



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street, S.E.
Charleston, WV 25304
(304) 926-0450
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Jim Justice , Governor
Austin Caperton , Cabinet Secretary
www.dep.wv.gov

Wednesday, February 08, 2017
WELL WORK PERMIT
Horizontal 6A / Re-Work

CNX GAS COMPANY LLC (A)
POST OFFICE BOX 1248

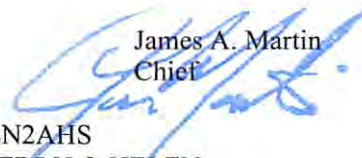
JANE LEW, WV 263786506

Re: Permit approval for PEN2AHS
47-085-10067-00-00

This well work permit is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to any additional specific conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas Inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days of completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

Per 35 CSR 4-5.2.g this permit will expire in two (2) years from the issue date unless 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: PEN2AHS
Farm Name: KIESSLING, TERRY & HELEN
U.S. WELL NUMBER: 47-085-10067-00-00
Horizontal 6A / Re-Work
Date Issued: 2/8/2017

Promoting a healthy environment.

02/10/2017

PERMIT CONDITIONS

West Virginia Code § 22-6A-8(d) allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

1. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.
2. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled *Water Well Regulations*, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.
3. 24 hours prior to the initiation of the completion process the operator shall notify the Chief or his designee.
4. During the completion process the operator shall monitor annular pressures and report any anomaly noticed to the chief or his designee immediately.
5. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.
6. The operator shall provide to the Office of Oil and Gas the dates of each of the following within 30 days of their occurrence: completion of construction of the well pad, commencement of drilling, cessation of drilling, completion of any other permitted well work, and completion of the well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov.

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

1) Well Operator: CNX GAS COMPANY LLC

<u>494458046</u>	<u>085</u>	<u>Clay</u>	<u>Ellenboro</u>
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Operator ID County District Quadrangle

2) Operator's Well Number: PEN2AHS Well Pad Name: PEN2

3) Farm Name/Surface Owner: Kiessling Public Road Access: County Road 6/3

4) Elevation, current ground: 1075.4 Elevation, proposed post-construction: 1075.4

5) Well Type (a) Gas Oil Underground Storage

Other _____

(b) If Gas Shallow Deep

Horizontal

*Michael Daff
12-20-16*

6) Existing Pad: Yes or No yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Target Marcellus, Depth 6262'-6324, Thickness 62", Pressure 4174#psi

8) Proposed Total Vertical Depth: 6314'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 16028'

11) Proposed Horizontal Leg Length: 11,039

12) Approximate Fresh Water Strata Depths: 454

13) Method to Determine Fresh Water Depths: Closest well and Seneca Technology database

- already drilled

14) Approximate Saltwater Depths: 1244'

15) Approximate Coal Seam Depths: No Coal

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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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	20"	N	LS	52	40'	40'	GTS
Fresh Water	13 3/8"	N	J-55	54.5	579'	579'	CTS
Coal							
Intermediate	9 5/8"	N	HCK-55 BTC	36.0	5410'	5410'	CTS
Production	5 1/2"	N	HCP-110 TXP BTC	20.0	16028'	16028'	14.8 ppg Class A tail slurry to intermediate
Tubing							
Liners							

existing

EXISTING

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	20"	26"	0.25	2703		Grout to surface	Grout to surface
Fresh Water	13 3/8"	17.5"	.380	2730		Type 1	1.18
Coal							
Intermediate	9 5/8"	12.25"	.352	3520		Class A	1.19
Production	5 1/2"	8.75/8.5"	.361	12,640		Class A	1.27
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:

Well previously drilled by NOBLE ENERGY. Submitting permit application to complete hydraulic fracturing operations and produce the well.

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

The completions phase will be multiple stages 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. Max Pressure 9,600 PSI, Max Rate 100 BPM

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 1.5 - Expansion

22) Area to be disturbed for well pad only, less access road (acres): 1.5 - Expansion

23) Describe centralizer placement for each casing string:

PREVIOUSLY COMPLETED. From original NOBLE ENERGY submittal "Conductor- No centralizers used. Fresh Water/Surface- Bow spring centralizers every 3 joints to surface. Intermediate- Bow spring centralizers on every joint to KOP, one every third joint from KOP to 100' surface. Production - Rigid bow spring every third joint from KOP to TOC, rigid bow spring every joint to KOP" (previous submittal attached)

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

PREVIOUSLY COMPLETED. From original Noble Energy submittal "Conductor 1.15% CaCl2. Fresh Water -1.15% CaCl2. Coal 1.15 CaCl2, 0.6% gas migration control additive, 0.5% fluid loss additive, 0.4% salt tolerant dispersant, and 0.3% defoamer, Intermediate -10.0% BWOW NaCl, 0.2% BWOB Anti-Foam, 0.3% BWOW Dispersant, 0.4% BWOB Cement retarder. Production: 2.6% Cement extender, 0.7% Fluid Loss additive, 0.5% high temperature retarder, 0.2% friction reducer." (previous submittal attached)

25) Proposed borehole conditioning procedures:

PREVIOUSLY COMPLETED. From original NOBLE ENERGY submittal " Conductor- The hole is drilled w/ air and casing is run in air. apart from insuring the hole is clean via air circulation at TD, there are no other conditioning procedure. Fresh Water- The hole is drilled w/air and casing is run with air. Once casing is on bottom, the hole is filled w/ KCl water and a minimum of one hole volume is circulated prior to pumping cement. Coal- The hole is drilled with air and casing is run in air. Once casing is at set depth, the hole is filled w/KCl water and a minimum of one hole volume is circulated prior to pumping cement. Intermediate - Once surface casing is set and cemented intermediate hole is drilled either on air or SOBM and filled w/ KCl water once drilled to TD. The well is conditioned with KCl Circulation prior to running casing. Once casings is at setting depth, the well is circulated a minimum of one hole volume prior to pumping cement. Production - the hole is drilled with synthetic oil base mud and once at TD the hole is circulated at a drilling pump rate for at least three hours. Once the torque and drag trends indicate the hole is clean and drilling BHA is puled and casing is run. Once on bottom w/ casing the hole is circulated a minimum of one hole volume prior to pumping cement." (Previous submittal attached)

*Note: Attach additional sheets as needed.

PENS2 Pad Frac - SOG Review

In accordance with WVDEP 35CSR8 Section 5.11, all known shallow oil and gas (SOG) wells have been identified within a 1000' radius of the PENS2 pad. Any SOG well that falls within the Area of Review (AOR) is provided in a list that includes API, Operator, Well Name, Well Number, Current Status, Total Depth, Producing Formation at Total Depth, and Permit Date. See following pages.

The Marcellus Shale of the Pennsboro area is found at an approximate True Vertical Depth (TVD) of 6200'. Although there are a significant number of SOG Communication events in the Pennsboro area (Figure 1), it is highly unlikely that communication will occur with any wells producing from formations shallower than the Benson Sand, found at an approximate TVD of 5000'. This is based on previous experience and study of SOG Communication with Marcellus fracs throughout Ritchie and Doddridge counties. In the Pennsboro area, there are very few producing formations between the Big Injun and the Benson Sand. Most wells are either approximately 2000' or 5000' deep.

The current hypothesis for SOG Communication is that Marcellus frac fluids and pressure intersect and migrate up a nearby fault that acts as a conduit for upward migration and intersection with high permeability reservoirs of the Alexander and Benson. Both of these reservoirs are primarily depleted, allowing an easier pressure migration throughout these formations. Geomechanical data is collected from dipole sonic logs. CONSOL's nearest sonic data is from the PENS1C well (Figure 2), immediately adjacent to the PENS2 pad. Frac modeling (Figure 3) of the Marcellus in the area does not show significant upward frac growth. In fact, typical frac height would need to be more than double to reach the Alexander, approximately 1000' above the Marcellus Shale.

Figure 1. SOG Communication events are represented by red diamonds in conjunction with the PENS1 and PENS2 fracs completed to date.

