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west virginia department of environmental protection

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

Austin Caperton, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

Wednesday, November 13, 2019  
PERMIT MODIFICATION APPROVAL  
Horizontal 6A / New Drill

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

Re: Permit Modification Approval for NUTTER 1208 S-7H  
47-033-05960-00-00

**Lateral spacing: extend lateral from 21307' to 21867', updated leases.**

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

A handwritten signature in blue ink, appearing to read 'James A. Martin', is written over the typed name and title.

Operator's Well Number: NUTTER 1208 S-7H  
Farm Name: LINDA & WILLIAM W. BRODWATER III  
U.S. WELL NUMBER: 47-033-05960-00-00  
Horizontal 6A New Drill  
Date Modification Issued: 11/13/2019

Promoting a healthy environment.

WW-6B  
(04/15)

API NO. 47- 33 - 05960-MOD  
OPERATOR WELL NO. Nutter 1208 S-7H  
Well Pad Name: Nutter 1208

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: Nutter 1208 S-7H Well Pad Name: Nutter 1208

3) Farm Name/Surface Owner: Nutter Public Road Access: SR 19

4) Elevation, current ground: 1162' Elevation, proposed post-construction: 1147'

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 7013'/7064' and 51' in thickness. Anticipated pressure at 4314#.

*SDW  
9/20/2019*

8) Proposed Total Vertical Depth: 7050'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 21,867'

11) Proposed Horizontal Leg Length: 14,135'

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

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

14) Approximate Saltwater Depths: 1299', 1675'

15) Approximate Coal Seam Depths: 810' to 815'

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

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(a) If Yes, provide Mine Info: Name: \_\_\_\_\_ SEP 27 2019

Depth: \_\_\_\_\_

Seam: \_\_\_\_\_

Owner: \_\_\_\_\_

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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	30"	New	LS	157.5	120'	120' ✓	Drilled In
Fresh Water/Coal	20"	NEW	J-55	94	1000'	1000' ✓	40% excess yield = 1.20, CTS
Intermediate 1	13 3/8"	NEW	J-55	68	1890'	1890' ✓	40% excess yield = 1.20, CTS
Intermediate 2	9 5/8"	NEW	J-55	40	2700'	2700' ✓	40% excess yield Lead/ 0% Excess Tail
Production	5 1/2"	NEW	P-110	23	21867'	21867' ✓	20% excess yield = 1.19, tail yield = 1.24
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				Drilled In
Fresh Water	20"	24"	.438	2110	1200	Type 1, Class A	40 % excess yield = 1.20, CTS
Coal/Storage	13 3/8"	17 1/2"	.480	3450		Type 1/Class A	Lead 40% excess, Tail 0% excess
Intermediate	9 5/8"	12 1/4"	.395	3950		Type 1/Class A	Lead 40% excess, Tail 0% Excess
Production	5 1/2"	8 1/2"	.415	14520 ✓	12500	Type 1/Class A	20% excess yield = 1.19, tail yield 1.24
Tubing							
Liners							

**PACKERS**

Kind:				RECEIVED Office of Oil and Gas
Sizes:				SEP 27 2019
Depths Set:				WV Department of Environmental Protection

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 7050 feet. Drill horizontal leg to estimated 14,135' lateral length, 21,867' TMD. Hydraulically fracture 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. We plan to run an ECP above the Gantz/Dominion Storage interval to aid in sealing off and isolating the storage interval.

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): 22.420 acres

22) Area to be disturbed for well pad only, less access road (acres): 15.399 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, will also be running ECP for isolating storage zone  
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 -N/A, Casing to be drilled in w/ Dual Rotary Rig.  
Fresh Water - 15.6 ppg PNE-1 + 3% bwoc CaCl<sub>2</sub> 40% Excess Yield = 1.20, CTS  
Coal - Lead: 15.4 ppg PNE-1 + 2.5% bwoc CaCl<sub>2</sub> 40% Excess / Tail: 15.9 ppg PNE-1 + 2.5% bwoc CaCl<sub>2</sub> zero% Excess. CTS  
Intermediate - Lead: 15.4 ppg PNE-1 + 2.5% bwoc CaCl<sub>2</sub> 40% Excess. Tail: 15.9 ppg PNE-1 + 2.5% bwoc CaCl<sub>2</sub> 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 MPA170 20% 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.





**1208 S-7H**  
**Marcellus Shale Horizontal**  
**Harrison County, WV**

Ground Elevation			1208 S-7H SHL				14218875.58N 1803904.66E			
Azm			1208 S-7H LP				14218115.57N 1802682.89E			
WELLBORE DIAGRAM			1208 S-7H BHL				14204927.53N 1807756E			
WELLBORE DIAGRAM	HOLE	CASING	GEOLOGY	TOP	BASE	MUD	CEMENT	CENTRALIZERS	CONDITIONING	COMMENTS
	30"	30" 157.5# LS	Conductor	0	120	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
	26"	20" 94# J-55	Fresh Water	0	135, 500	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
			Kittaning Coal	810	815					
			Coal/Fresh Water Protection	0	1000					
	17.5"	13-3/8" 68# J-55 BTC	Little/Big Lime	1276 / 1317	1301 / 1393	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 <i>*will also be running ACP for isolating storage zone*</i>	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
			Injun / Gantz (Storage)	1393 / 1680	1499 / 1740					
			Intermediate 1	0	1900					
	12.25"	9-5/8" 40# J-55 BTC	Fifty / Thirty Foot	1800 / 1880	1847 / 1892	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
			Gordon Stray / Gordon	1935 / 2000	2000 / 2090					
			5th Sand	2185	2220					
			Bayard Sand	2275	2310					
	8.5" Vertical	5-1/2" 23# P-110 HP CDC HTQ	Speechley	2895	2913	AIR / 9.0ppg SOBM	<b>Lead:</b> 14.5 ppg POZ:PNE-1 + 0.3% bwoc R3 + 1% bwoc EC1 + 0.75 gal/sk FP13L + 0.3% bwoc MPA170 <b>Tail:</b> 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
			Balltown	3115	3155					
			Benson	4200	4233					
			West Falls	4770	6015					
8.5" Curve			Rhinestreet	6015	6290	11.5ppg-12.5ppg SOBM				
			Cashaqua	6290	6491					
			Middlesex	6491	6571					
			West River	6571	6664					
			Burkett	6664	6690					
			Tully Limestone	6690	6794					
			Hamilton	6794	7013					
			Marcellus	7013	7064					
8.5" Lateral	TMD / TVD (Production)	21867	7050	11.5ppg-12.5ppg SOBM						
	Onondaga	7064	7064							

