



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

Monday, December 9, 2019
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

HG ENERGY II APPALACHIA, LLC
5260 DUPONT ROAD
PARKERSBURG, WV 26101


Re: Permit Modification Approval for NAYS 1209 N-2H
47-033-05935-00-00

Increase lateral spacing from 1000' to 1500'. Total measured depth change 20911' to 23267'

HG ENERGY II APPALACHIA, 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: NAYS 1209 N-2H
Farm Name: HG ENERGY II APPALACHIA, LLC
U.S. WELL NUMBER: 47-033-05935-00-00
Horizontal 6A New Drill
Date Modification Issued: 12/09/2019

Promoting a healthy environment.

WW-6B
(04/15)

API NO. 47- 033 - 05935 MOO
OPERATOR WELL NO, Nays 1209 N-2H
Well Pad Name: Nays 1209

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

1) Well Operator: HG Energy II Appalachia, LLC 494519932 Harrison Union West Milford 7.5'
Operator ID County District Quadrangle

2) Operator's Well Number: Nays 1209 N-2H Well Pad Name: Nays 1209

3) Farm Name/Surface Owner: Nays / HG Energy II Appalachia Public Road Access: Kincheloe Run Rd/SLS 35

4) Elevation, current ground: 1002' Elevation, proposed post-construction: 1007'

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 at 6863'/6914' and 51' in thickness. Anticipated pressure at 4314#.

*SDW
9/24/2019*

8) Proposed Total Vertical Depth: 6900'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 23,267'

11) Proposed Horizontal Leg Length: 15,801'

12) Approximate Fresh Water Strata Depths: 135', 500'

13) Method to Determine Fresh Water Depths: Nearest offset well data

14) Approximate Saltwater Depths: None noted in offsets

15) Approximate Coal Seam Depths: 660' to 665'

16) Approximate Depth to Possible Void (coal mine, karst, other): None

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: _____
Depth: _____
Seam: _____
Owner: _____

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WW-6B
(04/15)

API NO. 47- _____ - _____
 OPERATOR WELL NO. Nays 1209 N-2H
 Well Pad Name: Nays 1209

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 - 1st	36"	New	LS	195.36	100'	100'	Drilled In
Fresh Water	20"	NEW	J-55	94	600'	600'	40% excess yield = 1.20, CTS
Coal	13 3/8"	NEW	J-55	68	1735'	1735'	40% excess yield = 1.20, CTS
Intermediate	9 5/8"	NEW	J-55	40	2500'	2500'	40% excess yield Lead/ 0% Excess Yield
Production	5 1/2"	NEW	P-110	23	23267'	23267'	20% excess yield = 1.15, tail yield = 1.05
Tubing							
Liners							

*SDW
2/20/2019*

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	30"	30"	.500				CTS
Fresh Water	20"	24"	.438	2110	1200	Type 1, Class A	30 % excess yield = 1.20, CTS
Coal	13 3/8"	17 1/2"	.480	3450		Type 1/Class A	40% excess yield = 1.20, CTS
Intermediate	9 5/8"	12 1/4"	.395	3950		Type 1/Class A	40% excess yield = 0% Excess Lead
Production	5 1/2"	8 1/2"	.415	14520	12500	Type 1/Class A	20% excess yield = 1.10, tail yield = 1.05
Tubing							
Liners							

PACKERS

Kind:				
Sizes:				
Depths Set:				

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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 - 1st	36"	New	LS	195.36	100'	100'	Drilled In
Fresh Water	20"	NEW	J-55	94	600'	600'	40% excess yield = 1.20, CTS
Coal	13 3/8"	NEW	J-55	68	1735'	1735'	40% excess yield = 1.20, CTS
Intermediate	9 5/8"	NEW	J-55	40	2500'	2500'	40% excess yield Lead/ 0% Excess Tail
Production	5 1/2"	NEW	P-110	23	23267'	23267'	20% excess yield = 1.19, tail yield = 1.19
Tubing							
Liners							

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	30"	30"	.500				CTS
Fresh Water	20"	24"	.438	2110	1200	Type 1, Class A	30 % excess yield = 1.20, CTS
Coal	13 3/8"	17 1/2"	.480	3450		Type 1/Class A	40% excess yield = 1.20, CTS
Intermediate	9 5/8"	12 1/4"	.395	3950		Type 1/Class A	40% excess yield = 0% Excess Lead, 40%
Production	5 1/2"	8 1/2"	.415	14520	12500	Type 1/Class A	20% excess yield = 1.19, tail yield 1.19
Tubing							
Liners							

PACKERS

Kind:				
Sizes:				
Depths Set:				

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

Drill the vertical depth to the Marcellus at an estimated total vertical depth of approximately 6900 feet. Drill horizontal leg to estimated 15801' TMD, stimulate and be capable of producing from the Marcellus Formation. Should we encounter an unanticipated void in the coal, we will install a minimum of 20' of casing below the void but not more than 100' below the void, set a basket and grout to surface.

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

The stimulation will be completed with multiple stages divided over the lateral length of the well. Stage spacing is dependent upon engineering design. Slickwater fracturing technique will be utilized on each stage using sand, water, and chemicals. See attached list. Maximum pressure not to exceed 12,500 psi.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 16.148 acres

22) Area to be disturbed for well pad only, less access road (acres): 10.834 acres

23) Describe centralizer placement for each casing string:

No centralizers will be used with conductor casing.
Freshwater - centralized every 3 joints to surface.
Coal - Bow Spring on every joint.
Intermediate - Bow Spring on first 2 joints then every third joint to 100' from surface.
Production - Run 1 spiral centralizer every 5 joints from the top of the curve to surface. Run 1 spiral centralizer every 3 joints from the 1st 5.5' long joint to the top of the curve.

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

Conductor -NA, Casing to be drilled in w/ Dual Rotary Rig.
Fresh Water - 15.6 ppg PNE-1 + 3% bwoc CaCl₂, 40% Excess Yield = 1.20, CTS
Coal - Lead: 15.4 ppg PNE-1 + 2.5% bwoc CaCl₂, 40% Excess / Tail: 15.9 ppg PNE-1 + 2.5% bwoc CaCl₂ zero% Excess, CTS
Intermediate - Lead: 15.4 ppg PNE-1 + 2.5% bwoc CaCl₂, 40% Excess, Tail: 15.9 ppg, PNE-1 + 2.5% bwoc CaCl₂ zero% Excess, CTS
Production - Lead: 14.5 ppg POZ:PNE-1 + 0.3% bwoc R3 + 1% bwoc EC1 + 0.75 gal/sk FP13L + 0.3% bwoc MPA170, Tail: 14.8 ppg PNE-1 + 0.35% bwoc R3 + 0.75 gal/sk FP13L + 50% bwoc ASCA1 + 0.5% bwoc MPA17020% Excess/Lead Yield=1.19, Tail Yield=1.94, CTS

25) Proposed borehole conditioning procedures:

Conductor - Ensure the hole is clean at TD.
Fresh Water - Once casing is at setting depth, circulate a minimum of one hole volume with Fresh Water prior to pumping cement.
Coal - Once casing is at setting depth, Circulate and condition at TD. Circulate a minimum of one hole volume prior to pumping cement.
Intermediate - Once casing is at setting depth, Circulate and condition mud at TD. Circulate a minimum of one hole volume prior to pumping cement.
Production - Once on bottom/TD with casing, circulate at max allowable pump rate for at least 2x bottoms up, or until returns and pump pressures indicate the hole is clean. Circulate a minimum of one hole volume prior to pumping cement.

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*Note: Attach additional sheets as needed.



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1209 N-2H
Marcellus Shale Horizontal
Harrison County, WV

				1209 N-2H SHL				237364.97N 1732373.55E					
Ground Elevation		1007'		1209 N-2H LP				238160.77N 1733273.82E					
Azm		341.493°		1209 N-2H BHL				253144.12N 1728258.32E					
WELLBORE DIAGRAM		HOLE	CASING	GEOLOGY	TOP	BASE	MUD	CEMENT	CENTRALIZERS	CONDITIONING	COMMENTS		
X	X	30"	30" 157.5# LS	Conductor	0	100	AIR	N/A, Casing to be drilled in w/ Dual Rotary Rig	N/A	Ensure the hole is clean at TD.	Conductor casing = 0.5" wall thickness		
X	X	24"	20" 94# J-55	Fresh Water	0	135	AIR	15.6 ppg PNE-1 + 3% bwoc CaCl 40% Excess Yield=1.20 / CTS	Centralized every 3 joints to surface	Once casing is at setting depth, circulate a minimum of one hole volume with Fresh Water prior to pumping cement.	Surface casing = 0.438" wall thickness Burst=2110 psi		
X	X			Fresh Water	0	600							
X	X	17.5"	13-3/8" 68# J-55 BTC	Kittaning Coal	660	665	AIR / KCL Salt Polymer	Lead: 15.4 ppg PNE-1 + 2.5% bwoc CaCl 40% Excess / Tail: 15.9 ppg PNE-1 + 2.5% bwoc CaCl zero% Excess. CTS	Bow Spring on every joint	Once casing is at setting depth, Circulate and condition at TD. Circulate a minimum of one hole volume prior to pumping cement.	Intermediate casing = 0.480" wall thickness Burst=3450 psi		
X	X			Little/Big Lime	1126 / 1167	1151 / 1243							
X	X			Injun / Gantz (Storage)	1243 / 1535	1349 / 1585							
X	X			Intermediate 1 (Shoe 150' below storage)	0	1735							
X	X	12.25"	9-5/8" 40# J-55 BTC	Fifty / Thirty Foot	1650 / 1730	1697 / 1742	AIR / KCL Salt Polymer	Lead: 15.4 ppg PNE-1 + 2.5% bwoc CaCl 40% Excess / Tail: 15.9 ppg PNE-1 + 2.5% bwoc CaCl zero% Excess. CTS	Bow Spring on first 2 joints then every third joint to 100' form surface	Once casing is at setting depth, Circulate and condition mud at TD. Circulate a minimum of one hole volume prior to pumping cement.	Intermediate casing = 0.395" wall thickness Burst=3950 psi		
X	X			Gordon Stray / Gordon	1785 / 1850	1850 / 1940							
X	X			5th Sand	2035	2070							
X	X			Bayard Sand	2125	2160							
X	X	8.5" Vertical	5-1/2" 23# P-110 HP CDC HTQ	Speechley	2745	2763	9.0ppg SOBMB	Lead: 14.5 ppg POZ:PNE-1 + 0.3% bwoc R3 + 1% bwoc EC1 + 0.75 gal/sk FP13L + 0.3% bwoc MPA170 Tail: 14.8 ppg PNE-1 + 0.35% bwoc R3 + 0.75 gal/sk FP13L + 50% bwoc ASCA1 + 0.5% bwoc MPA170 20% Excess Lead Yield=1.19 Tail Yield=1.94 CTS	Run 1 spiral centralizer every 5 joints from the top of the curve to surface.	Once on bottom/TD with casing, circulate at max allowable pump rate for at least 2x bottoms up, or until returns and pump pressures indicate the hole is clean. Circulate a minimum of one hole volume prior to pumping cement.	Production casing = 0.415" wall thickness Burst=16240 psi Note: Actual centralizer schedules may be changed due to hole conditions		
X	X			Balltown	2965	3005							
X	X			Benson	4050	4083							
X	X			West Falls	4620	5865							
X	X			8.5" Curve	5-1/2" 23# P-110 HP CDC HTQ	Rhinstreet	5865		6140			11.5ppg-12.5ppg SOBMB	Run 1 spiral centralizer every 3 joints from the 1st 5.5" long joint to the top of the curve.
X	X					Cashaqua	6140		6341				
X	X					Middlesex	6341		6421				
X	X					West River	6421		6514				
X	X					Burkett	6514		6540				
X	X					Tully Limestone	6540		6644				
X	X	8.5" Lateral	5-1/2" 23# P-110 HP CDC HTQ	Hamilton	6644	6863	11.5ppg-12.5ppg SOBMB						
X	X			Marcellus	6863	6914							
X	X			TMD / TVD (Production)	23267	6900							
X	X	Onondaga	6914										