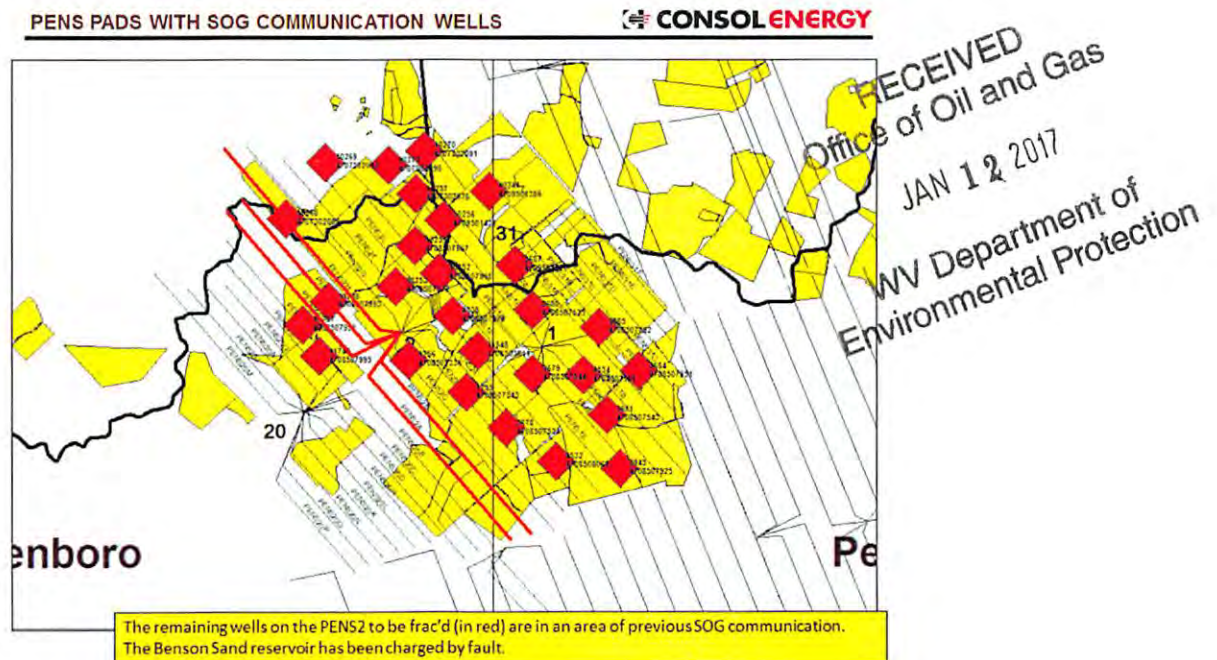
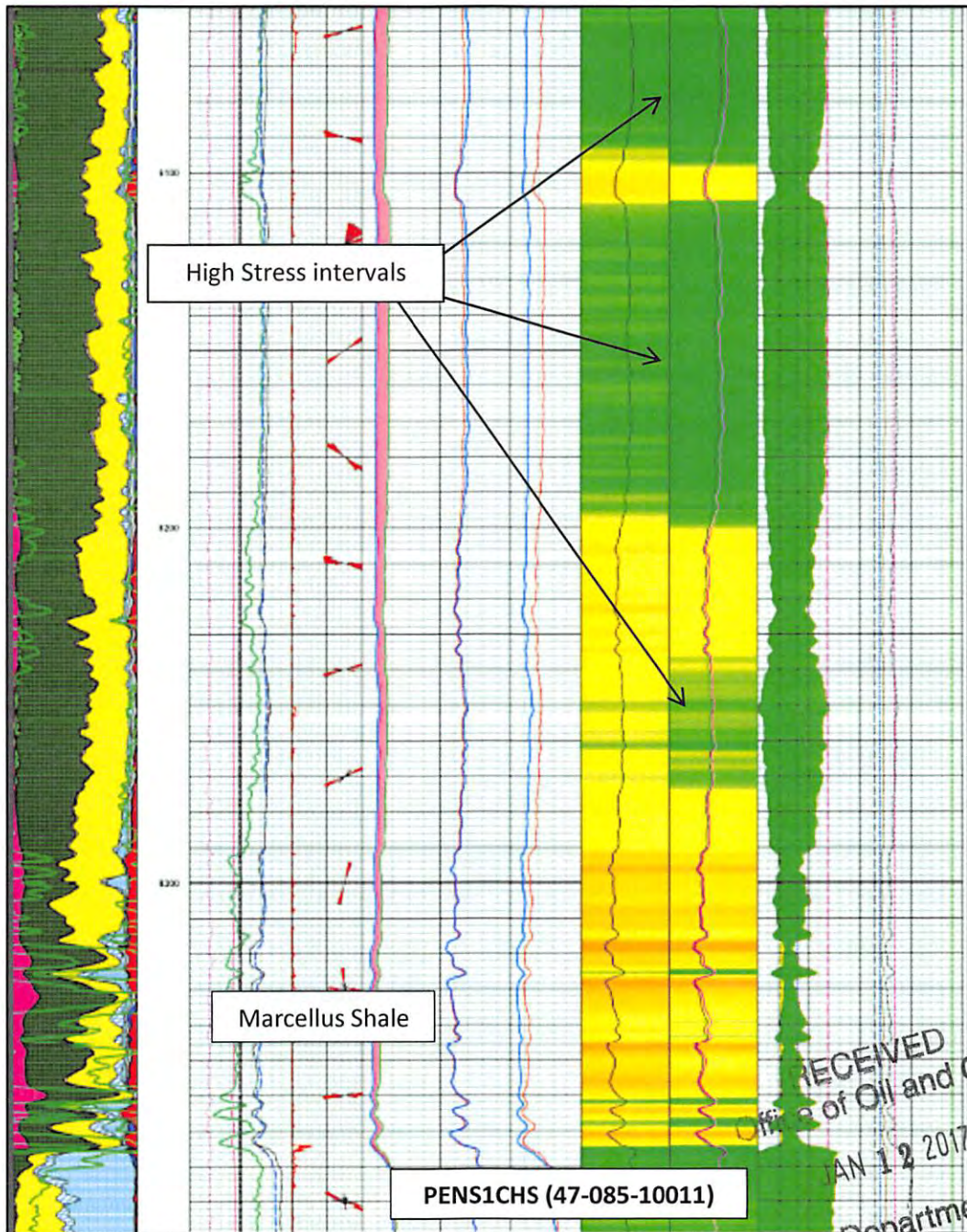
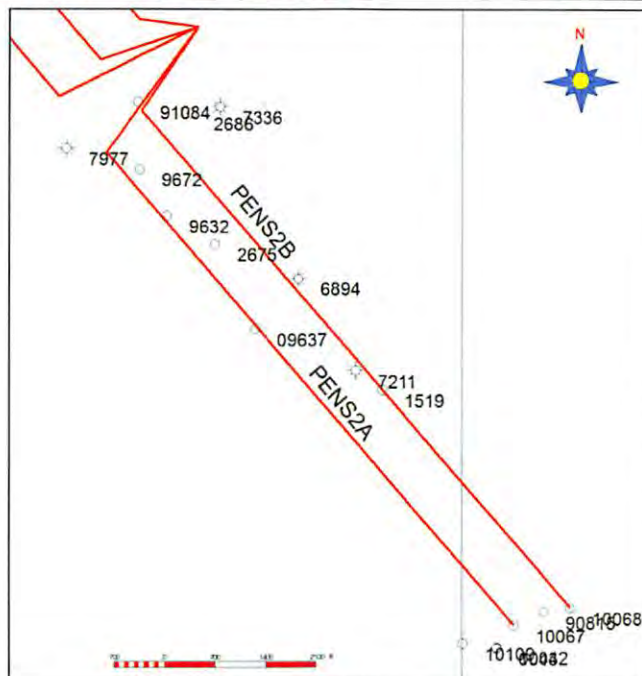


Figure 2. Stratigraphic intervals of high stress should serve as adequate confining layers, or frac barriers, for a Marcellus frac, seen below in the PENS1C Stress Profile log.



PENS2 "SOUTH" WELLS TO BE FRAC'D (A, B)