LP @ 7050' TVD / 7732' MD

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

+/-14135' ft Lateral

TD @ +/-7050' TVD  
+/-21867' MD

X=centralizers

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

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

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

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

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

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

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

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

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

HG Energy II Appalachia, LLC  
1208 S-7H LEASE CHAIN

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TRACT #	LEGACY LEASE NUMBER	TAX MAP	LEASE NUMBER	GRANTOR/LESSOR	GRANTEE/LESSEE	ROYALTY	DEED BOOK	PAGE
2	LC014207	17-12-0425-0031-0003 17-12-0425-0031-0000	Q101051000	LEEMAN B. MAXWELL HEIRS	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	176	141
				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
1	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
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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				
4	FK020607	17-12-0445-0008-0000, 17-12-0445-0016-0000, 17-12-0445-0016-0001, 17-12-0445-0017-0000, 17-12-0445-0017-0001, 17-12-0445-0018-0000, 17-12-0445-0018-0001, 17-12-0445-0019-0000, p/o 17-12-0445-0020-0000	Q100749000	W.L. HUGHES AND FLORA HIGHER	TREAT & CRAWFORD	NOT LESS THAN 1/8	161	90
				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
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				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
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				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				
8	FK014008	17-12-0444-0032-0000, p/o 17-12-0444-0043-0000, p/o 17-12-0445-0020-0000, 17-12-0445-0030-0001, 17-12-0445-0030-0002, 17-12-0445-0030-0003, 17-12-0445-0030-0004, 17-12-0445-0030-0005, 17-12-0445-0032-0000, 17-12-0445-0044-0000, p/o 17-12-0465-0001-0000, 17-12-0465-0002-0000, 17-12-0465-0003-0000, 17-12-0465-0012-0000, p/o 21-04-0088-0001-0000, 21-04-0088-0001-0001, 21-04-0088-0001-0005, p/o 21-04-0088-0001-0007, p/o 21-04-0088-0001-0009, p/o 21-04-0088-0004-0000	Q100369000	HOWARD NEELY, A SINGLE MAN	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	174	142				
				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	692				
				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				
				5	FK065540	17-12-0445-0021-0000	Q100562000	HANNAH H. SMITH, WIDOW; IRENE FERRELL, SINGLE; ELECTA E. TAYLOR, SINGLE; EVA RUTH SMITH, WIDOW; WILDA C. TAYLOR AND JOHN W. TAYLOR, HER HUSBAND; BERTIE JUSTICE, WIDOW; ORA FLECHER, WIDOW; THE UNION NATIONAL BANK, COMMITTEE FOR FRED RUSKIN FLECHER, C. W. MORROW AND LUCY MORROW, HIS WIFE; FRENCH TRIMBLE AND VA. C. TRIMBLE, HIS WIFE; E. B. SMITH AND BLANCHE PARRILL SMITH, HIS WIFE	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	748	578
								HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	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				
DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	FIRST AMENDMENT TO FARMOUT AGREEMENT	1524					491				
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				
9	FK066065	p/o 17-12-0465-0004-0000; p/o 17-12-0465-0004-0001	Q100728000					W. A. JACKSON	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	756	144
				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.	CONFIRMATORY ASSIGNMENT	1414	1166				
				DOMINION EXPLORATION & PRODUCTION, INC.	DOMINION TRANSMISSION, INC.	ASSIGNMENT	1457	978				
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	1522	33				
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	FIRST AMENDMENT TO 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	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				
10	LC009807	21-04-0088-0004-0000; 21-04-0088-0005-0000, 0001; 21-04-0088-0006-0000; 21-04-0088-0007-0000, 0001, 0002, 0003, 0014, 0015, 0016, 0017; 21-04-008C-0029-0000; 21-04-008C-0030-0000, 0002; 21-04-008C-0031-0000, 0001, 0002, 0003; 21-04-008C-0054-0000; 21-05-0001-0050-0001; 21-05-0001-0048-0000; 21-05-0001-0084-0000; 21-05-0001-0049-0000; 21-04-008C-0086-0000; 21-05-0001-0066-0000, 0002, 0003, 0004, 0005, 0006, 0007, 0008, 0009; 21-04-008C-0058-0000; 21-04-008C-0049-0001; 21-04-008C-0052-0001, 0002; 21-05-0002-0021-0001; 21-04-008C-0033-0001, 0010, 0012, 0009, 0008, 0005, 0006, 0007, 0004, 0003, 0002, 0000; 21-04-008C-0047-0000; 04-0008C-0047 0001; 04-008C-0047-0002, 0003, 0004; 21-04-008C-0034-0000; 21-04-008C-0026-0000	Q100620000	DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS					
				ISAAC JACKSON	SOUTH PENN OIL COMPANY	NOT LESS THAN 1/8	58	431				
				SOUTH PENN OIL COMPANY	HOPE NATURAL GAS COMPANY	ASSIGNMENT (GAS)	73	272				
				HOPE NATURAL GAS COMPANY	JANE LEW LIGHT AND HEAT COMPANY	ASSIGNMENT (5 ACRES OF LEASEHOLD)	113	315				
				JANE LEW LIGHT AND HEAT COMPANY	STANDARD GAS COMPANY	ASSIGNMENT	113	361				
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	MERGER/NAME CHANGE	294	89				
				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	425	127				
				CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	WVSOS					
				CNG TRANSMISSION CORPORATION	CNG DEVELOPMENT COMPANY	JOINT VENTURE AGREEMENT	UNRECORDED					
				CNG TRANSMISSION CORPORATION	CNG DEVELOPMENT COMPANY	ASSIGNMENT	477	430				
				EMAX OIL COMPANY	CABOT OIL AND GAS CORPORATION	FARMOUT AGREEMENT	UNRECORDED					
				EMAX OIL COMPANY	CABOT OIL AND GAS CORPORATION	ASSIGNMENT	513	93				
				CABOT OIL AND GAS CORPORATION	ENERVEST APPALACHIA, L.P.	ASSIGNMENT	558	249				
				CNG TRANSMISSION CORPORATION	CNG PRODUCING COMPANY	ASSIGNMENT	522	528				
				CNG TRANSMISSION CORPORATION	EMAX OIL COMPANY	WELLBORE ASSIGNMENT	522	189				
				CNG TRANSMISSION CORPORATION	GAS EXPLORATION AND DEVELOPMENT COMPANY	ASSIGNMENT	554	605				
				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS					
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	FARMOUT AGREEMENT	672	154				
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	684	57				
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	712	848				
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	717	1				
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	CORRECTIVE ASSIGNMENT TO DB 717-1	725	784				
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	722	170				
				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	723	499				
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	AMENDED AND RESTATED PARTIAL ASSIGNMENT	723	527				
				16	N/A	21-04-0005-0056-0000; THRU 21-04-0005-0061-0000;  21-04-0005-0065-0000; 21-04-008C-0033-0000; 21-04-008C-0033-0001; p/o 21-04-008C-0033-0002;  21-04-008C-0033-0003; THRU 21-04-008C-0033-0012	HG10294	WILLIAM C. WHITE	HG ENERGY II APPALACHIA, LLC	NOT LESS THAN 1/8	741	607
								CATHERINE DAVISSON	HG ENERGY II APPALACHIA, LLC	NOT LESS THAN 1/8	745	241