LP @ 6900' TVD / 7466' MD

8.5" Hole - Cemented Long String
5-1/2" 23# P-110 HP CDC HTQ

+/-15801' ft Lateral

TD @ +/-6900' TVD
+/-23267' MD

X=centralizers

**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 Sheets"

**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: HG Energy II Appalachia, LLC
 By: Diane White *Diane White*
 Its: Agent

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BHL is located on topo map 6,262 feet south of Latitude: 39° 12' 30"
 SHL is located on topo map 6,821 feet south of Latitude: 39° 10' 00"

SEE PAGE 3 FOR SURFACE OWNERS

SEE PAGE 2 FOR PLAT DUE TO LENGTH OF LATERAL

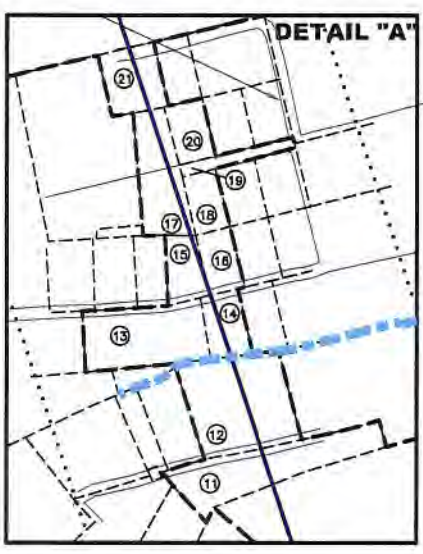
LESSOR	DIST-TM/PAR
A J. B. GUSMAN ET AL	20-444/11.2
	20-444/11.3
	20-444/11
B EDMOND SOUTHERN ET UX	20-444/10
	12-444/56
	12-444/51
C MARY S. DEISON ET AL	12-424/44
	12-2002/29
D PAUL S. HORNOR ET AL	12-424/43
	12-424/43.1
	12-424/43.4
	12-424A/9
	12-424A/8
E G.W. RIFFER ET AL	12-424A/29
	12-424A/30
	12-424A/63
	12-424A/46
	12-424A/65
	12-424A/47
	12-424A/62
	12-424/17.2
	12-424/18.4
	12-424/18
F WM BURNSIDE ET AL	12-2001/47
	12-2001/40
	12-2001/41
	12-2001/24.1
	12-2001/25
G WILLIAM AND RUHAMA BURSIDE	12-2001/24
	12-2001/3
	20-424/2
H J P POST ET AL	20-404/57
	20-404/43
J JACOB MCCONKEY	20-404/43.5
	20-404/43.6
	20-404/31
	20-404/30.1
	20-404/6
	20-404/6.1
	20-404/5



SURFACE HOLE LOCATION (SHL)
UTM 17-NAD83(M)
N:4333341.21
E:548091.57
 UTM 17-NAD83(FT)
 N:14216970.30
 E:1798197.10
 LAT/LON DATUM-NAD83
 LAT:39.147939
 LON:-80.443458

APPROX. LANDING POINT
UTM 17-NAD83(M)
N:4333588.23
E:548361.81
 UTM 17-NAD83(FT)
 N:14217780.70
 E:1799083.70
 LAT/LON DATUM-NAD83
 LAT:39.150150
 LON:-80.440313

BOTTOM HOLE LOCATION (BHL)
UTM 17-NAD83(M)
N:4338127.49
E:546757.80
 UTM 17-NAD83(FT)
 N:14232673.28
 E:1793821.21
 LAT/LON DATUM-NAD83
 LAT:39.191139
 LON:-80.458562



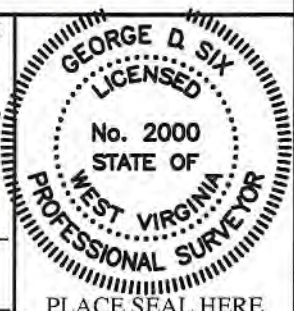
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CIVIL ENVIRONMENTAL CONSULTING FIELD SERVICES
 600 WHITE OAKS BOULEVARD, BRIDGEPORT, WV 26330
 PHONE (304) 624-4108 FAX (304) 624-7931

FILE #: 1209 N-2H
 DRAWING #: 1209 N-2H
 SCALE: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY: 1/2500
 PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT THOMAS 1498.81'

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: George D. Six
 R.P.E.: _____ L.L.S.: P.S. No. 2000



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



DATE: SEPTEMBER 19, 2019
 OPERATOR'S WELL #: 1209 N-2H
 API WELL #: 47 33 05935 MOD
 STATE COUNTY PERMIT

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

WATERSHED: MIDDLE WEST FORK CREEK ELEVATION: 1,007'±

COUNTY/DISTRICT: HARRISON / UNION QUADRANGLE: WEST MILFORD, WV 7.5'

SURFACE OWNER: HG ENERGY II APPALACHIA, LLC ACREAGE: 95.06±

OIL & GAS ROYALTY OWNER: ANN COVINGTON, ET AL ACREAGE: 887.72±

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

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TVD: 6,900'± TMD: 23,268'±

WELL OPERATOR HG ENERGY II APPALACHIA, LLC DESIGNATED AGENT DIANE C. WHITE
 Address 5260 DUPONT ROAD Address 5260 DUPONT ROAD
 City PARKERSBURG State WV Zip Code 26101 City PARKERSBURG State WV Zip Code 26101

BHL is located on topo map 65 feet west of Longitude: 80° 27' 30"
 SHL is located on topo map 7,598 feet west of Longitude: 80° 25' 00"