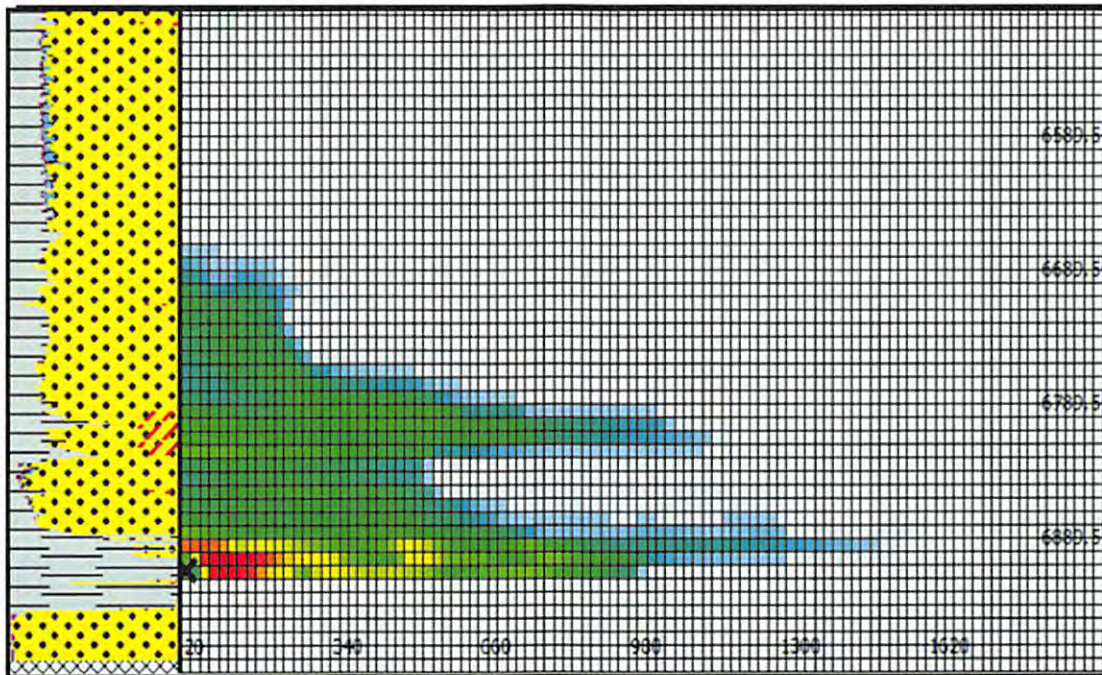
API	OPERATOR	WELL NAME	WELL #	STATUS	TD	PRODUCING FORMATION AT TD	PERMIT DATE	STATUS COMMENTS	DISTANCE FROM LATERAL (MAP VIEW)
Any well producing from a formation deeper than 4700' is within 1500' of the Marcellus.									
4708510042	Antero Resources Appalachia Corp.	SCHMIDLE UNIT #1H	1H	GAS	6452	MARCELLUS	4/4/2014	PRODUCING MARCELLUS HORIZONTAL	
4708510055	CONSOL		PEN 2 CHS	PERMIT	6314	MARCELLUS	10/29/2013	PRODUCING MARCELLUS LATERAL, 750' AWAY	750
4708509672	HALL DRILLING	FOX RUSSELL	A HALL 1	PLUGGED	6300	NONE	12/28/2007	VERTICAL MARCELLUS WELL, PLUGGED 10-20-14	
4708510109	CONSOL		PEN 20 BHS	GAS	6242	NONE	08/02/2014	DRILLED BUT NOT FRAC'D MARCELLUS HORIZONTAL	700
4708506894	SENECA UPSHUR PETROLEUM	GOFF RICHARD L.	JK929	GAS	5392	DEVONIAN SHALE	9/11/1984	PRODUCING, COMMUNICATED ALREADY	
4708507211	SENECA UPSHUR PETROLEUM	KIGER JAMES & ARDETH	JK100	GAS	5911	DEVONIAN SHALE	3/26/1985	PRODUCING, COMMUNICATED ALREADY	
4708507977	PARDEE EXPLORATION COMPANY	SMITH JOHN A.	JNO A SMITH 9	GAS	5453	ALEXANDER	9/25/1990	PRODUCING	
4708507336	CONSOL	Adkins, R. G.	1256	GAS	5128	BENSON	4/1/1985	PRODUCING, COMMUNICATED ALREADY	860
4708502686	CURFREY BROWN OIL	HALL ARTHUR L.	1	ABD	2020	BIG INJUN	3/20/1963	ABANDONED WELL	
4708502675	CURFREY BROWN OIL	HALL ARTHUR L.	2	ABD	1960	BIG INJUN	2/14/1963	ABANDONED WELL	
4708501519	A E LAMP	MAPLE LILLIE &	1	ABDOIL	1926	BIG INJUN	7/26/1954	ABANDONED WELL	
4708510043	Antero Resources Appalachia Corp.	SCHMIDLE UNIT #2H	2H	PERMIT			7/26/2013	STATUS UNKNOWN, PERMITTED MARCELLUS LATERAL	
4708508815				UNKNOWN				UNKNOWN	
4708510104				UNKNOWN				UNKNOWN	
4708509632	HALL DRILLING	FOX RUSSELL E.	A. HALL 1	CAN			9/19/2007	NEVER DRILLED	
4708509637	HALL DRILLING	JORDAN MIKE	A. HALL 3	CAN			10/10/2007	NEVER DRILLED	

Pink highlighted wells infer internal monitoring required.

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Figure 3. Stratigraphic intervals of high stress should serve as adequate frac barriers for a Marcellus frac. The frac modeling example below is from the Oxford area of western Doddridge County, where the Marcellus and adjacent shallower shales are lithologically similar to Pennsboro. Frac modeling only yields frac height of approximately 300' and falls far short of the 1000' required to communicate with the Alexander or Benson formations. Therefore, faulting is the primary suspect for upward frac migration.

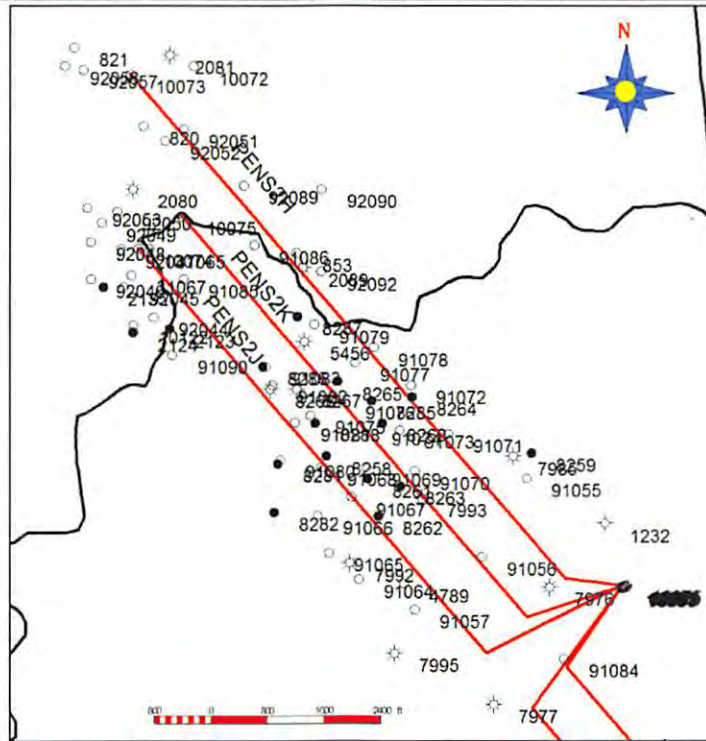
SOG Communication: OXFD13CHS Frac Simulation



Frac Simulation of the Oxford area, Doddridge County, WV. Model of 300 stage spacing yields frac height of 260 feet. Tully Limestone (~25'), Tully-Hamilton (~55'), Marcellus-Alexander (1500')

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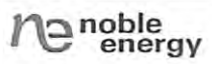
PENS2 "NORTH" WELLS TO BE FRAC'D (J, K, H)