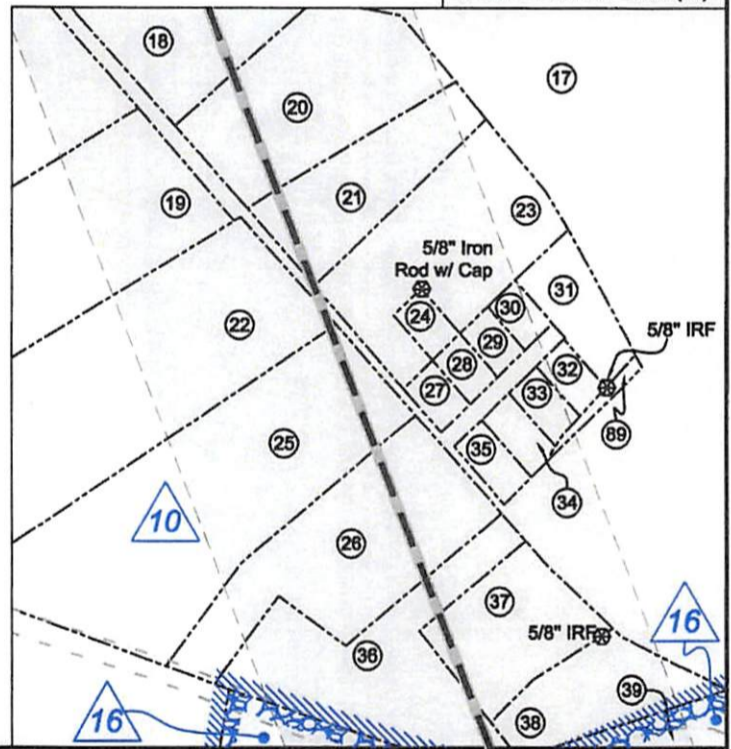




Harrison County				
No.	TM / Par	Owner	Bk / Pg	Ac.
1	425 / 31	Linda & William W. Brodwater III	1410 / 1045	247.84
2	425 / 1	Lisa M. Nutter	1577 / 738	87.78
3	444 / 14	Robert J. Brightbill	1560 / 293	55.62
4	445 / 10	Lisa M. Nutter	W687 / 445	66.87
5	445 / 9	Lisa M. Nutter	W687 / 445	105.50
6	445 / 18	George W. & Sandra Garton	1425 / 838	30.52
7	445 / 20	Edwin & Gertrude Bush Trustees	1425 / 846	91.70
8	445 / 21	Robert Allman, et al	W177 / 231	41.11
9	445 / 32	Patricia T. Garton	1425 / 854	43.15
10	445 / 44	Danny K. & Katherine Snyder	F120 / 161	95.51
11	485 / 3	Patricia T. Garton	1425 / 854	4.56
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13	485 / 4	John G. & Rebecca M. Moore	1428 / 929	10.00
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15	485 / 1.2	Roy Gregory Juckett	1437 / 1115	6.45
91	445 / 19	Howard L. & Nancy R. McKay	1162 / 709	0.87
92	485 / 2	William C. White	1376 / 325	6.12
93	485 / 2.1	William C. White	--- / ---	3.73
94	485 / 1.3	Stutler Holdings	1524 / 688	2.71

Detail 1 - Scale: 1" = 500' (4x)

ID	Lease
1	Jerome B. Gusman
2	Leeman B. Maxwell Heirs
3	A.J. Smith, et ux
4	W.L. & Flora Hughes
5	Hannah H. Smith
6	Walter Neely, et al
7	Page Harmer Thomas, et al
8	Howard Neely
9	W.A. Jackson
10	Isaac Jackson
11	Pearl Reel
12	William C. White
13	J.W. Jackson
14	C.H. Stalnaker, et ux
15	Garnett M. Corley
16	William White, et al
18	I.L. Moss



FILE NO: 195-36-G-18  
 DRAWING NO: 1208 S-7H Well Plat  
 SCALE: 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY:  
Submeter  
 PROVEN SOURCE OF ELEVATION:  
CORS, Bridgeport, WV

  
**STATE OF WEST VIRGINIA**  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
**OIL AND GAS DIVISION**

DATE: September 23 20 19  
 OPERATOR'S WELL NO. 1208 S-7H  
 API WELL NO  
47 - 033 - 05960  
 STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
 (IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW

LOCATION: ELEVATION: 1,147' WATERSHED: Middle West Fork Creek  
 DISTRICT: Grant / Hackers Creek