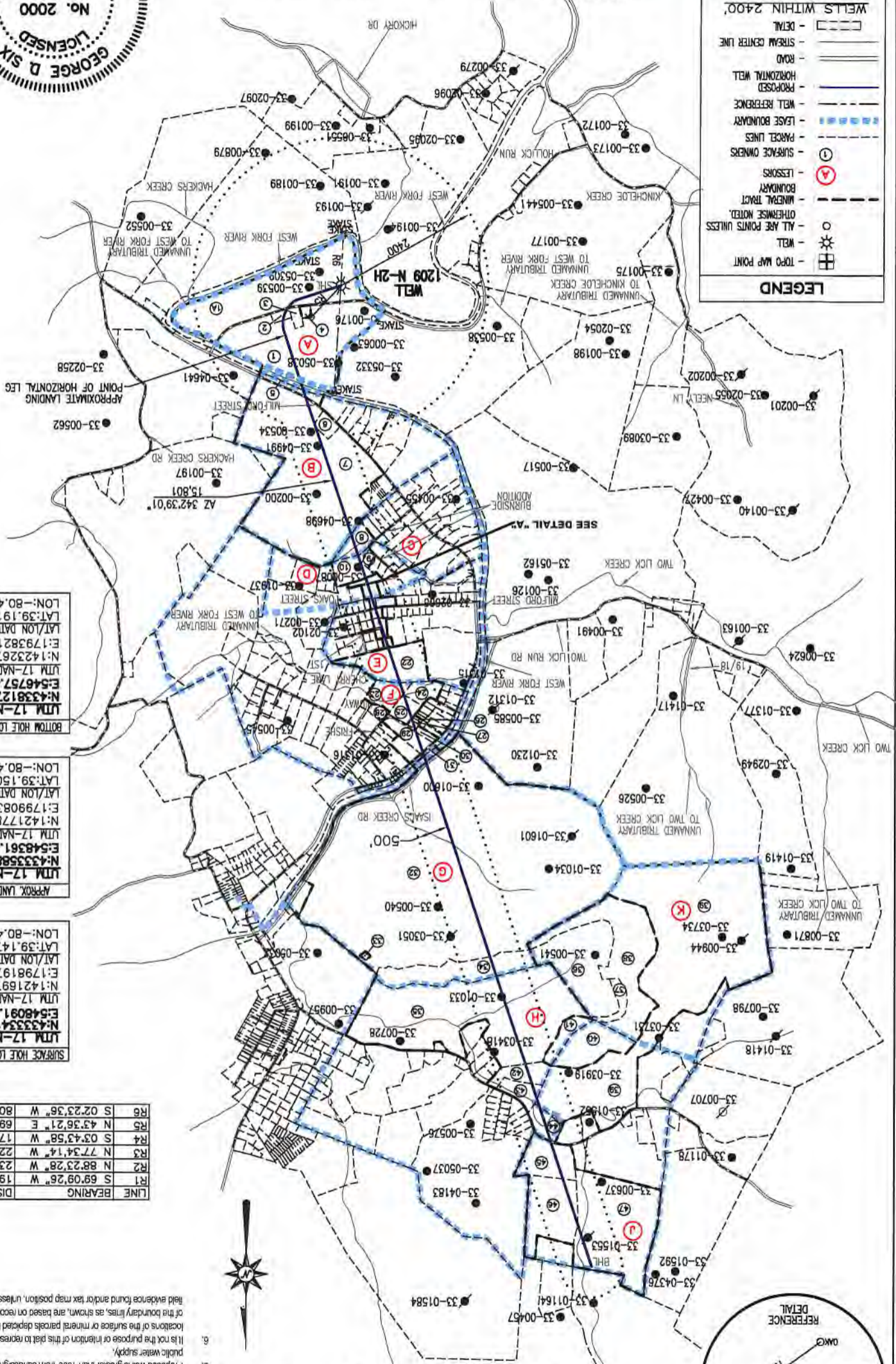
SEPTEMBER 19, 2019

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API WELL #: 47 STATE COUNTY PERMIT
 05935 MD

LEGEND

- TOP MAP POINT
- WELL
- ALL ARE POINTS UNLESS OTHERWISE NOTED
- MINERAL TRACT
- BOUNDARY
- LESSONS
- SURFACE OWNERS
- PARCEL LINES
- LEASE BOUNDARY
- WELL REFERENCE
- PROPOSED HORIZONTAL WELL
- STREAM CENTER LINE
- ROAD
- DETAIL
- WELLS WITHIN 2400'
- EXISTING WELLS
- PLUGGED WELLS
- ABANDONED WELLS



BOTTOM HOLE LOCATION (BHL)

UTM 17-NAD83(M)
 N:4338127.49
 E:546757.80
 UTM 17-NAD83(ET)
 N:14232673.28
 E:1793821.21
 LAT/LON DATUM=NAD83
 LAT:39.19139
 LON:-80.458562

APPROX. LANDING POINT

UTM 17-NAD83(M)
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 E:548361.81
 UTM 17-NAD83(ET)
 N:14217780.70
 E:1799803.70
 LAT/LON DATUM=NAD83
 LAT:39.150150
 LON:-80.440313

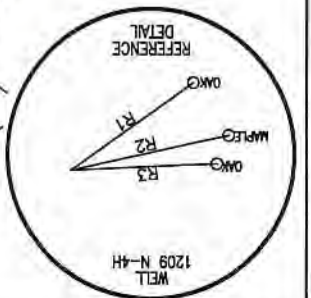
SURFACE HOLE LOCATION (SHL)

UTM 17-NAD83(M)
 N:4333341.21
 E:548091.57
 UTM 17-NAD83(ET)
 N:14216970.30
 E:1798197.10
 LAT/LON DATUM=NAD83
 LAT:39.147939
 LON:-80.443458

LINE	BEARING	DISTANCE
R1	S 69°09'26" W	198.91'
R2	N 88°23'28" W	239.18'
R3	N 77°34'14" W	226.83'
R4	S 03°43'58" W	1726.17'
R5	N 43°36'21" E	694.32'
R6	S 02°23'36" W	800.10'

- NOTES:**
1. There are no water wells or developed springs within 250' of proposed well.
 2. There are no existing buildings within 625' of proposed well.
 3. Proposed well is greater than 100' from perennial stream, wetland, pond, reservoir or lake.
 4. There are no native trout streams within 300' of proposed well.
 5. Proposed well is greater than 1,000' from surface/groundwater intake or public water supply.
 6. It is not the purpose or intention of this plat to represent surveyed locations or the surface or mineral parcels depicted hereon. The location of the boundary lines, as shown, are based on record deed descriptions. Field evidence found and/or tax map position, unless otherwise noted.

1209 N-2H
PAGE 2 OF 3



George D. Six

1209 N-2H

PAGE 3 OF 3

	SURFACE OWNER	DIST-TM/PAR
1	DANNY LEE & ALICIA A. STICKEL	P/O 20-444/11.2
1A	HG ENERGY II APPALACHIA, LLC	P/O 20-444/11.2
2	HG ENERGY II APPALACHIA, LLC	20-444/11.3
3	AARON C. & CHRISTINA P. MEDINA	20-444/11
4	HG ENERGY II APPALACHIA, LLC	20-444/11.1
5	CHRISTOPHER WAYNE TITUS	20-444/10
6	SHARON WELCH	12-444/56
7	WAYNE A. RITTER & JESSICA WRAY	12-444/51
8	JEFFREY R. BENNETT	12-424/44
9	RICHARD HARNER & PATRICIA LYNN LOWTHER	12-2002/29
10	RICHARD HARNER & PATRICIA LYNN LOWTHER	12-424/43
11	RICHARD HARNER & PATRICIA LYNN LOWTHER	12-424/43.1
12	JEREMIAH G. & JACLYN E. SEARS	12-424/43.4
13	*RALPH ELDON & CATHY F. FREEMAN	12-424A/9
14	JOHN D. RENZELLI & SHELBY L. GARRETT	12-424A/8
15	BRYAN K. BYRD	12-424A/29
16	BRYAN K. & CRYSTAL L. BYRD	12-424A/30
17	DANNY W. & SUSAN JAMES	12-424A/63
18	DANNY W. & SUSAN JAMES	12-424A/46
19	*DANNY W. & SUSAN JAMES & RAY W. & AULDA JAMES	12-424A/65
20	*MARK D. REASER & M. E. JARRETT-REASER	12-424A/47
21	DEBORAH R. JENKINS	12-424A/62
22	DARREN L. & ANGELA C. BENNETT	12-424/17.2
23	H. EUGENE CURREY	12-424/18.4
24	VICKIE OFFIELD	12-424/18
25	ELLA L. & GARY J. SOUTHERN	12-2001/47
26	BENJAMIN E. & LADONNA M. HECKERT	12-2001/40
27	BENJAMIN E. & LADONNA M. HECKERT	12-2001/41
28	KENNETH C. & MARY ANN GODBEY	12-2001/24.1
29	APRIL R. MITCHELL	12-2001/25
30	LAKEVIEW LOAN SERVICE LLC C/O ZACHARY A CAMPBELL ETAL*20	12-2001/24
31	APRIL R. MITCHELL	12-2001/3
32	WILLIAM MICHAEL MCDONALD	20-424/2
33	GREATER HARRISON COUNTY PUBLIC SERVICE DISTRICT	20-404/58
34	PERRY LEE & DEBORAH JEAN POST	20-404/57
35	PERRY LEE & DEBORAH JEAN POST	20-404/43
36	PERRY LEE & DEBORAH JEAN POST	20-404/41
37	PERRY LEE & DEBORAH JEAN POST	20-404/40.1
38	PERRY LEE & DEBORAH JEAN POST	20-404/40
39	AL-N-EL FARMS LLC	20-404/30.1
40	PERRY LEE & DEBORAH JEAN POST	20-404/30
41	PERRY LEE & DEBORAH JEAN POST	20-404/42
42	RICHARD E. & MICHELLE M. CASTO	20-404/43.5
43	ROGER L. & MELISSA ANN COFFINDAFFER	20-404/43.6
44	HOMAS N. & PLEASIE M. TURNER T	20-404/31
45	ROBERT N. & REGINA C. HARDMAN	20-404/6
46	MARGARET J. JENKINS	20-404/6.1
47	CONSOLIDATION COAL COMPANY	20-404/5

SURFACE HOLE LOCATION (SHL)
UTM 17-NAD83(M)
N:4333341.21
E:548091.57
 UTM 17-NAD83(FT)
 N:14216970.30
 E:1798197.10
 LAT/LON DATUM-NAD83
 LAT:39.147939
 LON:-80.443458

APPROX. LANDING POINT
UTM 17-NAD83(M)
N:4333588.23
E:548361.81
 UTM 17-NAD83(FT)
 N:14217780.70
 E:1799083.70
 LAT/LON DATUM-NAD83
 LAT:39.150150
 LON:-80.440313

BOTTOM HOLE LOCATION (BHL)
UTM 17-NAD83(M)
N:4338127.49
E:546757.80
 UTM 17-NAD83(FT)
 N:14232673.28
 E:1793821.21
 LAT/LON DATUM-NAD83
 LAT:39.191139
 LON:-80.458562

* - DENOTES PARCEL WITHIN 30 FEET OF PLANNED WELL BORE

API WELL #: 47 33 05935 MOD
 STATE COUNTY PERMIT

THRASHER

SEPTEMBER 19, 2019

CIVIL ENVIRONMENTAL • CONSULTING FIELD SERVICES
 600 WHITE OAKS BOULEVARD, BRIDGEPORT, WV 26330
 PHONE (304) 624-4108 FAX (304) 624-7831

BHL is located on topo map 6,282 feet south of Latitude: 39° 12' 30"
 SHL is located on topo map 6,821 feet south of Latitude: 39° 10' 00"