API	OPERATOR	WELL NAME	WELL #	STATUS	TD	PRODUCING FORMATION AT TD	PERMIT DATE	STATUS COMMENTS	DISTANCE FROM LATERAL (MAP VIEW)
Any well producing from a formation deeper than 4700' is within 1500' of the Marcellus.									
4708510072	CONSOL		PEN2GHS		6217	MARCELLUS	11/12/2013	PRODUCING MARCELLUS LATERAL, 750' FROM PENS2H	750
4708505456	TRIAD RESOURCES	SMITH EDNA ETAL	HEMSWORTH 4	GAS	5500	ALEXANDER	4/16/1982	PRODUCING	
4708507977	PARDEE EXPLORATION COMPANY	SMITH JOHN A.	JND A SMITH 9	GAS	5453	ALEXANDER	9/25/1990	PRODUCING	
4708507976	PARDEE EXPLORATION COMPANY	SMITH JOHN A.	JND A SMITH 8	GAS	5300	ALEXANDER	10/21/1990	PRODUCING	
4707302080	GLASS DEVELOPMENT	SMITH EDNA V.	E. V. SMITH 1	GAS	5234	ALEXANDER	11/6/1990	ABANDONED WELL	
4708507985	PARDEE EXPLORATION COMPANY	SMITH JOHN A.	J. A. SMITH 6	GAS	5176	BENSON	10/29/1990	PRODUCING	
4708507992	CONSOL	Simonton #1	11737	GAS	5032	BENSON	10/19/1990	PRODUCING, COMMUNICATED ALREADY	653
4707302081	PARDEE EXPLORATION COMPANY	JONES MARY E.	JONES 2	GAS	5026	BENSON	12/6/1990	PRODUCING	
4707302089	CONSOL	Laura Whaley 1	10268	GAS	5015	BENSON		PRODUCING, COMMUNICATED ALREADY	65
4708507995	CONSOL	Weekley #1	11748	GAS	5006	BENSON	10/22/1990	PRODUCING, COMMUNICATED ALREADY	990
4708507993	CONSOL	Simonton #2	11738	GAS	5005	BENSON	10/19/1990	PRODUCING, COMMUNICATED ALREADY	30
4707300820	ERIC CUMMINGHAM	TULLOS STEPHEN	1	ABDGAS	2705	GORDON	2/14/1980	ABANDONED WELL	
4708508264	GLASS DEVELOPMENT COMPANY	COASTAL LUMBER CO.	H. PYLES 1	OIL	2087	BIG INJUN	unknown	ABANDONED WELL	
4708508261	GLASS DEVELOPMENT COMPANY	CARROLL MIKE	WM SIMONTON 7	OIL	1975	BIG INJUN	unknown	ABANDONED WELL	
4708501232	E C HARTMAN	J Hammond 1		DRY	1966	BIG INJUN	unknown	PLUGGED	
4708508260	GLASS DEVELOPMENT COMPANY	CARROLL MIKE	WM SIMONTON 6	OIL	1960	BIG INJUN	unknown	ABANDONED WELL	
4708508259	GLASS DEVELOPMENT COMPANY	CARROLL MIKE	WM SIMONTON 5	OIL	1954	BIG INJUN	unknown	ABANDONED WELL	
4708508285	GLASS DEVELOPMENT COMPANY	SMITH EDNA	0	OIL	1952	BIG INJUN	unknown	ABANDONED WELL	
4708508263	GLASS DEVELOPMENT COMPANY	CARROLL MIKE	WM SIMONTON 9	OIL	1945	BIG INJUN	unknown	PRODUCING OIL	
4708508287	GLASS DEVELOPMENT COMPANY	SMITH EDNA	0	OIL	1927	BIG INJUN	unknown	ABANDONED WELL	
4708508265	GLASS DEVELOPMENT COMPANY	COASTAL LUMBER CO.	H. PYLES 3	OIL	1913	BIG INJUN	unknown	PRODUCING OIL	
4708508258	GLASS DEVELOPMENT COMPANY	CARROLL MIKE	WM SIMONTON 4	OIL	1900	BIG INJUN	unknown	ABANDONED WELL	
4708508288	BEECHUCK OIL INC	SMITH EDNA	0	OIL	1880	BIG INJUN	unknown	ABANDONED WELL	
4707302124	GLASS DEVELOPMENT	HAMMETT HOMER	M. L. GORRELL 3	OIL	1878	BIG INJUN	unknown	ABANDONED WELL	
4707302125	GLASS DEVELOPMENT	McCULLOUGH HEIRS	E. WAGNER 6	OIL	1875	BIG INJUN	unknown	ABANDONED WELL	
4708508262	GLASS DEVELOPMENT COMPANY	CARROLL MIKE	WM SIMONTON 8	OIL	1855	BIG INJUN	unknown	ABANDONED WELL	
4707302123	GLASS DEVELOPMENT	HAMMETT HOMER	M. L. GORRELL 2	OIL	1823	BIG INJUN	unknown	ABANDONED WELL	
4708508282	GLASS DEVELOPMENT COMPANY	RITCHIE RODNEY	0	OIL	1820	BIG INJUN	unknown	ABANDONED WELL	
4708508268	GLASS DEVELOPMENT COMPANY	HAMMETT HOMER	M. L. GORRELL 2	GAS	1818	BIG INJUN	unknown	ABANDONED WELL	
4708508286	GLASS DEVELOPMENT COMPANY	SMITH EDNA	0	OIL	1815	BIG INJUN	unknown	PRODUCING OIL	
4708508281	GLASS DEVELOPMENT COMPANY	RITCHIE RODNEY	0	OIL	1780	BIG INJUN	unknown	ABANDONED WELL	
4708508267	GLASS DEVELOPMENT COMPANY	HAMMETT HOMER	M. L. GORRELL 1	GAS	1715	BIG INJUN	unknown	ABANDONED WELL	
4708504789	KEY OIL	SMITH JOHN A.	EDNA SMITH 1	PLG	550		unknown	PLUGGED	

Pink highlighted wells infer internal monitoring required.

85-100671-



Casing Summary

Well Name: PEN-2A-HS

Conductor, 66.3ftKB											
Set Depth (ftKB)		Set Tension (kips)		String Nominal OD (in)		String Min Drift (in)		Centralizers		Scratchers	
66.3				20				0			
Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Thread	Top (ftKB)	Btm (ftKB)	Len (ft)	P Burst (psi)	P Collapse (psi)
1	Casing Joints	20	19.124	94.00	K-55		30.2	66.3	36.10		520.0
Surface, 616.4ftKB											
Set Depth (ftKB)		Set Tension (kips)		String Nominal OD (in)		String Min Drift (in)		Centralizers		Scratchers	
616.4				13 3/8		12.459		5			
Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Thread	Top (ftKB)	Btm (ftKB)	Len (ft)	P Burst (psi)	P Collapse (psi)
1	Wellhead	13 3/8	12.615	54.50	J-55	Buttress Thread	26.2	29.5	3.21		1,130.0
13	Casing Joints	13 3/8	12.615	54.50	J-55	Buttress Thread	29.5	570.8	541.29		1,130.0
1	Float Collar	13 3/8	12.615	54.50	J-55	Buttress Thread	570.8	572.8	2.00		1,130.0
1	Casing Joints	13 3/8	12.615	54.50	J-55	Buttress Thread	572.8	614.9	42.15		1,130.0
1	Float Shoe	13 3/8	12.615	54.50	J-55	Buttress Thread	614.9	616.4	1.50		
Intermediate, 5,462.4ftKB											
Set Depth (ftKB)		Set Tension (kips)		String Nominal OD (in)		String Min Drift (in)		Centralizers		Scratchers	
5,462.4				9 5/8		68					
Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Thread	Top (ftKB)	Btm (ftKB)	Len (ft)	P Burst (psi)	P Collapse (psi)
0	LD Joint	9 5/8	8.921	36.00	HCP-55	BUTTRESS	28.2	28.2	0.00		2,020.0
1	Hanger	9 5/8	8.921	36.00	HCP-55	BUTTRESS	28.2	30.1	1.87		2,020.0
13	Casing Joints	9 5/8	8.921	36.00	HCP-55	BUTTRESS	30.1	5,378.6	5,348.51		2,020.0
1	Float collar	9 5/8	8.921	36.00	HCP-55	BUTTRESS	5,378.6	5,379.7	1.06		2,020.0
2	Casing Joints	9 5/8	8.921	36.00	HCP-55	BUTTRESS	5,379.7	5,461.0	81.35		2,020.0
1	Float Shoe	9 5/8	8.921	36.00	HCP-55	BUTTRESS	5,461.0	5,462.4	1.37		2,020.0
Production, 16,386.0ftKB											
Set Depth (ftKB)		Set Tension (kips)		String Nominal OD (in)		String Min Drift (in)		Centralizers		Scratchers	
16,386.0				5 1/2		275					
Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Thread	Top (ftKB)	Btm (ftKB)	Len (ft)	P Burst (psi)	P Collapse (psi)
397	Casing Joints	5 1/2	4.778	20.00	P-110	TXP-BTC	0.0	16,252.9	16,252.91		11,100.0
1	TOE SLEEVE	5 1/2	4.778	20.00	P-110	TXP-BTC	16,252.9	16,258.4	5.50		11,100.0
1	Casing Joints	5 1/2	4.778	20.00	P-110	TXP-BTC	16,258.4	16,301.3	42.88		11,100.0
1	LANDING COLLAR	5 1/2	4.778	20.00	P-110	TXP-BTC	16,301.3	16,302.8	1.50		11,100.0
1	Casing Joints	5 1/2	4.778	20.00	P-110	TXP-BTC	16,302.8	16,341.6	38.85		11,100.0
1	FLOAT COLLAR	5 1/2	4.778	20.00	P-110	TXP-BTC	16,341.6	16,342.6	0.95		11,100.0
1	Casing Joints	5 1/2	4.778	20.00	P-110	TXP-BTC	16,342.6	16,382.7	40.11		11,100.0
1	SHOE	5 1/2	4.778	20.00	P-110	TXP-BTC	16,382.7	16,386.0	3.30		11,100.0

RECEIVED
Office of Oil and Gas
JAN 03 2017
MAC
WV Department of Environmental Protection
85-100-16
02/10/2017



Cement Summary

Well Name: PEN-2A-HS

Report Date: 12/6/2016

API 47-085-10067	Surface Legal Location	Regulatory Field	County/Parish RITCHIE	State/Province WEST VIRGINIA	Well Configuration Type HORIZONTAL
Ground Elevation (ft) 1,084	Casing Flange Elevation (ft) 1,084.00	KB - GL / MSL (ftKB) 26.25	KB-Casing Flange Distance (ft) 26.25	Spud Date 1/15/2014 03:30	Rig Release Date 8/13/2014 02:00

