Natural Energy LLC	12.5% or Greater	1551	44
U	WV-061-003925-001	TENNANT, EDNA J	Northeast Natural Energy LLC	12.5% or Greater	1566	77
U	WV-061-003925-002	KERR, JANET R.	Northeast Natural Energy LLC	12.5% or Greater	1565	678
U	WV-061-003925-003	LIMING, DAVID L	Northeast Natural Energy LLC	12.5% or Greater	1564	410
U	WV-061-002854-001	HOWARD, DONNA L	Chesapeake Appalachia, L.L.C.	12.5% or Greater	1425	363
Ü		Chesapeake Appalachia, L.L.C.	Northeast Natural Energy LLC		120	769
U	WV-061-003909-001	SHUMAN, INC.	Northeast Natural Energy LLC	12.5% or Greater	1564	404
U	WV-061-005316-001	GOODWIN, RONALD	Northeast Natural Energy LLC	12.5% or Greater	1638	637
U	WV-061-004348-001	MICHAEL, WILLIAM	Northeast Natural Energy LLC	12.5% or Greater	1575	706
V	WV-061-004348-002	KENNEDY, ASEL	Northeast Natural Energy LLC	12.5% or Greater	1588	706
٧ .	WV-061-004246-001	KNISLEY, WILLIAM	Northeast Natural Energy LLC	12.5% or Greater	1569	211
W	WV-061-003749-001	COSNER, SHEILA	Northeast Natural Energy LLC	12.5% or Greater	1554	689
X	WV-061-003749-002	EDDY, RONALD L	Northeast Natural Energy LLC	12.5% or Greater	1558	827
X	WV-061-004696-001	RAIKES, CHARLES	Northeast Natural Energy LLC	12.5% or Greater	1605	310
X	- WV-061-003749-001	COSNER, SHEILA	Northeast Natural Energy LLC	12.5% or Greater	1554	689
Υ	WV-061-003749-002	EDDY, RONALD L	Northeast Natural Energy LLC	12.5% or Greater	1558	827
γ	WV-061-004696-001	RAIKES, CHARLES	Northeast Natural Energy LLC	12.5% or Greater	1605	310
Υ .	WV-061-003015-007	MEREDITH, ALEDA	Northeast Natural Energy LLC	12,5% or Greater	1558	825
Z	WV-061-003015-012	COLOSINO, BONNIE	Northeast Natural Energy LLC	12.5% or Greater	1568	1
Z	WV-061-003015-022	ROGERS, DAVID L	Northeast Natural Energy LLC	12.5% or Greater	1566	100
Z	WV-061-003015-020	ROGERS, DEBRA L	Northeast Natural Energy LLC	12.5% or Greater	1559	160
Z	WV-061-003015-021	HOVATTER, DONNA	Northeast Natural Energy LLC	12.5% or Greater	1559	162
Z	WV-061-005558-001	LEONIDAS PROPERTIES LLC	LOLA DRILLING I LLC	12.5% or Greater	1564	425
Z		LOLA DRILLING I LLC	RICE ENERGY	19070400	133	752
		RICE ENERGY	EQT	*See SEC MERGER	https://www.sec.gov 38/0001104	//Archives/edgar/data/1588 465917068001/a17- 3_3posasr.htm
		EQT	Northeast Natural Energy LLC		139	668
	WV-061-003015-006	WALKER, JOHN	Northeast Natural Energy LLC	12.5% or Greater	1564	339
Z	WV-061-003015-013	BARTOLINA, KAREN	Northeast Natural Energy LLC	12.5% or Greater	1552	442
Z	WV-061-003015-026	KEENER, KATHY A	Northeast Natural Energy LLC	12.5% or Greater	1552	438
Z	WV-061-003015-005	RUNION, LEWIS	Northeast Natural Energy LLC	12.5% or Greater	1564	341 页
Z	WV-061-003015-028	REED, LISA GAY	Northeast Natural Energy LLC	12.5% or Greater	1565	-
Z	WV-061-003015-016	WALKER, MARY	Northeast Natural Energy LLC	12.5% or Greater	1564	293 RW AN
Z	WV-061-003015-029	BORN, NANCY L	Northeast Natural Energy LLC	12.5% or Greater	1567	
Z	WV-061-003015-023	ROGERS, RANDY L	Northeast Natural Energy LLC	12.5% or Greater	1551	844 ental P
Z	WV-061-003015-017	ROGERS, RODNEY	Northeast Natural Energy LLC	12.5% or Greater	1551	211 65 0
Z	WV-061-003015-014	TENNANT, SHARON	Northeast Natural Energy LLC	12.5% or Greater	1551	205 99
Z	WV-061-003015-024	RODGERS, SHELIA	Northeast Natural Energy LLC	12.5% or Greater	1564	721 9
Z	WV-061-003015-010	WALKER, STANLEY	Northeast Natural Energy LLC	12.5% or Greater	1573	186
Z	WV-061-003015-019	BROWN, SUSAN JANE	Northeast Natural Energy LLC	12.5% or Greater	1552	349

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Z	WV-061-003015-015	ANGELONE, WILDA	Northeast Natural Energy LLC	12.5% or Greater	1551	215
Z	WV-061-003015-008	WALKER, WM D JR	Northeast Natural Energy LLC	12.5% or Greater	1558	823
Z	WV-061-003015-025	ROGERS, WILLIAM	Northeast Natural Energy LLC	12.5% or Greater	1559	166
Z	WV-061-003015-011	MICHAEL, WINNIE	Northeast Natural Energy LLC	12.5% or Greater	1551	201
Z	WV-061-004125-001	MATTERN, JAMES	Northeast Natural Energy LLC	12.5% or Greater	1563	615
Z	WV-061-003015-027	TENNANT, MINERVA	Northeast Natural Energy LLC	12.5% or Greater	1551	207