SEE PAGE 3 FOR SURFACE OWNERS

SEE PAGE 2 FOR PLAT DUE TO LENGTH OF LATERAL

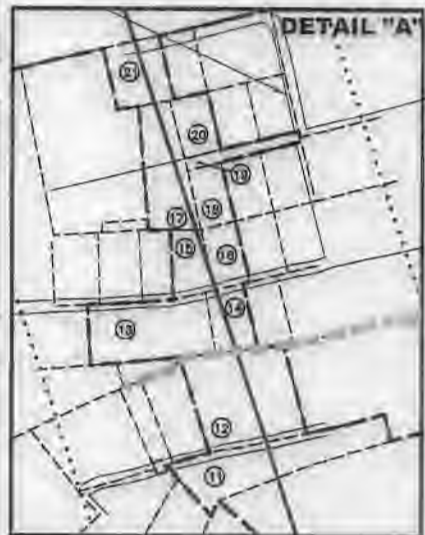
	LESSOR	DIST-TM/PAR
A	J. B. GUSMAN ET AL	20-444/11.2 20-444/11.3 20-444/11
B	EDMOND SOUTHERN ET UX	20-444/10 12-444/56 12-444/51
C	MARY S. DEISON ET AL	12-424/44
D	PAUL S. HORNOR ET AL	12-2002/29 12-424/43 12-424/43.1 12-424/43.4
E	G.W. RIFFER ET AL	12-424A/9 12-424A/8 12-424A/29 12-424A/30 12-424A/63 12-424A/46 12-424A/85 12-424A/47 12-424A/62 12-424/17.2
F	WM BURNSIDE ET AL	12-424/18.4 12-424/18 12-2001/47 12-2001/40 12-2001/41 12-2001/24.1 12-2001/25 12-2001/24 12-2001/3
G	WILLIAM AND RUHAMA BURNSIDE	20-424/2 20-404/57
H	J. P. POST ET AL	20-404/43 20-404/43.5 20-404/43.8 20-404/31
J	JACOB MCCONKEY	20-404/30.1 20-404/6 20-404/6.1 20-404/8



SURFACE HOLE LOCATION (SHL)
 UTM 17-NAD83(M)
 N:4333341.21
 E:548091.57
 UTM 17-NAD83(ET)
 N:14218970.30
 E:1798197.10
 LAT/LON DATUM-NAD83
 LAT:39.147939
 LON:-80.443458

APPROX. LANDING POINT
 UTM 17-NAD83(M)
 N:433366.23
 E:548361.81
 UTM 17-NAD83(ET)
 N:14217780.70
 E:1799083.70
 LAT/LON DATUM-NAD83
 LAT:39.150150
 LON:-80.440313

BOTTOM HOLE LOCATION (BHL)
 UTM 17-NAD83(M)
 N:4338127.48
 E:548757.80
 UTM 17-NAD83(ET)
 N:14232673.28
 E:1793821.21
 LAT/LON DATUM-NAD83
 LAT:39.191139
 LON:-80.458562



BHL is located on topo map 65 feet west of Longitude: 80° 27' 30"
 SHL is located on topo map 7,598 feet west of Longitude: 80° 25' 00"

THRASHER

CIVIL ENVIRONMENTAL - CONSULTING FIELD SERVICES
 600 WHITE OAKS BOULEVARD, BRIDGEPORT, WV 26330
 PHONE (304) 624-4108 FAX (304) 624-7831

FILE #: 1209 N-2H
 DRAWING #: 1209 N-2H
 SCALE: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY: 1/2500
 PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT THOMAS 1498.81'

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: George D. Six
 R.P.E.: _____ L.L.S.: P.S. No. 2000



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



DATE: SEPTEMBER 19, 2019
 OPERATOR'S WELL #: 1209 N-2H
 API WELL #: 47 33 05935 MoD
 STATE COUNTY PERMIT

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

WATERSHED: MIDDLE WEST FORK CREEK ELEVATION: 1,007'±

COUNTY/DISTRICT: HARRISON / UNION QUADRANGLE: WEST MILFORD, WV 7.5'

SURFACE OWNER: HG ENERGY II APPALACHIA, LLC ACREAGE: 95.06±

OIL & GAS ROYALTY OWNER: ANN COVINGTON, ET AL ACREAGE: 887.72±

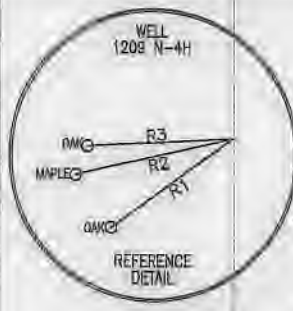
DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG & ABANDON
 CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY): _____

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TVD: 6,900'± TMD: 23,268'±

WELL OPERATOR HG ENERGY II APPALACHIA, LLC DESIGNATED AGENT DIANE C. WHITE
 Address 5260 DUPONT ROAD Address 5260 DUPONT ROAD
 City PARKERSBURG State WV Zip Code 26101 City PARKERSBURG State WV Zip Code 26101

1209 N-2H

PAGE 2 OF 3



NOTES:

1. There are no water wells or developed springs within 250' of proposed well.
2. There are no existing buildings within 625' of proposed well.
3. Proposed well is greater than 100' from perennial stream, wetland, pond, reservoir or lake.
4. There are no natural or man-made streams within 300' of proposed well.
5. Proposed well is greater than 1000' from surface/groundwater intake or public water supply.
6. It is not the purpose or intention of this plat to represent surveyed locations of the surface or mineral parcels depicted hereon. The location of the boundary lines, as shown, are based on record deed descriptions, field evidence found and/or law map position, unless otherwise noted.

LINE	BEARING	DISTANCE
R1	S 69°09'26" W	186.91'
R2	N 88°23'28" W	239.18'
R3	N 77°34'14" W	226.83'
R4	S 03°43'58" W	1726.17'
R5	N 43°36'21" E	694.32'
R6	S 02°23'36" W	800.10'

SURFACE HOLE LOCATION (SHL)

UTM 17-NAD83(M)
 N:4333341.21
 E:548091.57

UTM 17-NAD83(FT)
 N:14216970.30
 E:1798187.10

LAT/LON DATUM-NAD83
 LAT:39.147939
 LON:-80.443458

APPROX. LANDING POINT

UTM 17-NAD83(M)
 N:4333588.23
 E:548361.81

UTM 17-NAD83(FT)
 N:14217780.70
 E:1799083.70

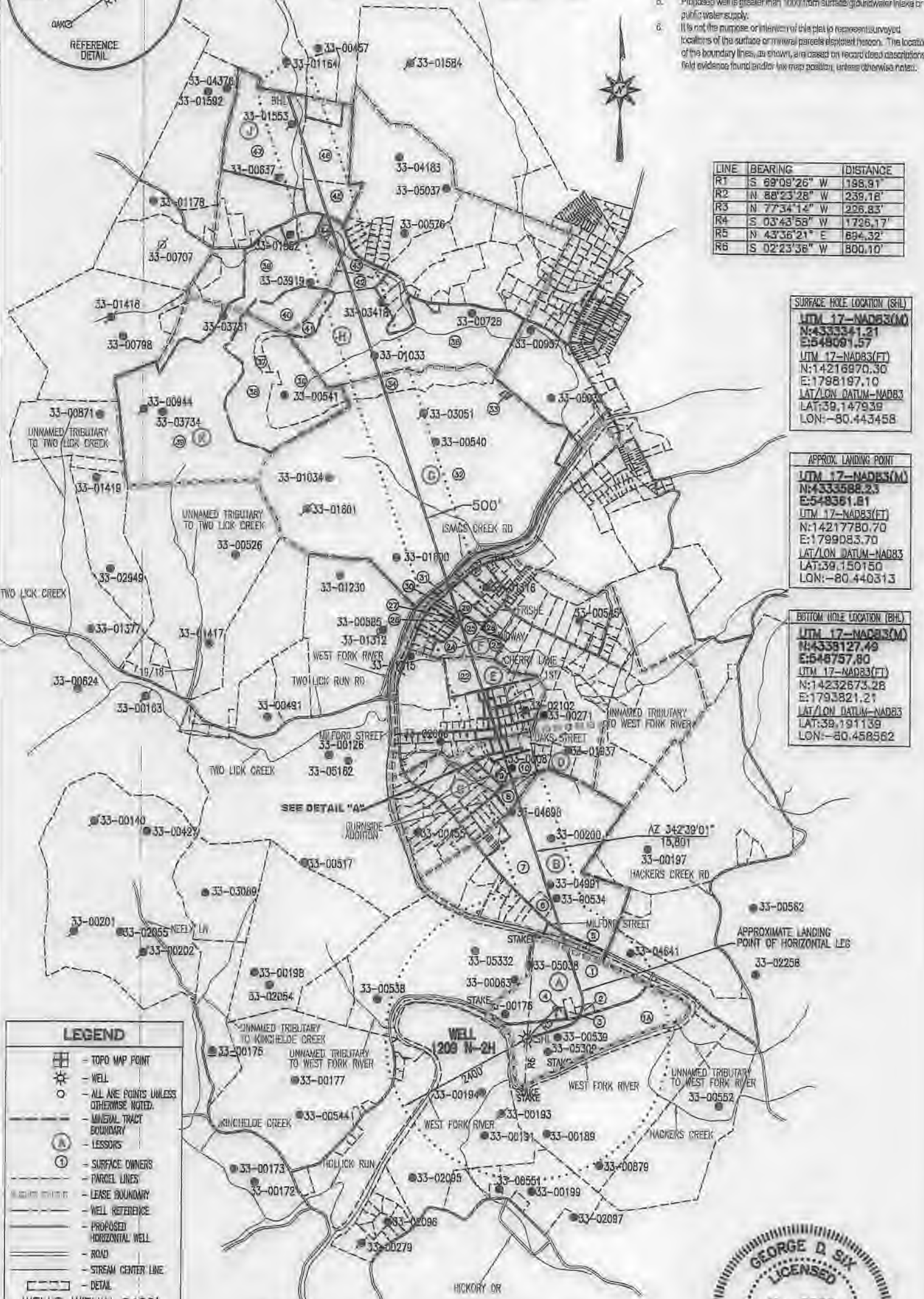
LAT/LON DATUM-NAD83
 LAT:39.150150
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BOTTOM HOLE LOCATION (BHL)