Production Casing Cement, Casing, 8/12/2014 19:19

Description

Production Casing Cement

String Production, 16,386.0ftKB	Cementing Start Date 8/12/2014	Cementing End Date 8/12/2014	Wellbore ORIGINAL HOLE		
Top Depth (ftKB) 3,000.0	Bottom Depth (ftKB) 5,850.0	Top Plug? No	Bottom Plug? Yes	Plug Bump Pressure (psi)	Cement Circulated? No
Initial Pump Rate (bbl/min) 6	Final Pump Rate (bbl/min) 6	Plug Bump Pressure (psi)	Pipe Reciprocated? No	Tagged Depth (ftKB)	Depth Plug Drilled Out To (ftKB)
Top Depth (ftKB) 5,850.0	Bottom Depth (ftKB) 16,386.0	Top Plug? Yes	Bottom Plug? No	Plug Bump Pressure (psi) 2,502.0	Cement Circulated? No
Initial Pump Rate (bbl/min) 8	Final Pump Rate (bbl/min) 8	Plug Bump Pressure (psi) 2,502.0	Pipe Reciprocated? No	Tagged Depth (ftKB)	Depth Plug Drilled Out To (ftKB)

Stage Number 1	Description Production Casing Cement	Comment Load top plug, Pump 475 sk 137bbis Propr blend Lead cement with D167 .5%, D065 .35%, D201 .52%, D046 .2% @ 13ppg Yield 1.62 cuft/sx,
-------------------	---	---

Fluid Type	Class	Amount (sacks)	Yield (ft ³ /sack)	Volume Pumped (bbl)	Density (lb/gal)	Fluid Description
Spacer	N/A	0		60.0	12.30	SPACER WITH B220
Spacer	N/A	0		60.0	12.30	SPACER
Lead	A	475	1.62	137.0	13.00	LEAD

Stage Number 2	Description Production Casing Cement	Comment Pump 2100sk, 512bbis D901 Tail cement with D020 3%, D207 .6%, D201 .5%, D046 .2%, D208 .04% @ 14.8ppg Yield 1.37 cuft/sk, Drop Top Plug, Wash lines,
-------------------	---	---

Fluid Type	Class	Amount (sacks)	Yield (ft ³ /sack)	Volume Pumped (bbl)	Density (lb/gal)	Fluid Description
Tail	A	2,100	1.37	512.0	14.80	TAIL
Displacement	N/A	0		362.0	12.00	DISPLACEMENT

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JAN 03 2017
WV Dept. of Environmental Protection
Report Printed: 12/6/2016

WW-9
(4/16)

API Number 47 - 85 - 10067 **F**
Operator's Well No. PEN2AHS

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name CNX GAS COMPANY LLC OP Code 494458046

Watershed (HUC 10) Northfork of Hughes River HUC10 / Bonds Creek Quadrangle Ellenboro

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes No

Will a pit be used? Yes No

If so, please describe anticipated pit waste: N/A

Will a synthetic liner be used in the pit? Yes No If so, what ml.? N/A

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number _____)
- Reuse (at API Number 4708510109, 4708510110, 4708510111, 4708510122, 4708510123, 4708510129, 4708510090) *Frac Water*
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain _____)

Will closed loop system be used? If so, describe: N/A

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. N/A

-If oil based, what type? Synthetic, petroleum, etc. _____

Additives to be used in drilling medium? N/A

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. N/A

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) _____

-Landfill or offsite name/permit number? N/A

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature *Matt Harley*

Company Official (Typed Name) Matt Harley

Company Official Title Manager- Permitting

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Office of Oil and Gas
JAN 12 2017

Subscribed and sworn before me this 9th day of January, 2017

Sherril Kuran

Notary Public

My commission expires 12-11-17

WV Department of Environmental Protection
COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
SHERRIL J KURAN
Notary Public
FRANKLIN TWP., GREENE COUNTY
My Commission Expires **02/10/2017**

CNX GAS COMPANY LLC

Proposed Revegetation Treatment: Acres Disturbed original 11.2, expansion 1.5 Prevegetation pH see attached

Lime see attached Tons/acre or to correct to pH see attached

Fertilizer type see attached

Fertilizer amount see attached lbs/acre

Mulch see attached Tons/acre

Seed Mixtures

Temporary

Permanent

Seed Type lbs/acre

Seed Type lbs/acre

see attached

see attached

Attach:

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, include dimensions (L x W x D) of the pit, and dimensions (L x W), and area in acreage, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Michael Doff

Comments: Site previously built and wells have been drilled but not completed. Please see attached copy of originally submitted WW9 from Noble Energy Inc. CNX GAS COMPANY LLC will follow

the previously permitted reclamation plan set forth by NOBLE ENERGY in their previous submittal for reclamation of the site as well as CNX's pad expansion areas. (see attached)

Title: Oil & Gas Inspector

Date: 12-20-16

Field Reviewed? Yes No



Safety Plan for PEN2 Well Pad

Wells PEN2AHS, PEN2BHS, PEN2HHS, PEN2JHS, PEN2KHS

CNX Gas Company LLC



Environmental Protection

Environmental Protection

Approval Sheet- PEN2 Well Pad

The Office of Oil and Gas and the Oil and Gas Conservation Commission have set forth minimum requirements for necessary equipment and procedures that must be addressed in a Safety Plan ("Plan") and shall be submitted and approved prior to drilling a deep well. A deep well shall be any well which meets the definition as provided for in Chapter 22C, Article 9 of the West Virginia Code.

A site specific Safety Plan must be submitted with each deep well application or no later than one week prior to spudding. Approved Plans shall be maintained and available at the drilling rig at all times.

The Office of Oil and Gas must approve all changes and modifications to previously approved plans.

This plan has met the requirements of the Policy Statement Deep Well Drilling Procedures and Site Safety Plan Requirements as set forth by:

West Virginia Division of Environmental Protection, Office of Oil and Gas

And

West Virginia Oil and Gas Conservation Commission.

Approved this day 20th of month December, 2016 by

Michael A. Daff

Date: 12-20-16

Date: _____

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Office of Oil and Gas
JAN 03 2017
WV Department of
Environmental Protection

CNX Gas Company LLC – PEN2 PAD – Water Management Plan

Addendum for Pennsylvania Pits/Impoundments

Statement of Purpose:

This addendum is included to explain the inclusion of several produced water storage facilities in Pennsylvania within this water management plan application.

CNX Gas Company LLC (CNX) and its subsidiaries (including CNX Water Assets LLC dba CONVEY Water Systems) own or operate several facilities outside of the state of West Virginia. Some of these facilities are being included as sources within the submitted water management plan in order to preserve the ability to recycle produced fluid stored at these facilities during the PEN2 well completion operations.

A list of well pads that have supplied water to these facilities has been included as an attachment. All of the water facilities to be utilized are permitted to hold produced fluid consistent with the regulatory obligations in that state.

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Office of Oil and Gas

JAN 03 2017

WV Department of
Environmental Protection

02/10/2017

BHL is located on topo map 7,055 feet south of Latitude: 39° 20' 00"
 SHL is located on topo map 13,993' feet south of Latitude: 39° 22' 30"

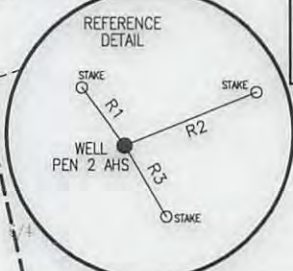
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NOTES:

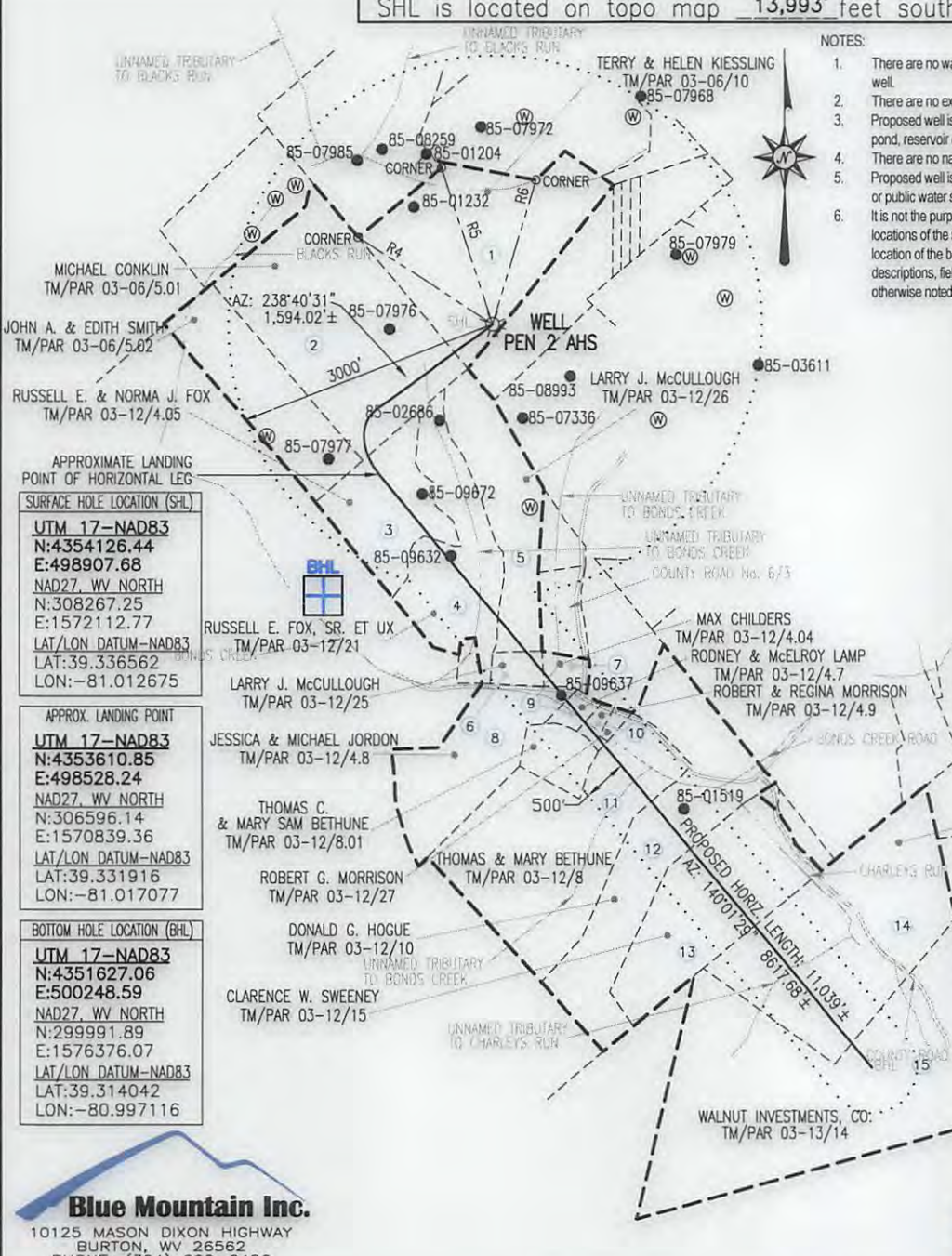
1. There are no water wells or developed springs within 250' of proposed well.
2. There are no existing buildings within 625' of proposed well.
3. Proposed well is greater than 100' from perennial stream, wetland, pond, reservoir or lake.
4. There are no native trout streams within 300' of proposed well.
5. Proposed well is greater than 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 tax map position, unless otherwise noted.

LEGEND

- TOPO MAP POINT
- WELL
- ALL ARE POINTS UNLESS OTHERWISE NOTED.
- WATER SOURCE
- LEASE NUMBER BASED ON ATTACHED WW-6A1
- MINERAL TRACT BOUNDARY
- PARCEL LINES
- WELL REFERENCE
- PROPOSED HORIZONTAL WELL
- ROAD
- STREAM CENTER LINE
- EXISTING WELLS
- PLUGGED WELLS



LINE	BEARING	DISTANCE
R1	N 36°42'29" W	150.58'
R2	N 68°16'50" E	297.00'
R3	S 30°53'03" E	170.55'
R4	N 57°21'14" W	1797.26'
R5	N 18°18'09" W	1832.09'
R6	N 16°47'53" E	1677.36'



SURFACE HOLE LOCATION (SHL)
 UTM 17-NAD83
 N:4354126.44
 E:498907.68
 NAD27, WV NORTH
 N:308267.25
 E:1572112.77
 LAT/LON DATUM-NAD83
 LAT:39.336562
 LON:-81.012675

APPROX. LANDING POINT
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 N:4353610.85
 E:498528.24
 NAD27, WV NORTH
 N:306596.14
 E:1570839.36
 LAT/LON DATUM-NAD83
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 LON:-81.017077

BOTTOM HOLE LOCATION (BHL)
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 E:500248.59
 NAD27, WV NORTH
 N:299991.89
 E:1576376.07
 LAT/LON DATUM-NAD83
 LAT:39.314042
 LON:-80.997116

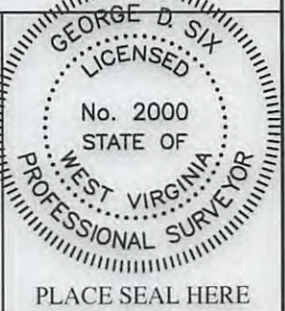
Blue Mountain Inc.
 10125 MASON DIXON HIGHWAY
 BURTON, WV 26562
 PHONE: (304) 662-6486

FILE #: PEN 2 AHS
 DRAWING #: PEN 2 AHS
 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:

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: DECEMBER 19, 2016
 OPERATOR'S WELL #: PEN 2 AHS
 API WELL #: 47 85 10067 F
 STATE COUNTY PERMIT

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

WATERSHED: NORTH FORK HUGHES RIVER ELEVATION: 1081.91± 1075.4'

COUNTY/DISTRICT: RITCHIE / CLAY QUADRANGLE: ELLENBORO, WV 7.5'

SURFACE OWNER: TERRY & HELEN KIESSLING ACREAGE: 79.242±

OIL & GAS ROYALTY OWNER: TERRY KIESSLING ET AL ACREAGE: 868.804±

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: 6,324± TMD: 16,028±

WELL OPERATOR CNX GAS COMPANY LLC DESIGNATED AGENT CHRIS TURNER
 Address 1000 CONSOL ENERGY DRIVE Address 1 DOMINION DR.
 City CANONSBURG State PA Zip Code 15317 City JANE LEW State WV Zip Code 26378

02/10/2017

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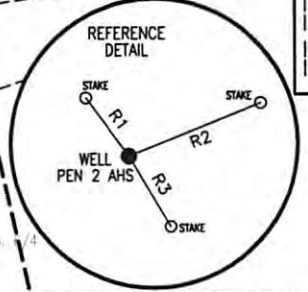
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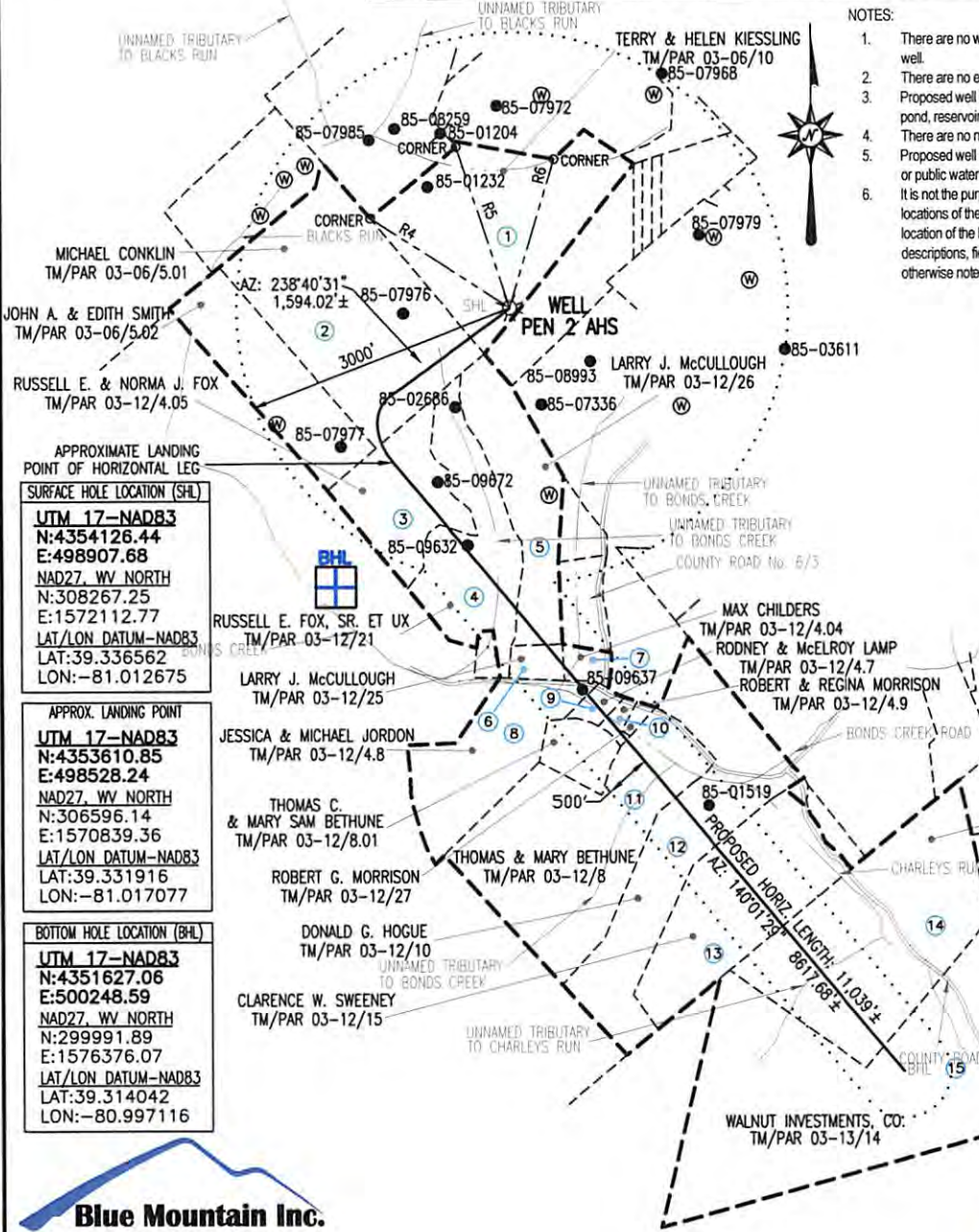
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- - WELL REFERENCE
- - PROPOSED HORIZONTAL WELL
- - ROAD
- - STREAM CENTER LINE
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WELLS WITHIN 3000'