QUADRANGLE: Top - West Millford  
Btm - Weston  
 COUNTY: Harrison / Lewis

SURFACE OWNER: Linda & William W. Brodwater III

ACREAGE: 200

ROYALTY OWNER: Leeman B. Maxwell Heirs, et al

LEASE NO: \_\_\_\_\_ ACREAGE: 247.84

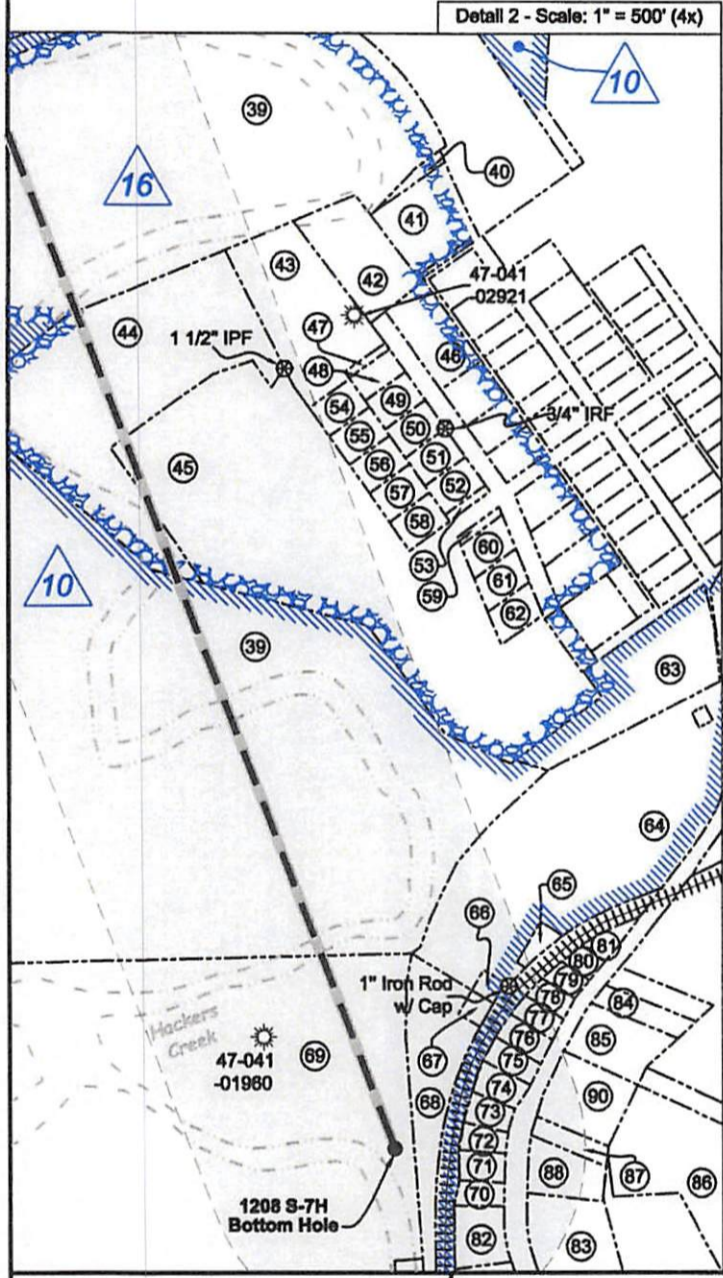
PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) LP & BH MOD

PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 7,050' TVD  
21,868' MD

WELL OPERATOR: HG Energy II Appalachia, LLC  
 ADDRESS: 5260 Dupont Road  
Parkersburg, WV 26101

DESIGNATED AGENT: Diane C. White  
 ADDRESS: 5260 Dupont Road  
Parkersburg, WV 26101





		Lewis County		
No.	TM / Par	Owner	Bk / Pg	Ac.
16	8B / 6	Roy G. Juckett	638 / 520	34.00
17	8B / 7	William E. Watson	547 / 164	71.51
18	8B / 7.3	Risha Family LP	712 / 700	3.21
19	8B / 7.2	USARC Military Reservation	509 / 790	9.83
20	8B / 7.16	Big Brother & Holding Co.	682 / 778	4.77
21	8B / 7.15	Big Brother & Holding Co.	682 / 778	2.84
22	8C / 30	RGL Inc.	665 / 707	11.90
23	8B / 7.14	Big Brother & Holding Co.	682 / 778	4.68
24	8C / 103	Thomas R. & Kathy M. Ellis	653 / 62	0.36
25	8C / 30.2	Victoria S. Martin	465 / 37	11.91
26	8C / 31	Victoria S. Martin	380 / 183	5.51
27	8C / 95	Henry J. & Margaret G. Ford	630 / 431	0.36
28	8C / 97	Forest J. & JoAnn Nicholson	587 / 722	0.34
29	8C / 98	Sandra Kay Matthews	620 / 376	0.34
30	8C / 99	Mark F. Smith	593 / 8	0.34
31	8C / 100	Phillip C. & Norma K. Alfred	605 / 254	1.28
32	8C / 96	Garland E. & Jean C. Chapman	666 / 441	0.39
33	8C / 93	Richard J. Davis	W33 / 424	0.40
34	8C / 92	Rebecca T. Cronin	625 / 583	0.447
35	8C / 91	Kenneth E. & Alice F. Smith	683 / 572	0.46
36	8C / 31.3	Victoria S. Martin	349 / 591	5.00
37	8C / 31.2	Victoria S. Martin	377 / 285	2.87
38	8C / 31	Elizabeth D. & Carl A. Meahl Jr.	536 / 90	1.93
39	8C / 33.2	C.D. Cole	502 / 70	150.51
40	5 / 62	William C. White	W23 / 102	0.097
41	5 / 63	William C. White	W23 / 102	0.86
42	8C / 33.5	Michael B. & Judy M. Grogg	511 / 612	1.14
43	8C / 33.10	Linda J. Cooke	FID	1.79
44	8C / 33	Lantetta S. & Glenna K. Myers	598 / 332	6.73
45	8C / 33.1	Jane Lew Associates	409 / 488	10.35
46	8C / 33.7	David D. & Kimberly M. Marple	514 / 156	0.74
47	8C / 33.4	Lowell Weaver	580 / 680	0.059
48	8C / 33.3	Sharon K. Weaver	507 / 475	0.214
49	5 / 50	David & Sharon Snyder	370 / 149	0.27
50	5 / 51	Bethel M. Cruze	700 / 794	0.27
51	5 / 52	Sharon Stalkneker	622 / 270	0.27
52	5 / 53	Lowell W. Weaver	471 / 688	0.27
53	8C / 33.4	Lowell W. Weaver	580 / 680	0.06
54	5 / 58	Carol Susan Taylor	627 / 593	0.27
55	5 / 59	Carol Susan Taylor	627 / 593	0.26
56	5 / 60	Dale & Katherin Holden	680 / 239	0.26
57	5 / 61	Michael L. & Betty A. Ford	379 / 386	0.27
58	5 / 54	Joetta J. & George Anderson	594 / 552	0.27
59	5 / 64	Betty Hitt	582 / 261	0.07
60	5 / 55	Larry F. Bean II	634 / 569	0.276
61	5 / 56	William F. & Linda K. Murphy	731 / 666	0.276
62	5 / 57	Marjorie & Linda C. Hyatt	510 / 581	0.275
63	8C / 33.12	Lisa & David Wagner	604 / 150	2.34
64	8C / 47	C.J. Martin II	666 / 168	5.67
65	1 / 42.1	Derek Long	642 / 334	0.19
66	8C / 47.1	C.J. Martin II	666 / 168	0.09
67	8C / 47.2	C.J. Martin II	666 / 168	0.11
68	8C / 47.3	C.J. Martin II	666 / 168	1.40
69	8C / 34	Charles D. Cole II	437 / 680	136.87
70	1 / 34	Melissa S. Mann	724 / 943	0.17
71	1 / 35	Big Brother & Holding Co. LLC	682 / 411	0.21
72	1 / 36	Big Brother & Holding Co. LLC	682 / 411	0.16
73	1 / 37.1	Zachary Lamb	674 / 66	0.19
74	1 / 37	Jason D. & Sarah H. Bryant	651 / 730	0.45
75	1 / 38	Amanda Jo Frazier	651 / 69	0.16
76	1 / 39	Cinda Roby, et al	W48 / 139	0.21
77	1 / 40	Dale Keith McCoy	657 / 360	0.17
78	1 / 41	Robert M. Brown	682 / 220	0.15
79	1 / 42	Jay H. & Linda McCarty	450 / 338	0.14
80	1 / 43	Douglas E. & Ruth M. Ferrell	680 / 150	0.12
81	1 / 44	Douglas E. & Ruth M. Ferrell	680 / 150	0.19
82	1 / 33	Kathryn L. Fridley	W48 / 494	0.38
83	1 / 49	Robert T. & Cynthia M. Swiger	323 / 163	1.13
84	1 / 46.2	David L. & Celia K. Radcliff	578 / 818	0.32
85	1 / 46	Garrison & Heather Grogg	706 / 58	0.75
86	1 / 68	Board of Education	216 / 215	2.80
87	1 / 48	Board of Education	151 / 129	0.28
88	1 / 84	Christel L. Beam	738 / 201	0.568
89	8C / 94	William E. Watson	566 / 489	0.197
90	1 / 47	Board of Education	- / -	1.00