UTM 17-NAD83(M)
 N:4339127.49
 E:546757.80

UTM 17-NAD83(FT)
 N:14232673.28
 E:1793821.21

LAT/LON DATUM-NAD83
 LAT:39.191139
 LON:-80.458582



LEGEND

- TOPO MAP POINT
- WELL
- ALL ARE POINTS UNLESS OTHERWISE NOTED.
- MINERAL TRACT BOUNDARY
- LESSORS
- SURFACE OWNERS
- PARCEL LINES
- LEASE BOUNDARY
- WELL REFERENCE
- PROPOSED HORIZONTAL WELL
- ROAD
- STREAM CENTER LINE
- DETAIL

WELLS WITHIN 2400'

- EXISTING WELLS
- PLUGGED WELLS
- ABANDONED WELLS

API WELL.#: 47 33 05935 M&D
 STATE COUNTY PERMIT



George D. Six

1209 N-2H

PAGE 3 OF 3

	SURFACE OWNER	DIST-TM/PAR
1	DANNY LEE & ALICIA A. STICKEL	P/O 20-444/11.2
1A	HG ENERGY II APPALACHIA, LLC	P/O 20-444/11.2
2	HG ENERGY II APPALACHIA, LLC	20-444/11.3
3	AARON C. & CHRISTINA P. MEDINA	20-444/11
4	HG ENERGY II APPALACHIA, LLC	20-444/11.1
5	CHRISTOPHER WAYNE TITUS	20-444/10
6	SHARON WELCH	12-444/56
7	WAYNE A. RITTER & JESSICA WRAY	12-444/51
8	JEFFREY R. BENNETT	12-424/44
9	RICHARD HARNER & PATRICIA LYNN LOWTHER	12-2002/29
10	RICHARD HARNER & PATRICIA LYNN LOWTHER	12-424/43
11	RICHARD HARNER & PATRICIA LYNN LOWTHER	12-424/43.1
12	JEREMIAH G. & JACLYN E. SEARS	12-424/43.4
13	*RALPH ELDON & CATHY F. FREEMAN	12-424A/9
14	JOHN D. RENZELLI & SHELBY L. GARRETT	12-424A/8
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27	BENJAMIN E. & LADONNA M. HECKERT	12-2001/41
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37	PERRY LEE & DEBORAH JEAN POST	20-404/40.1
38	PERRY LEE & DEBORAH JEAN POST	20-404/40
39	AL-N-EL FARMS LLC	20-404/30.1
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41	PERRY LEE & DEBORAH JEAN POST	20-404/42
42	RICHARD E. & MICHELLE M. CASTO	20-404/43.5
43	ROGER L. & MELISSA ANN COFFINDAFFER	20-404/43.6
44	HOMAS N. & PLEASIE M. TURNER T	20-404/31
45	ROBERT N. & REGINA C. HARDMAN	20-404/6
46	MARGARET J. JENKINS	20-404/6.1
47	CONSOLIDATION COAL COMPANY	20-404/5

SURFACE HOLE LOCATION (SHL)
UTM 17-NAD83(M)
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UTM 17-NAD83(FT)
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E:1798197.10
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APPROX. LANDING POINT
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BOTTOM HOLE LOCATION (BHL)
UTM 17-NAD83(M)
N:4338127.49
E:546757.80
UTM 17-NAD83(FT)
N:14232673.28
E:1793821.21
LAT/LON DATUM-NAD83
LAT:39.191139
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* - DENOTES PARCEL WITHIN 30 FEET OF PLANNED WELL BORE

API WELL #: 47 33 05935 MOD
 STATE COUNTY PERMIT

THRASHER

SEPTEMBER 19, 2019

CIVIL ENVIRONMENTAL • CONSULTING FIELD SERVICES
 600 WHITE OAKS BOULEVARD, BRIDGEPORT, WV 26330
 PHONE (304) 624-4108 FAX (304) 624-7831

HG Energy II Appalachia, LLC

1209 N-2H LEASE CHAIN

TRACT #	LEGACY LEASE NUMBER	TAX MAP	LEASE NUMBER	GRANTOR/LESSOR	GRANTEE/LESSEE	ROYALTY	DEED BOOK	PAGE				
A	FK020606	17-20-0444-0011-0000, 17-20-0444-0011-0001, 17-20-0444-0011-0002, 17-20-0444-0011-0003, 17-20-0444-0012-0000, 17-12-0444-0013-0000, 17-12-0444-0014-0000, 17-12-0444-0021-0000, 17-12-0444-0021-0001, 17-12-0444-0022-0000, 17-12-0445-0001-0000, 17-12-0445-0002-0000, 17-12-0445-0009-0000, 17-12-0445-0010-0000, 17-12-0445-0011-0000	Q100370000	J.B. GUSMAN AND ADALINE GUSMAN	TREAT AND CRAWFORD	NOT LESS THAN 1/8	158	8				
				TREAT AND CRAWFORD	UNITED FUEL GAS COMPANY	ASSIGNMENT	226	359				
				UNITED FUEL GAS COMPANY	FAYETTE COUNTY GAS COMPANY	ASSIGNMENT	UNRECORDED					
				FAYETTE COUNTY GAS COMPANY	HOPE NATURAL GAS	ASSIGNMENT	201	3				
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY COMPANY	MERGER/NAME CHANGE	903	179				
				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	1136	250				
				CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	51	795				
				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	58	362				
				DOMINION TRANSMISSION, INC.	DOMINION EXPLORATION & PRODUCTION, INC.	ASSIGNMENT	1409	680				
				DOMINION TRANSMISSION, INC.	DOMINION EXPLORATION & PRODUCTION, INC.	ASSIGNMENT	1442	356				
				DOMINION EXPLORATION & PRODUCTION, INC.	DOMINION TRANSMISSION, INC.	ASSIGNMENT	1457	978				
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	1522	33				
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	1543	1235				
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	1576	125				
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	1584	942				
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	692				
				DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS					
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	1601	581				
				B	FK004884	17-12-424-0044-0000 17-12-424-0051-0000 17-12-424-0051-0001 17-12-424-0051-0002 17-12-424-0051-0004 17-20-444-0006-0000 17-20-444-0006-0001 17-20-444-0006-0002 17-20-444-0006-0004 17-20-444-0006-0005 17-20-444-0007-0001 17-20-444-0008-0000 17-20-444-0009-0000 17-20-444-0009-0001 17-20-444-0010-0000 17-20-444-0056-0000 17-12-2002-0024-0000 17-12-2002-0024-0000 17-12-2002-0024-0001 17-12-2002-0024-0002 17-12-2002-0025-0000 17-12-2002-0026-0000 17-12-2002-0027-0000 17-12-2002-0028-0000 17-12-2002-0024-0031	Q100457000	EDMOND SOUTHERN AND MARTHA W. SOUTHERN, HIS WIFE	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	149	307
								HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	MERGER/NAME CHANGE	903	179
CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	1136					250				
CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	51					795				
CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	58					362				
DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	1522					33				
CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	1543					1235				
DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	1576					125				
CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	1584					942				
NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600					660				
NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600					692				
DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS									
DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	1601					581				

RECEIVED
 Office of Oil and Gas
 SEP 24 2019
 MA/Department of
 Environmental Protection

C	FK013947 FK099146	17-12-0424-0036-0000	Q100368000	MARY S. DEISON, MARTHA A. DEISON AND MARTHA S. DEISON	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	175	140
		17-12-0424-0039-0000		HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	MERGER/NAME CHANGE	903	179
		17-12-0424-0048-0000		CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	1136	250
		17-20-0424-0048-0001		CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	51	795
		17-20-0424-0048-0003		CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	58	362
		17-20-0424-0049-0000		DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	1522	33
		17-20-0424-0049-0001		CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	1543	1235
		17-20-0424-0049-0002		DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	1576	125
		17-200424-0049-0003		CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	1584	942
		17-20-0424-0050-0000		NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	660
		17-20-0424-0050-0001		PAUL S. HORNER AND MARY H. HORNER, HIS WIFE	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	696	249
		17-20-0424-0050-0004		HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY COMPANY	MERGER/NAME CHANGE	903	179
		17-20-0424-0050-0005		CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	1136	250
17-20-0424-0039-0000	CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	51	795			
17-12-2002-0002-0000	CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	58	362			
17-12-2002-0003-0000	DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	1522	33			
17-12-2002-0004-0000	DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	FIRST AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	1524	491			
17-12-2002-0005-0000	CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	1543	1235			
17-12-2002-0006-0002								
17-12-2002-0006-0003								
17-12-2002-0007-0000								
17-12-2002-0009-0000								
17-12-2002-0009-0001								
17-12-2002-0010-0000								
17-12-2002-0010-0004								
17-12-2002-0011-0000								
17-12-2002-0012-0000								
17-12-2002-0013-0000								
17-12-2002-0014-0000								
17-12-2002-0015-0001								
17-12-2002-0016-0000								
17-12-2002-0017-0001								
17-12-2002-0018-0000								
p/o 17-12-424-0044-0000								
D	FK061785	17-12-0424-0045-0000	Q101041000	PAUL S. HORNER AND MARY H. HORNER, HIS WIFE	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	696	249
		17-12-0424-0045-0002		HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY COMPANY	MERGER/NAME CHANGE	903	179
		17-12-0424-0045-0003		CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	1136	250
		p/o 17-12-0424-0045-0007		CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	51	795
		17-12-0424-0045-0006		CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	58	362
		17-12-0424-0045-0009		DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	1522	33
		p/o 17-12-0424-0045-0008		DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	FIRST AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	1524	491
		17-12-0424-0043-0002		CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	1543	1235
		17-12-0424-0043-0004						
17-12-0424-0043-0005								
17-12-0424-0043-0006								
17-12-2002-0010-0001								
17-12-2002-0010-0003								