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Signed: [Signature]
 R.P.E.: _____ L.L.S.: P.S. No. 2000

GEORGE D. SIX
 LICENSED
 No. 2000
 STATE OF
 WEST VIRGINIA
 PROFESSIONAL SURVEYOR

PLACE SEAL HERE

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

DATE: DECEMBER 19, 2016
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 Address 1000 CONSOL ENERGY DRIVE Address 1 DOMINION DR.
 City CANONSBURG State PA Zip Code 15317 City JANE LEW State WV Zip Code 26378



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 JAN 10 2017
 WV Department of Environmental Protection
 02/10/2017

85-10067 F



Matthew Hanley
Manager – Gas Permitting
CONSOL Energy Inc.
1000 CONSOL Energy Drive
Canonsburg, PA 15317

*Existing
Lateral*

West Virginia Department of Environmental Protection
Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304-2345

RE: Road Letter – PENS 2 Well Pad Rework Applications

To Whom It May Concern:

CNX Gas Company LLC has the right to drill, stimulate and produce wells that are drilled under the County and State Roads as designated on the plats.

Should you have any questions or need additional information, please do not hesitate to contact me at matthanley@consolenergy.com or 724-485-3011.

Sincerely,

A handwritten signature in blue ink that reads 'Matthew Hanley'.

Matthew Hanley
CNX Gas Company LLC

RECEIVED
Office of Oil and Gas

JAN 03 2017

WV Department of
Environmental Protection

02/10/2017

**STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE CERTIFICATION**

Date of Notice Certification: 1-3-17

API No. 47- 85 - 10067 F
Operator's Well No. PEN2AHS
Well Pad Name: PEN2

Notice has been given:

Pursuant to the provisions in West Virginia Code § 22-6A, the Operator has provided the required parties with the Notice Forms listed below for the tract of land as follows:

State: <u>West Virginia</u>	UTM NAD 83 Easting: <u>498907.682</u>
County: <u>085</u>	Northing: <u>4354126.437</u>
District: <u>Clay</u>	Public Road Access: <u>County Road 6/3</u>
Quadrangle: <u>Pennsboro</u>	Generally used farm name: <u>Keissling</u>
Watershed: <u>Northfork of Hughes River HUC10 / Bonds Creek</u>	

Pursuant to West Virginia Code § 22-6A-7(b), every permit application filed under this section shall be on a form as may be prescribed by the secretary, shall be verified and shall contain the following information: (14) A certification from the operator that (i) it has provided the owners of the surface described in subdivisions (1), (2) and (4), subsection (b), section ten of this article, the information required by subsections (b) and (c), section sixteen of this article; (ii) that the requirement was deemed satisfied as a result of giving the surface owner notice of entry to survey pursuant to subsection (a), section ten of this article six-a; or (iii) the notice requirements of subsection (b), section sixteen of this article were waived in writing by the surface owner; and Pursuant to West Virginia Code § 22-6A-11(b), the applicant shall tender proof of and certify to the secretary that the notice requirements of section ten of this article have been completed by the applicant.

<p>Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following:</p> <p>*PLEASE CHECK ALL THAT APPLY</p> <p><input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED</p> <p><input type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input checked="" type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED</p> <p><input type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or</p> <p align="center"><i>NO DRILLING</i></p> <p><input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)</p> <p><input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION</p> <p><input checked="" type="checkbox"/> 5. PUBLIC NOTICE</p> <p><input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION</p>	<p>OOG OFFICE USE ONLY</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p>
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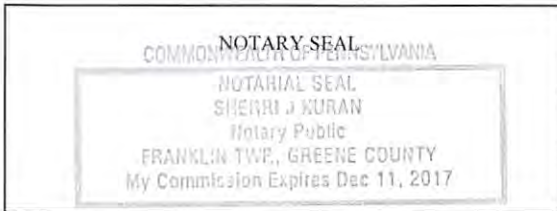
Required Attachments:

The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication date verification or the associated Affidavit of Publication. The attached Notice Forms and Certifications of Notice shall serve as proof that the required parties have been noticed as required under West Virginia Code § 22-6A. Pursuant to West Virginia Code § 22-6A-11(b), the Certification of Notice to the person may be made by affidavit of personal service, the return receipt card or other postal receipt for certified mailing.

Certification of Notice is hereby given:

THEREFORE, I Matt Hanley, have read and understand the notice requirements within West Virginia Code § 22-6A. I certify that as required under West Virginia Code § 22-6A, I have served the attached copies of the Notice Forms, identified above, to the required parties through personal service, by registered mail or by any method of delivery that requires a receipt or signature confirmation. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this Notice Certification and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator:	<u>CNX GAS COMPANY LLC</u>	Address:	<u>1000 Consol Energy Dr.</u>
By:	<u><i>Matt Hanley</i></u>		<u>Canonsburg PA 15317</u>
Its:	<u>Manager-Permitting</u>	Facsimile:	<u>724-485-4932</u>
Telephone:	<u>724-485-3011</u>	Email:	<u>MattHanley@consolenergy.com</u>



Subscribed and sworn before me this 21st day of December 2016
Sherri J. Kuran Notary Public
 My Commission Expires 12-11-17

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

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Office of Oil and Gas
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JAN 03 2017
JAN 03 2017
WV Department of
Environmental Protection
02/10/2017

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF APPLICATION

Notice Time Requirement: notice shall be provided no later than the **filing date of permit application.**

Date of Notice: 1/3/17 **Date Permit Application Filed:** 1/3/17

Notice of:

- PERMIT FOR ANY WELL WORK
- CERTIFICATE OF APPROVAL FOR THE CONSTRUCTION OF AN IMPOUNDMENT OR PIT

Delivery method pursuant to West Virginia Code § 22-6A-10(b)

- PERSONAL SERVICE
- REGISTERED MAIL
- METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION

Pursuant to W. Va. Code § 22-6A-10(b) no later than the filing date of the application, the applicant for a permit for any well work or for a certificate of approval for the construction of an impoundment or pit as required by this article shall deliver, by personal service or by registered mail or by any method of delivery that requires a receipt or signature confirmation, copies of the application, the erosion and sediment control plan required by section seven of this article, and the well plat to each of the following persons: (1) The owners of record of the surface of the tract on which the well is or is proposed to be located; (2) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for roads or other land disturbance as described in the erosion and sediment control plan submitted pursuant to subsection (c), section seven of this article; (3) The coal owner, operator or lessee, in the event the tract of land on which the well proposed to be drilled is located [sic] is known to be underlain by one or more coal seams; (4) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for the placement, construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this article; (5) Any surface owner or water purveyor who is known to the applicant to have a water well, spring or water supply source located within one thousand five hundred feet of the center of the well pad which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field within which the proposed well work activity is to take place. (c)(1) If more than three tenants in common or other co-owners of interests described in subsection (b) of this section hold interests in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be maintained pursuant to section eight, article one, chapter eleven-a of this code. (2) Notwithstanding any provision of this article to the contrary, notice to a lien holder is not notice to a landowner, unless the lien holder is the landowner. W. Va. Code R. § 35-8-5.7.a requires, in part, that the operator shall also provide the Well Site Safety Plan ("WSSP") to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

Application Notice WSSP Notice E&S Plan Notice Well Plat Notice is hereby provided to:

SURFACE OWNER(s)
Name: Terry and Helen Kiessling
Address: 8629 Red Maple Dr.
Cincinnati, OH 45244