FILE NO: 195-36-G-18  
DRAWING NO: 1208 S-7H Well Plat  
SCALE: 1" = 2000'  
MINIMUM DEGREE OF ACCURACY: Submeter  
PROVEN SOURCE OF ELEVATION: CORS, Bridgeport, WV

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OIL AND GAS DIVISION

DATE: September 23 2019  
OPERATOR'S WELL NO. 1208 S-7H  
API WELL NO  
47 - 033 - 05960  
STATE COUNTY PERMIT

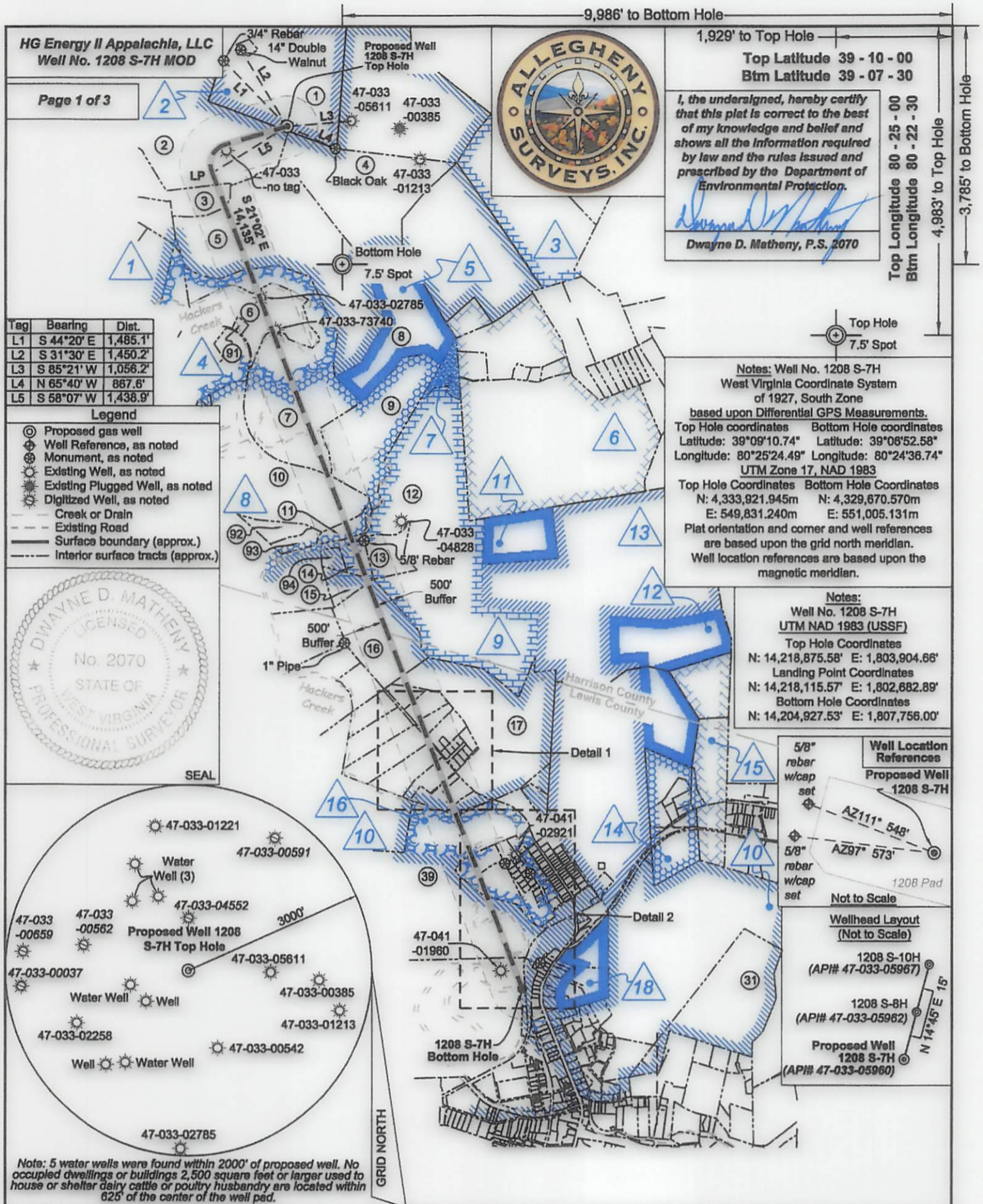
WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
(IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW

LOCATION: ELEVATION: 1,147' WATERSHED: Middle West Fork Creek  
DISTRICT: Grant / Hackers Creek  
SURFACE OWNER: Linda & William W. Brodwater III  
ROYALTY OWNER: Leeman B. Maxwell Heirs, et al LEASE NO: ACREAGE: 247.84

PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) LP & BH MOD  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 7,050' TVD 21,868' MD

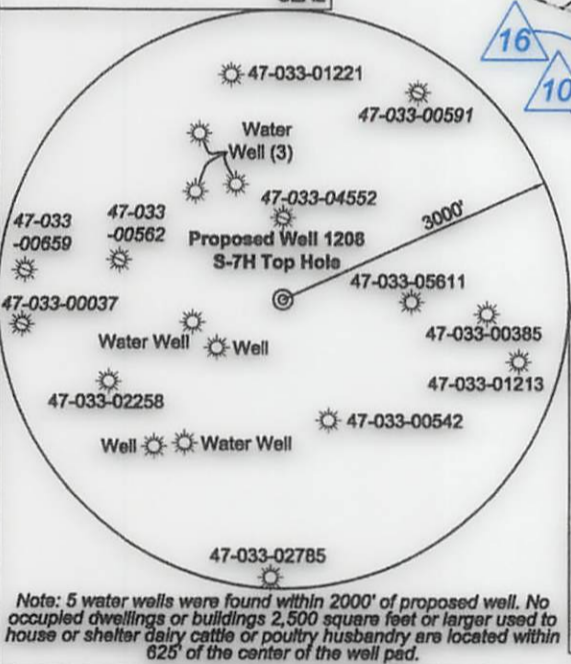
WELL OPERATOR: HG Energy II Appalachia, LLC DESIGNATED AGENT: Diane C. White  
ADDRESS: 5260 Dupont Road ADDRESS: 5260 Dupont Road  
Parkersburg, WV 26101 Parkersburg, WV 26101





Tag	Bearing	Dist.
L1	S 44°20' E	1,485.1'
L2	S 31°30' E	1,450.2'
L3	S 85°21' W	1,056.2'
L4	N 65°40' W	867.6'
L5	S 58°07' W	1,438.9'

- Legend**
- ⊙ Proposed gas well
  - ⊕ Well Reference, as noted
  - ⊙ Monument, as noted
  - ⊙ Existing Well, as noted
  - ⊙ Existing Plugged Well, as noted
  - ⊙ Digitized Well, as noted
  - Creek or Drain
  - Existing Road
  - Surface boundary (approx.)
  - Interior surface tracts (approx.)



9,986' to Bottom Hole

1,929' to Top Hole

Top Latitude 39 - 10 - 00  
Btm Latitude 39 - 07 - 30

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 rules issued and prescribed by the Department of Environmental Protection.

*Dwayne D. Matheny*

Dwayne D. Matheny, P.S. 2070

Top Longitude 80 - 25 - 00  
Btm Longitude 80 - 22 - 30

4,983' to Top Hole

3,785' to Bottom Hole

**Notes:** Well No. 1208 S-7H  
West Virginia Coordinate System of 1927, South Zone  
based upon Differential GPS Measurements.

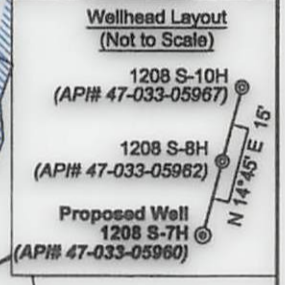
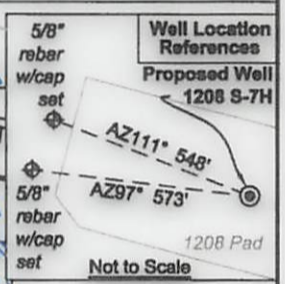
Top Hole coordinates Bottom Hole coordinates  
Latitude: 39°09'10.74" Latitude: 39°06'52.58"  
Longitude: 80°25'24.49" Longitude: 80°24'36.74"  
UTM Zone 17, NAD 1983

Top Hole Coordinates Bottom Hole Coordinates  
N: 4,333,921.945m N: 4,329,670.570m  
E: 549,831.240m E: 551,005.131m

Plat orientation and corner and well references are based upon the grid north meridian. Well location references are based upon the magnetic meridian.

**Notes:**  
Well No. 1208 S-7H  
UTM NAD 1983 (USSF)

Top Hole Coordinates  
N: 14,218,875.58' E: 1,803,904.66'  
Landing Point Coordinates  
N: 14,218,115.57' E: 1,802,682.89'  
Bottom Hole Coordinates  
N: 14,204,927.53' E: 1,807,756.00'



FILE NO: 195-36-G-18  
DRAWING NO: 1208 S-7H Well Plat  
SCALE: 1" = 2000'  
MINIMUM DEGREE OF ACCURACY: Submeter  
PROVEN SOURCE OF ELEVATION: CORS, Bridgeport, WV

**STATE OF WEST VIRGINIA**  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
**OIL AND GAS DIVISION**

DATE: September 23 20 19  
OPERATOR'S WELL NO. 1208 S-7H  
API WELL NO MOD 1  
47 - 033 - 05960  
STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
(IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW

LOCATION: ELEVATION: 1,147' WATERSHED: Middle West Fork Creek  
DISTRICT: Grant / Hackers Creek  
SURFACE OWNER: Linda & William W. Brodwater III  
ROYALTY OWNER: Leeman B. Maxwell Helrs, et al LEASE NO: ACREAGE: 247.84

PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) LP & BH MOD  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 21,868' MD