		17-12-2002-0010-0004 17-12-2002-0010-0006 17-12-2002-0019-0000 17-12-2002-0020-0000 17-12-2002-0021-0000 17-12-2002-0022-0000 17-12-2002-0023-0000 17-12-2002-0029-0000 17-12-2002-0023-0000		DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	1576	125
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	1584	942
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	660
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	692
				DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	WVSOS	
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC		1601	581
		17-12-424-0017-0000 17-12-424-0017-0001 17-12-424-0017-0002 17-12-424-0017-0003 17-12-424-0037-0000 17-12-424-0038-0001 17-12-424-0038-0002 17-12-424-0040-0000 17-12-424-0040-0001 17-12-424-0040-0002 p/o 17-12-424-0045-0009 17-12-424A-0001-0000 17-12-424A-0002-0000 17-12-424A-0003-0000 17-12-424A-0004-0000 17-12-424A-0005-0000 17-12-424A-0007-0000 17-12-424A-0008-0000 17-12-424A-0009-0000 17-12-424A-0010-0000 17-12-424A-0011-0000 17-12-424A-0011-0001 17-12-424A-0012-0000 17-12-424A-0015-0000 17-12-424A-0016-0000 17-12-424A-0017-0000 17-12-424A-0019-0000 17-12-424A-0020-0000 17-12-424A-0021-0000 17-12-424A-0002-0000 17-12-424A-0023-0000 17-12-424A-0024-0000 17-12-424A-0025-0000 17-12-424A-0027-0000 17-12-424A-0028-0000 17-12-424A-0029-0000 17-12-424A-0030-0000 17-12-424A-0031-0000 17-12-424A-0032-0000 17-12-424A-0033-0000 17-12-424A-0034-0000 17-12-424A-0035-0000 17-12-424A-0036-0000 17-12-424A-0042-0000		G.W. RIFFER AND MARY RIFFER, HIS WIFE	E.J. WEST	NOT LESS THAN 1/8	118	414
				E.J. WEST	W.H.D. CHAPIN AND W.J. KIRKWOOD	ASSIGNMENT	118	420
				W.H.D. CHAPIN AND W.J. KIRKWOOD	T.N. BARNSDALL	ASSIGNMENT	143	132
				T.N. BARNSDALL; THE SOUTHERN COMPANY; FRED S. RICH AND W.S. MOWRIS	RESERVE GAS COMPANY	ASSIGNMENT	235	432
				RESERVE GAS COMPANY	HOPE NATURAL GAS COMPANY	ASSIGNMENT	432	229
				SOUTHERN OIL COMPANY	PITTSBURG OIL & GAS COMPANY	CONVEYANCE	453	66
				PITTSBURG OIL & GAS COMPANY	OHIO-WEST VIRGINIA OIL & GAS CO.	CONVEYANCE	687	488
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	MERGER/NAME CHANGE	903	179
				OHIO-WEST VIRGINIA OIL AND GAS COMPANY	CNG PRODUCING COMPANY	ASSIGNMENT	1126	415
				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	1136	250
				CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	51	795
E	FK045308		Q100751000	CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	58	362
				CNG PRODUCING COMPANY	DOMINION EXPLORATION & PRODUCTION, INC.	MERGER/NAME CHANGE	58	366
				DOMINION EXPLORATION & PRODUCTION, INC.	CONSOL GAS COMPANY	MERGER/NAME CHANGE	59	972
				CONSOL GAS COMPANY	CNX GAS COMPANY	MERGER/NAME CHANGE	1472	294
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	1522	33

17-12-424A-0043-0000
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 17-12-424A-0049-0000
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 17-12-424A-0053-0001
 17-12-424A-0053-0002
 17-12-424A-0059-0000
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 17-12-424A-0062-0000
 17-12-424A-0063-0000
 17-12-424A-0064-0000
 17-12-424A-0065-0000
 17-12-424A-0066-0000
 17-12-424A-0067-0000
 17-12-424A-0068-0000

CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	1543	1235
DOMINION TRANSMISSION, INC.	CNX GAS COMPANY AND NOBLE ENERGY, INC.	MEMORANDUM OF LEASE	1551	969
DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	1576	125
CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	1584	942
NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	660
DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	1601	581
WM. BURNSIDE AND RUHARY BURNSIDE, HIS WIFE, AKA RLUHAMA BURNSIDE	E.J. WEST (212 ACRES)	NOT LESS THAN 1/8	118	353
E.J. WEST	CONSOLIDATED OIL COMPANY	ASSIGNMENT	118	358
CONSOLIDATED OIL COMPANY	E.C. BEARDSLEY	ASSIGNMENT	207	465
E.C. BEARDSLEY	THE WHEELING NATURAL GAS COMPANY	ASSIGNMENT	207	419
THE WHEELING NATURAL GAS COMPANY, TRI STATE GAS COMPANY AND THE MANUFACTURERS LIGHT AND HEAT COMPANY	HOPE NATURAL GAS COMPANY	ASSIGNMENT	202	375
JOSEPH CHEUVRONT, CHARLES CHEUVRONT, AND HARRIET CHEUVRONT	P.H. GAFFNEY (200 ACRES)	NOT LESS THAN 1/8	184	309

17-12-0405-0075-0000
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 17-12-2001-0018-0003
 17-12-2001-0018-0000
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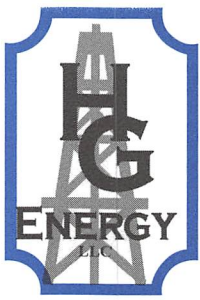
E.F. WILLIAMSON AND P.H. GAFFNEY DOING BUSINESS AS F.E. WILLIAMSON & CO.,	J.F. DONALDSON	ASSIGNMENT	222	83
J.F. DONALDSON	THE PHILADELPHIA COMPANY OF WEST VIRGINIA	ASSIGNMENT	222	79
THE PHILADELPHIA COMPANY OF WEST VIRGINIA	PITTSBURGH AND WEST VIRGINIA GAS COMPANY	ASSIGNMENT	236	111
PITTSBURGH AND WEST VIRGINIA GAS COMPANY	PHILADELPHIA OIL COMPANY	ASSIGNMENT	504	353
PITTSBURGH AND WEST VIRGINIA GAS COMPANY	EQUITABLE GAS COMPANY	CONVEYANCE	714	159
EQUITABLE GAS COMPANY AND PHILADELPHIA OIL COMPANY	HOPE NATURAL GAS COMPANY	ASSIGNMENT	790	135
HOPE NATURAL GASA COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION (212 & 200 AC)	MERGER/NAME CHANGE	903	179
CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATOIN	ASSIGNMENT	1136	250
CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	51	795
CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	58	362

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DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	1522	33
DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	FIRST AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	1524	491
CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	1543	1235
DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	1576	125
CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	1584	942
NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	660
NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	692
DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	1601	581
WILLIAM AND RUHAMA BURNSIDE	RESERVE GAS COMPANY	NOT LESS THAN 1/8	193	444
RESERVE GAS COMPANY	HOPE NATURAL GAS COMPANY	MERGER/NAME CHANGE	37	350
HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	MERGER/NAME CHANGE	903	179
FAYETTE COUNTY GAS COMPANY	HOPE NATURAL GAS	ASSIGNMENT	201	3
W.B. BERRY	J&J ENTERPRISES	ASSIGNMENT	1065	271

G	FK052931	17-20-0404-0049-0000 17-20-0404-0057-0000 17-20-0404-0058-0000 17-20-0424-0002-0000	FK052931	CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	1136	250
				J&J ENTERPRISES, BENSON DRILLING ASSOCIATION NO. 1	ENSOURCE, INC.	ASSIGNMENT	1187	246
				CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	51	795
				J&J ENTERPRISES	EASTERN AMERICAN ENERGY CORPORATION	MERGER/NAME CHANGE	1200	1110
				ENSOURCE, INC.	UMC PETROLEUM CORPORATION	MERGER/NAME CHANGE	WVSOS	
				EASTERN AMERICAN ENERGY CORPORATION	UMC PETROLEUM CORPORATION	ASSIGNMENT	1226	1040
				CNG TRANSMISSION CORPORATION	UMC PETROLEUM CORPORATION	CONSENT TO ASSIGNMENT	1226	1009
				BENSON DRILLING ASSOCIATES JV1	UMC PETROLEUM CORPORATION	ASSIGNMENT	1262	399
				UMC PETROLEUM CORPORATION	ASHLAND EXPLORATION, INC.	ASSIGNMENT	1263	494
				ASHLAND EXPLORATION HOLDINGS, INC.	BLAZER ENERGY CORPORATION	ASSIGNMENT	1294	299
				BLAZER ENERGY CORP., EASTERN STATES OIL AND GAS, INC. EASTERN STATES EXPLORATION COMPANY, EASTERN SEVEN, LLC	EASTERN SERIES 1997 TRUST	ASSIGNMENT	1296	909
				BLAZER ENERGY CORP., EASTERN STATES OIL AND GAS, INC. EASTERN STATES EXPLORATION COMPANY, EASTERN SEVEN, LLC	EASTERN SERIES 1997 TRUST	ASSIGNMENT	1309	463
				EASTERN SEVEN, LLC, EQUITABLE PRODUCTION - EASTERN STATES, INC., EQUITABLE PRODUCTION - EASTERN EXPLORATION, INC. FKA EASTERN STATES EXPLORATION COMPANY, EASTERN SEVEN PARTNERS, LP	EASTERN SERIES 1997 TRUST	CORRECTIVE ASSIGNMENT AND STIPULATION OF INTEREST	1324	156
				EASTERN SEVEN, INC.	EASTERN STATES OIL & GAS, INC.	ASSIGNMENT	1316	562
EASTERN STATES OIL AND GAS, INC.	BLAZER ENERGY CORPORATION	MERGER/NAME CHANGE	58	98				
CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION CORPORATION	MERGER/NAME CHANGE	59	1227				
DOMINION TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	Third Amendment to Farmout Agreement	1621	1295				
H	FK052902	17-20-0404-0032-0000 17-20-0404-0032-0001 17-20-0404-0032-0002 17-20-0404-0032-0003 17-20-0404-0032-0004 17-20-0404-0032-0005 17-20-0404-0032-0006 17-20-0404-0032-0007 17-20-0404-0032-0009 17-20-0404-0032-0010 17-20-0404-0033-0000 17-20-0404-0033-0001 17-20-0404-0033-0002 17-20-0404-0033-0003 17-20-0404-0033-0004 17-20-0404-0033-0005 17-20-0404-0033-0006 17-20-0404-0042-0000 17-20-0404-0043-0000 17-20-0404-0043-0001 17-20-0404-0043-0002 17-20-0404-0043-0003 17-20-0404-0043-0004 17-20-0404-0043-0005 17-20-0404-0043-0006 17-20-0404-0043-0007 17-20-0404-0043-0008	Q100475000	J.P. POST AND F.C. POST, HIS WIFE	RESERVE GAS COMPANY	NOT LESS THAN 1/8	174	214
				RESERVE GAS COMPANY	HOPE NATURAL GAS COMPANY	MERGER/NAME CHANGE	508	573
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	MERGER/NAME CHANGE	903	179
				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	1136	250
				CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	51	795
				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	58	362
				DOMINION TRANSMISSION, INC.	DOMINION EXPLORATION & PRODUCTION, INC.	MERGER/NAME CHANGE	1325	874
				DOMINION TRANSMISSION, INC.	DOMINION EXPLORATION & PRODUCTION, INC.	ASSIGNMENT	1427	829
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	1522	33
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	1543	1235
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	1576	125
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	1584	942
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	660
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	692
				DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	1601	581
				JACOB MCCONKEY AND MARY J. MCCONKEY, HIS WIFE	SOUTH PENN OIL COMPANY	NOT LESS THAN 1/8	113	469
				SOUTH PENN OIL COMPANY	HOPE NATURAL GAS COMPANY (GAS)	ASSIGNMENT	172	235
				HOPE NATURAL GAS COMPANY	RESERVE GAS COMPANY	ASSIGNMENT	221	210
				RESERVE GAS COMPANY	HOPE NATURAL GAS COMPANY	ASSIGNMENT	508	573
HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	MERGER/NAME CHANGE	903	179				
17-20-0404-0005-0000 17-20-0404-0006-0000								