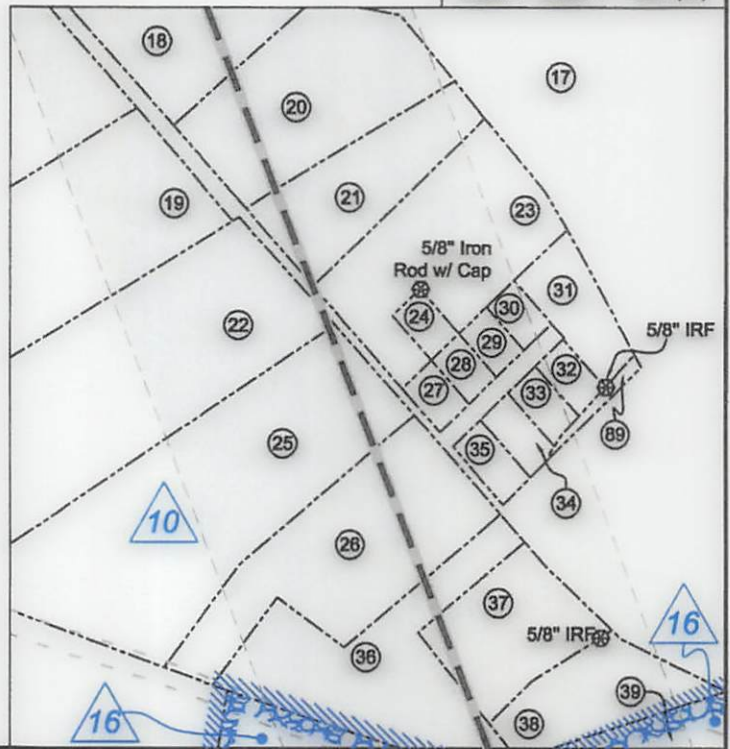
Top - West Milford  
QUADRANGLE: Btm - Weston  
COUNTY: Harrison / Lewis  
ACREAGE: 200

WELL OPERATOR: HG Energy II Appalachia, LLC DESIGNATED AGENT: Diane C. White  
ADDRESS: 5260 Dupont Road ADDRESS: 5260 Dupont Road  
Parkersburg, WV 26101 Parkersburg, WV 26101



Harrison County				
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Detail 1 - Scale: 1" = 500' (4x)



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9	W.A. Jackson
10	Isaac Jackson
11	Pearl Reel
12	William C. White
13	J.W. Jackson
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FILE NO: 195-36-G-18  
DRAWING NO: 1208 S-7H Well Plat  
SCALE: 1" = 2000'  
MINIMUM DEGREE OF ACCURACY:  
Submeter  
PROVEN SOURCE OF ELEVATION:  
CORS, Bridgeport, WV



DATE: September 23 20 19  
OPERATOR'S WELL NO. 1208 S-7H  
API WELL NO MOD |  
47 - 033 - 05960  
STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
(IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW

LOCATION: ELEVATION: 1,147' WATERSHED: Middle West Fork Creek

QUADRANGLE: Top - West Milford  
Btm - Weston

DISTRICT: Grant / Hackers Creek

COUNTY: Harrison / Lewis

SURFACE OWNER: Linda & William W. Brodwater III

ACREAGE: 200

ROYALTY OWNER: Leeman B. Maxwell Heirs, et al

LEASE NO: \_\_\_\_\_ ACREAGE: 247.84

PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) LP & BH MOD

PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 21,868' MD

WELL OPERATOR: HG Energy II Appalachia, LLC

DESIGNATED AGENT: Diane C. White

ADDRESS: 5260 Dupont Road

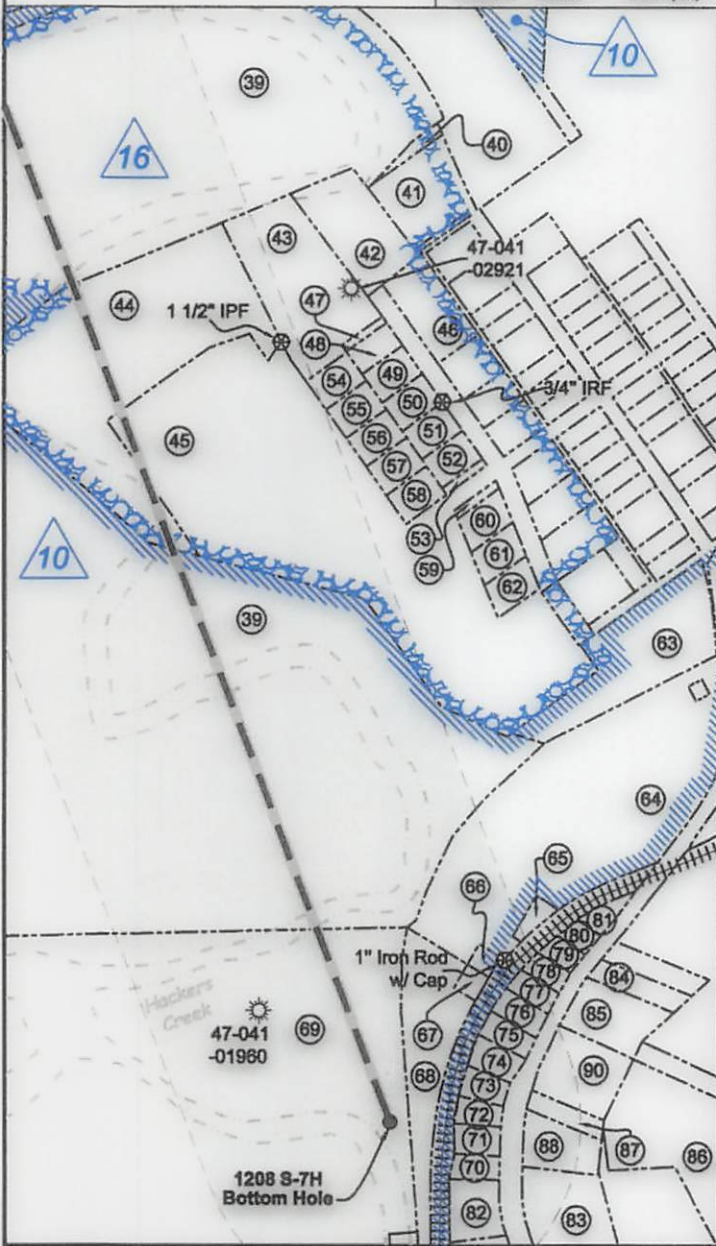
ADDRESS: 5260 Dupont Road

Parkersburg, WV 26101

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Detail 2 - Scale: 1" = 500' (4x)



No.	TM / Par	Owner	Bk / Pg	Ac.
16	8B / 6	Roy G. Juckett	638 / 520	34.00
17	8B / 7	William E. Watson	547 / 164	71.51
18	8B / 7.3	Risha Family LP	712 / 700	3.21
19	8B / 7.2	USARC Military Reservation	509 / 790	9.83
20	8B / 7.16	Big Brother & Holding Co.	682 / 778	4.77
21	8B / 7.15	Big Brother & Holding Co.	682 / 778	2.84
22	8C / 30	RGL Inc.	665 / 707	11.90
23	8B / 7.14	Big Brother & Holding Co.	682 / 778	4.68
24	8C / 103	Thomas R. & Kathy M. Ellis	653 / 62	0.36
25	8C / 30.2	Victoria S. Martin	465 / 37	11.91
26	8C / 31	Victoria S. Martin	380 / 183	5.51
27	8C / 95	Henry J. & Margaret G. Ford	630 / 431	0.36
28	8C / 97	Forest J. & JoAnn Nicholson	587 / 722	0.34
29	8C / 98	Sandra Kay Matthews	620 / 376	0.34
30	8C / 99	Mark F. Smith	593 / 8	0.34
31	8C / 100	Philip C. & Norma K. Alfred	605 / 254	1.28
32	8C / 96	Garland E. & Jean C. Chapman	666 / 441	0.39
33	8C / 93	Richard J. Davis	W33 / 424	0.40
34	8C / 92	Rebecca T. Cronin	625 / 583	0.447
35	8C / 91	Kenneth E. & Alice F. Smith	683 / 572	0.46
36	8C / 31.3	Victoria S. Martin	349 / 591	5.00
37	8C / 31.2	Victoria S. Martin	377 / 285	2.67
38	8C / 31	Elizabeth D. & Carl A. Meahl Jr.	536 / 90	1.93
39	8C / 33.2	C.D. Cole	502 / 70	150.51
40	5 / 62	William C. White	W23 / 102	0.097
41	5 / 63	William C. White	W23 / 102	0.86
42	8C / 33.5	Michael B. & Judy M. Grogg	511 / 612	1.14
43	8C / 33.10	Linda J. Cooke	FID	1.79
44	8C / 33	Lantetta S. & Glenna K. Myers	598 / 332	6.73
45	8C / 33.1	Jane Lew Associates	409 / 488	10.35
46	8C / 33.7	David D. & Kimberly M. Marple	514 / 156	0.74
47	8C / 33.4	Lowell Weaver	580 / 680	0.059
48	8C / 33.3	Sharon K. Weaver	507 / 475	0.214
49	5 / 50	David & Sharon Snyder	370 / 149	0.27
50	5 / 51	Bethel M. Cruze	700 / 794	0.27
51	5 / 52	Sharon Stalknaker	622 / 270	0.27
52	5 / 53	Lowell W. Weaver	471 / 668	0.27
53	8C / 33.4	Lowell W. Weaver	580 / 680	0.06
54	5 / 58	Carol Susan Taylor	627 / 593	0.27
55	5 / 59	Carol Susan Taylor	627 / 593	0.26
56	5 / 60	Dale & Katherin Holden	680 / 239	0.26
57	5 / 61	Michael L. & Betty A. Ford	379 / 386	0.27
58	5 / 54	Joetta J. & George Anderson	594 / 552	0.27
59	5 / 64	Betty Hitt	582 / 261	0.07
60	5 / 55	Larry F. Bean II	634 / 569	0.276
61	5 / 56	William F. & Linda K. Murphy	731 / 666	0.276
62	5 / 57	Marjorie & Linda C. Hyatt	510 / 581	0.275
63	8C / 33.12	Lisa & David Wagner	604 / 150	2.34
64	8C / 47	C.J. Martin II	666 / 168	5.67
65	1 / 42.1	Derek Long	642 / 334	0.19
66	8C / 47.1	C.J. Martin II	666 / 168	0.09
67	8C / 47.2	C.J. Martin II	666 / 168	0.11
68	8C / 47.3	C.J. Martin II	666 / 168	1.40
69	8C / 34	Charles D. Cole II	437 / 680	136.87
70	1 / 34	Melissa S. Mann	724 / 943	0.17
71	1 / 35	Big Brother & Holding Co. LLC	682 / 411	0.21
72	1 / 36	Big Brother & Holding Co. LLC	682 / 411	0.16
73	1 / 37.1	Zachary Lamb	674 / 66	0.19
74	1 / 37	Jason D. & Sarah H. Bryant	651 / 730	0.45
75	1 / 38	Amanda Jo Frazier	651 / 69	0.16
76	1 / 39	Cinda Roby, et al	W46 / 139	0.21
77	1 / 40	Dale Keith McCoy	657 / 360	0.17
78	1 / 41	Robert M. Brown	682 / 220	0.15
79	1 / 42	Jay H. & Linda McCarty	450 / 338	0.14
80	1 / 43	Douglas E. & Ruth M. Ferrell	680 / 150	0.12
81	1 / 44	Douglas E. & Ruth M. Ferrell	680 / 150	0.19
82	1 / 33	Kathryn L. Fridley	W46 / 494	0.38
83	1 / 49	Robert T. & Cynthia M. Swiger	323 / 163	1.13
84	1 / 46.2	David L. & Celia K. Radcliff	576 / 818	0.32
85	1 / 46	Garrison & Heather Grogg	708 / 58	0.75
86	1 / 68	Board of Education	216 / 215	2.80
87	1 / 48	Board of Education	151 / 129	0.28
88	1 / 84	Christel L. Beam	738 / 201	0.568
89	8C / 94	William E. Watson	566 / 489	0.197
90	1 / 47	Board of Education	- / -	1.00

FILE NO: 195-36-G-18  
DRAWING NO: 1208 S-7H Well Plat  
SCALE: 1" = 2000'  
MINIMUM DEGREE OF ACCURACY:  
Submeter  
PROVEN SOURCE OF ELEVATION:  
CORS, Bridgeport, WV

**STATE OF WEST VIRGINIA**  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
**OIL AND GAS DIVISION**

DATE: September 23 20 19

OPERATOR'S WELL NO. 1208 S-7H

API WELL NO **MOOI**

47 - 033 - 05960

STATE COUNTY PERMIT

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