J	FK052821	17-20-0404-0006-0000	Q101142000	CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	1136	250
		17-20-0404-0006-0001		CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	51	795
		17-20-0404-0006-0002		CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	58	362
		17-20-0404-0029-0000		DOMINION TRANSMISSION, INC.	DOMINION EXPLORATION & PRODUCTION, INC.	CONFIRMATORY ASSIGNMENT	1427	829
		17-20-0404-0029-0001		DOMINION EXPLORATION & PRODUCTION, INC.	DOMINION TRANSMISSION, INC.	ASSIGNMENT	1457	978
		17-20-0404-0029-0002		DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	1522	33
		17-20-0404-0029-0003		DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	FIRST AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	1524	491
		17-20-0404-0029-0004		CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	59	1227
		p/o 17-20-0404-0031-0000		CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	1543	1235
		p/o 17-20-0404-0030-0000		DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	1576	125
		p/o 17-20-0404-0030-0001		CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	1584	942
		p/o 17-20-0404-0040-0002		NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	660
		p/o 17-20-0404-0004-0005		DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	1601	581



HG Energy, LLC
5260 Dupont Road
Parkersburg, WV 26101
(304) 420-1100 - Office
(304) 863-3172 - Fax

September 17, 2019

Ms. Laura Adkins
WVDEP
Division of Oil & Gas
601 57th Street
Charleston, West Virginia 25304

RE: Nays 1209 N-1H thru S-12H Permit Revisions – (47-033-05930, 35, 36, 37, 38, 39, 43, 44, 45, 46, 47, 48)
Union District, Harrison County
West Virginia

Dear Ms. Adkins:

Per our discussions, enclosed are revised forms (survey plats, mylars, WW-6B's, casing schematics and WW6A-1's) for four of the Nays 1209 approved well work permits, (N-1H, N-2H, S-7H and S-10H). Four permits will remain the same, (1209 N-3H, N-6H, S-9H and S-12H). Four of the laterals will be abandoned and plugged, (1209 N-4H, N-5H, S-8H and S-11H). HG will file for these P/A permits shortly.

Based on production data for nearby producing wells in this field; the drilling/engineered plans are being revised to allow for greater distance between the laterals, (increased to 1500' from 1000' previously approved). Six laterals will be modified, two laterals have no changes and four laterals will be abandoned and plugged. There will be no changes to surface locations and the only change to the wells being modified is the lateral spacing being requested.

Please let me know if you have any questions or require additional information. I can be reached at (304) 420-1119 or dwhite@hgenergyllc.com.

Very truly yours,

Diane White

Diane C. White

Enclosures

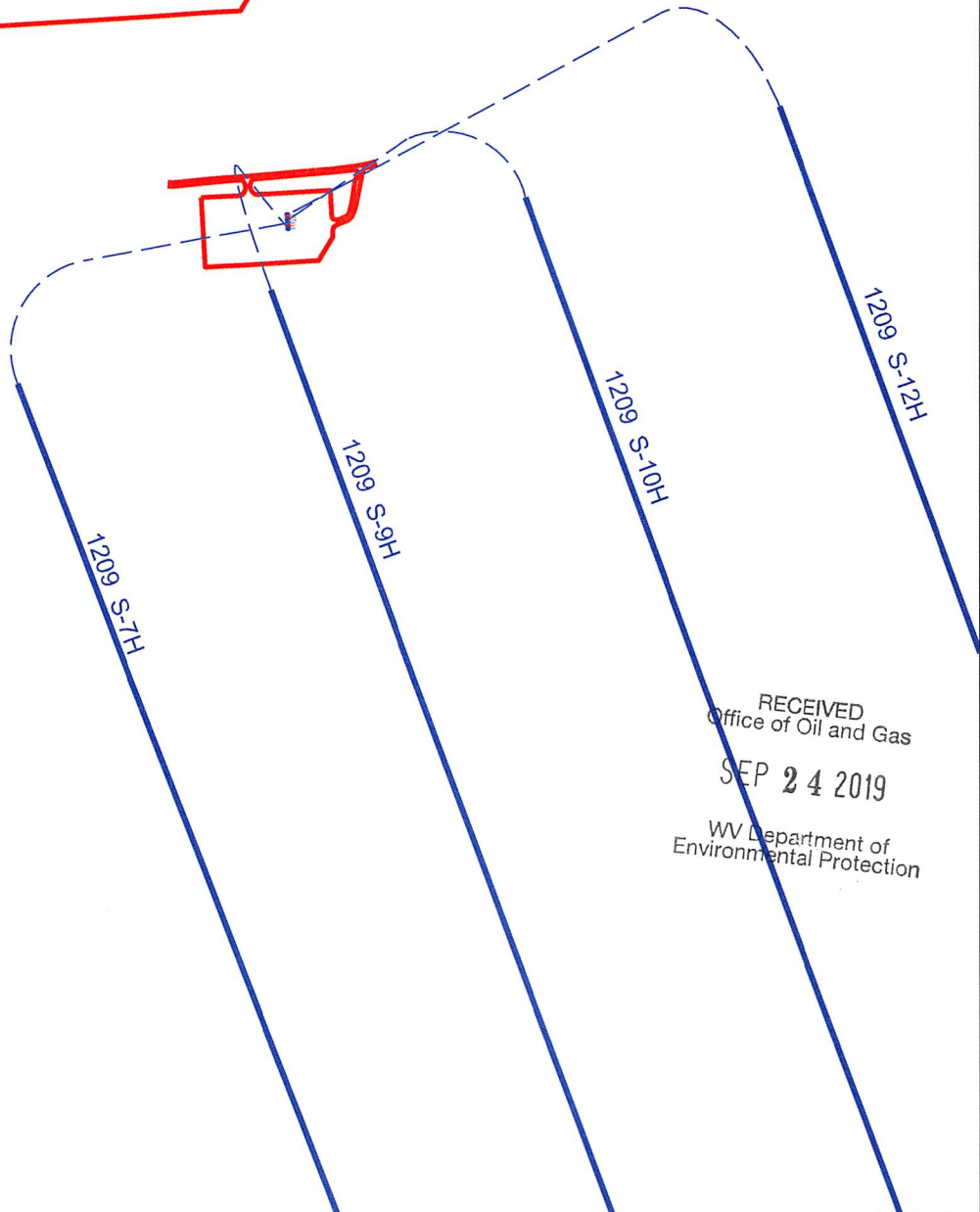
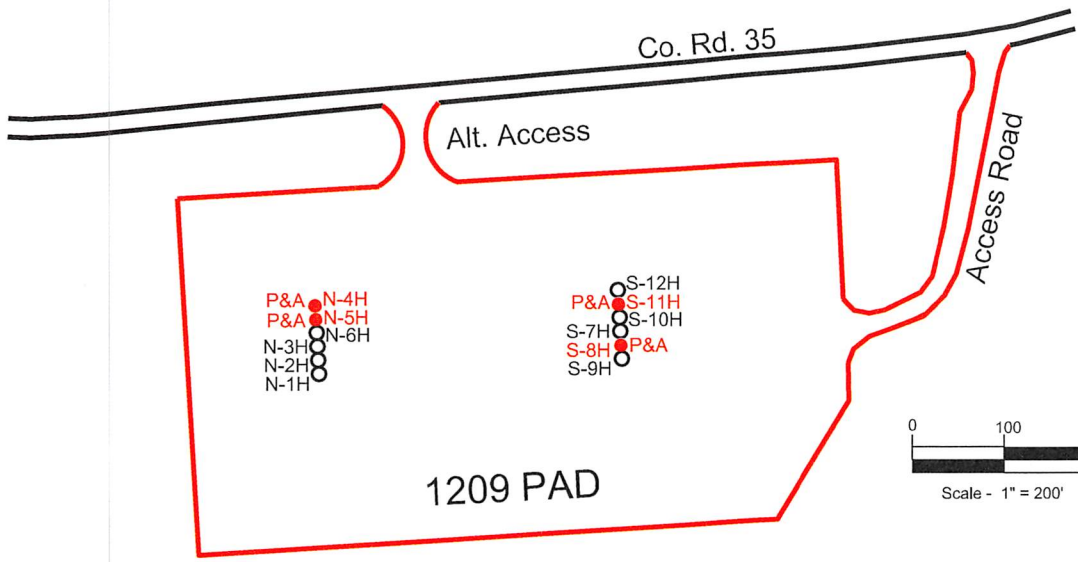
cc: Sam Ward – Inspector

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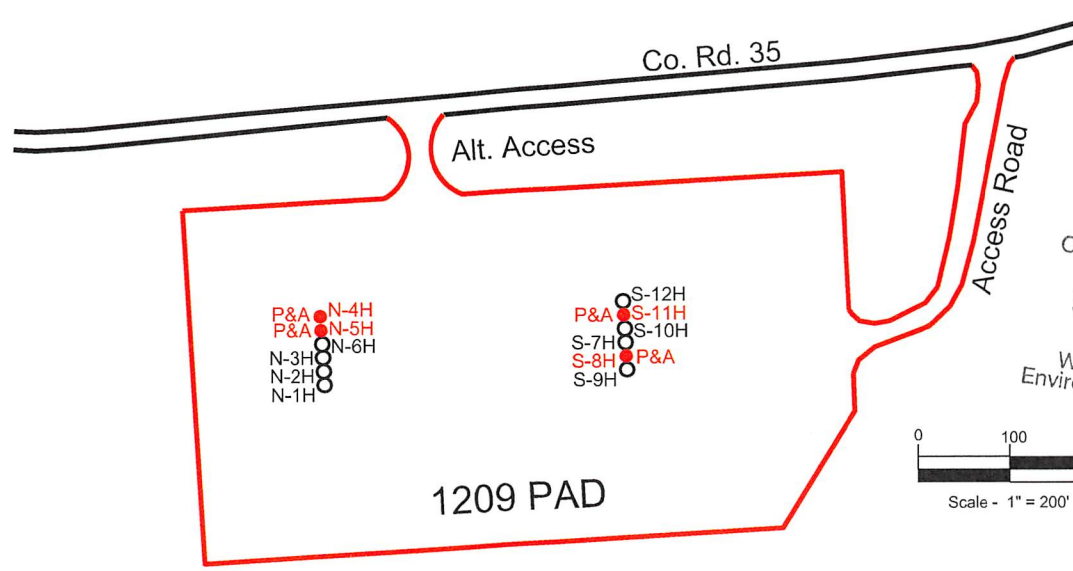
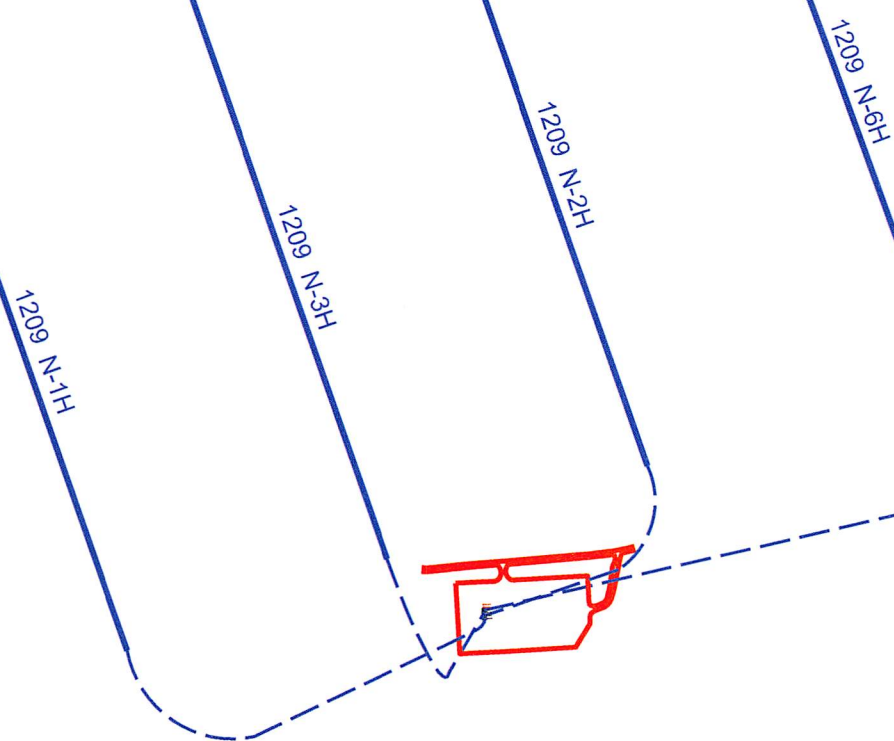
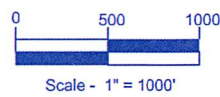
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1209 SOUTH PAD - WELLHEAD LAYOUT



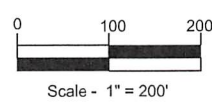
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1209 NORTH PAD - WELLHEAD LAYOUT



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

1) Well Operator: HG Energy II Appalachia, L.P. 494519932 Harrison Union West Milford 7.5'
Operator ID County District Quadrangle

2) Operator's Well Number: Nays 1209 N-1H Well Pad Name: Nays 1209

3) Farm Name/Surface Owner: Nays / HG Energy II Appalachia Public Road Access: Kincheloe Run Rd/SLS 35

4) Elevation, current ground: 1002' Elevation, proposed post-construction: 1007'

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 at 6863'/6914' and 51' in thickness. Anticipated pressure at 4314#.

8) Proposed Total Vertical Depth: 6900'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 20,379'

11) Proposed Horizontal Leg Length: 12,659'

12) Approximate Fresh Water Strata Depths: 135', 500'

13) Method to Determine Fresh Water Depths: Nearest offset well data

14) Approximate Saltwater Depths: None noted in offsets

15) Approximate Coal Seam Depths: 660' to 665'

16) Approximate Depth to Possible Void (coal mine, karst, other): None

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: _____
Depth: _____
Seam: _____
Owner: _____

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

1) Well Operator: HG Energy II Appalachia, L.P. 494519932 Harrison Union West Milford 7.5'
Operator ID County District Quadrangle

2) Operator's Well Number: Nays 1209 N-2H Well Pad Name: Nays 1209

3) Farm Name/Surface Owner: Nays / HG Energy II Appalachia Public Road Access: Kincheloe Run Rd/SLS 35

4) Elevation, current ground: 1002' Elevation, proposed post-construction: 1007'

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 at 6863'/6914' and 51' in thickness. Anticipated pressure at 4314#.

8) Proposed Total Vertical Depth: 6900'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 23,267'

11) Proposed Horizontal Leg Length: 15,801'

12) Approximate Fresh Water Strata Depths: 135', 500'

13) Method to Determine Fresh Water Depths: Nearest offset well data

14) Approximate Saltwater Depths: None noted in offsets

15) Approximate Coal Seam Depths: 660' to 665'

16) Approximate Depth to Possible Void (coal mine, karst, other): None

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: _____
Depth: _____
Seam: _____
Owner: _____

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

1) Well Operator: HG Energy II Appalachia, L.P. 494519932 Harrison Union West Milford 7.5'
Operator ID County District Quadrangle

2) Operator's Well Number: Nays 1209 S-7H Well Pad Name: Nays 1209

3) Farm Name/Surface Owner: Nays / HG Energy II Appalachia Public Road Access: Kincheloe Run Rd/SLS 35

4) Elevation, current ground: 1002' Elevation, proposed post-construction: 1007'

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 at 6863'/6914' and 51' in thickness. Anticipated pressure at 4314#.

8) Proposed Total Vertical Depth: 6900'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 17,267'

11) Proposed Horizontal Leg Length: 9,631'

12) Approximate Fresh Water Strata Depths: 135', 500'

13) Method to Determine Fresh Water Depths: Nearest offset well data

14) Approximate Saltwater Depths: None noted in offsets

15) Approximate Coal Seam Depths: 660' to 665'

16) Approximate Depth to Possible Void (coal mine, karst, other): None

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: _____
Depth: _____
Seam: _____
Owner: _____

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

1) Well Operator: HG Energy II Appalachia, L.P.

<u>494519932</u>	<u>Harrison</u>	<u>Union</u>	<u>West Milford 7.5'</u>
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Operator ID County District Quadrangle

2) Operator's Well Number: Nays 1209 S-10H Well Pad Name: Nays 1209

3) Farm Name/Surface Owner: Nays / HG Energy II Appalachia Public Road Access: Kincheloe Run Rd/SLS 35

4) Elevation, current ground: 1002' Elevation, proposed post-construction: 1007'

5) Well Type (a) Gas Oil _____ Underground Storage _____

Other _____

(b) If Gas Shallow Deep _____

Horizontal _____

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6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus at 6863'/6914' and 51' in thickness. Anticipated pressure at 4314#.

8) Proposed Total Vertical Depth: 6900'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 21,746'

11) Proposed Horizontal Leg Length: 14,221'

12) Approximate Fresh Water Strata Depths: 135', 500'

13) Method to Determine Fresh Water Depths: Nearest offset well data

14) Approximate Saltwater Depths: None noted in offsets

15) Approximate Coal Seam Depths: 660' to 665'

16) Approximate Depth to Possible Void (coal mine, karst, other): None

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: _____
Depth: _____
Seam: _____
Owner: _____

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