Name: _____
Address: _____

SURFACE OWNER(s) (Road and/or Other Disturbance)
Name: Frank Grass et al
Address: 5115 Lansins DR
Charlotte, NC 28270

Name: _____
Address: _____

SURFACE OWNER(s) (Impoundments or Pits)
Name: _____
Address: _____

COAL OWNER OR LESSEE
Name: _____
Address: _____

COAL OPERATOR
Name: _____
Address: _____

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
Name: Terry and Helen Kiessling
Address: 8629 Red Maple Dr.
Cincinnati, OH 45244

OPERATOR OF ANY NATURAL GAS STORAGE FIELD
Name: _____
Address: _____

*Please attach additional forms if necessary JAN 03 2017

RECEIVED
Office of Oil and Gas

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DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
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Name: _____
Address: _____

SURFACE OWNER(s) (Road and/or Other Disturbance)

Name: Frank Grass et al
Address: 5115 Lansins DR
Charlotte, NC 28270

Name: _____
Address: _____

SURFACE OWNER(s) (Impoundments or Pits)

Name: _____
Address: _____

COAL OWNER OR LESSEE

Name: _____
Address: _____

COAL OPERATOR

Name: _____
Address: _____

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)

Name: Scott and Erica Hammond
Address: 631 Stone Road
Pennsboro WV 26415

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

Name: _____
Address: _____

*Please attach additional forms if necessary

RECEIVED
Office of Oil and Gas

JAN 03 2017

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 Name: _____
 Address: _____

COAL OWNER OR LESSEE
 Name: _____
 Address: _____

SURFACE OWNER(s) (Road and/or Other Disturbance) *✓*
 Name: Frank Grass et al
 Address: 5115 Lansins DR
Charlotte, NC 28270
 Name: _____
 Address: _____

COAL OPERATOR
 Name: _____
 Address: _____

SURFACE OWNER(s) (Impoundments or Pits)
 Name: _____
 Address: _____

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s) *✓*
 Name: Larry J McCullough
 Address: 3694 bonds Creek road
Pennsboro WV, 26415

OPERATOR OF ANY NATURAL GAS STORAGE FIELD
 Name: _____
 Address: _____

*Please attach additional forms if necessary

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Address: _____

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Name: _____
Address: _____

COAL OWNER OR LESSEE

Name: _____
Address: _____

COAL OPERATOR

Name: _____
Address: _____

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)

Name: Edward and Cheryl Haas
Address: 1060 Blacks Run
Pennsboro WV, 26415

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

Name: _____
Address: _____

*Please attach additional forms if necessary

RECEIVED
Office of Oil and Gas

JAN 03 2017

WV Department of Environmental Protection
02/10/2017

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-10(b), notice is hereby given that the undersigned well operator has applied for a permit for well work or for a certificate of approval for the construction of an impoundment or pit.

This Notice Shall Include:

Pursuant to W. Va. Code § 22-6A-10(b), this notice shall include: (1) copies of the application; (2) the erosion and sediment control plan required by section seven of this article; and (3) the well plat.

Pursuant to W. Va. Code § 22-6A-10(f), this notice shall include: (1) a statement of the time limits for filing written comments; (2) who may file written comments; (3) the name and address of the secretary for the purpose of filing the comments and obtaining additional information; and (4) a statement that the persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

Pursuant to W. Va. Code R. § 35-8-5.7.a, the operator shall provide the Well Site Safety Plan to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

Pursuant to W. Va. Code R. § 35-8-15.2.c, this notice shall: (1) contain a statement of the surface owner's and water purveyor's right to request sampling and analysis; (2) advise the surface owner and water purveyor of the rebuttable presumption for contamination or deprivation of a fresh water source or supply; advise the surface owner and water purveyor that refusal to allow the operator to conduct a pre-drilling water well test constitutes a method to rebut the presumption of liability; (3) advise the surface owner and water purveyor of his or her independent right to sample and analyze any water supply at his or her own expense; advise the surface owner and water purveyor whether or not the operator will utilize an independent laboratory to analyze any sample; and (4) advise the surface owner and or water purveyor that he or she can obtain from the Chief a list of water testing laboratories in the subject area capable of and qualified to test water supplies in accordance with standard acceptable methods.

Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Well Location Restrictions

Pursuant to W. Va. Code § 22-6A-12, Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided, whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements. (b) No well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland, or within three hundred feet of a naturally reproducing trout stream. No well pad may be located within one thousand feet of a surface or ground water intake of a public water supply. The distance from the public water supply as identified by the department shall be measured as follows: (1) For a surface water intake on a lake or reservoir, the distance shall be measured from the boundary of the lake or reservoir. (2) For a surface water intake on a flowing stream, the distance shall be measured from a semicircular radius extending upstream of the surface water intake. (3) For a groundwater source, the distance shall be measured from the wellhead or spring. The department may, in its discretion, waive these distance restrictions upon submission of a plan identifying sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state. A waiver, if granted, shall impose any permit conditions as the secretary considers necessary. (c) Notwithstanding the foregoing provisions of this section, nothing contained in this section prevents an operator from conducting the activities permitted or authorized by a Clean Water Act Section 404 permit or other approval from the United States Army Corps of Engineers within any waters of the state or within the restricted areas referenced in this section. (d) The well location restrictions set forth in this section shall not apply to any well on a multiple well pad if at least one of the wells was permitted prior to the effective date of this article. (e) The secretary shall, by December 31, 2012, report to the Legislature on the noise, light, dust and volatile organic compounds generated by the drilling of horizontal wells as they relate to the well location restrictions regarding occupied dwelling structures pursuant to this section. Upon a finding, if any, by the secretary that the well location restrictions regarding occupied dwelling structures are inadequate or otherwise require alteration to address the items

examined in the study required by this subsection, the secretary shall have the authority to propose for promulgation legislative rules establishing guidelines and procedures regarding reasonable levels of noise, light, dust and volatile organic compounds relating to drilling horizontal wells, including reasonable means of mitigating such factors, if necessary.

Water Well Testing:

Pursuant to West Virginia Code § 22-6A-10(d), notification shall be made, with respect to surface landowners identified in subsection (b) or water purveyors identified in subdivision (5), subsection (b) of this section, of the opportunity for testing their water well. The operator shall provide an analysis to such surface landowner or water purveyor at their request.

Water Testing Laboratories:

Pursuant to West Virginia Code § 22-6A-10(i), persons entitled to notice pursuant to subsection (b) of this section may contact the department to ascertain the names and locations of water testing laboratories in the subject area capable and qualified to test water supplies in accordance with standard accepted methods. In compiling that list of names the department shall consult with the state Bureau for Public Health and local health departments. A surface owner and water purveyor has an independent right to sample and analyze any water supply at his or her own expense. The laboratory utilized by the operator shall be approved by the agency as being certified and capable of performing sample analyses in accordance with this section.

Rebuttable Presumption for Contamination or Deprivation of a Fresh Water Source or Supply:

W. Va. Code § 22-6A-18 requires that (b) unless rebutted by one of the defenses established in subsection (c) of this section, in any action for contamination or deprivation of a fresh water source or supply within one thousand five hundred feet of the center of the well pad for horizontal well, there is a rebuttable presumption that the drilling and the oil or gas well or either was the proximate cause of the contamination or deprivation of the fresh water source or supply. (c) In order to rebut the presumption of liability established in subsection (b) of this section, the operator must prove by a preponderance of the evidence one of the following defenses: (1) The pollution existed prior to the drilling or alteration activity as determined by a predrilling or prealteration water well test. (2) The landowner or water purveyor refused to allow the operator access to the property to conduct a predrilling or prealteration water well test. (3) The water supply is not within one thousand five hundred feet of the well. (4) The pollution occurred more than six months after completion of drilling or alteration activities. (5) The pollution occurred as the result of some cause other than the drilling or alteration activity. (d) Any operator electing to preserve its defenses under subdivision (1), subsection (c) of this section shall retain the services of an independent certified laboratory to conduct the predrilling or prealteration water well test. A copy of the results of the test shall be submitted to the department and the surface owner or water purveyor in a manner prescribed by the secretary. (e) Any operator shall replace the water supply of an owner of interest in real property who obtains all or part of that owner's supply of water for domestic, agricultural, industrial or other legitimate use from an underground or surface source with a comparable water supply where the secretary determines that the water supply has been affected by contamination, diminution or interruption proximately caused by the oil or gas operation, unless waived in writing by that owner. (f) The secretary may order the operator conducting the oil or gas operation to: (1) Provide an emergency drinking water supply within twenty-four hours; (2) Provide temporary water supply within seventy-two hours; (3) Within thirty days begin activities to establish a permanent water supply or submit a proposal to the secretary outlining the measures and timetables to be used in establishing a permanent supply. The total time in providing a permanent water supply may not exceed two years. If the operator demonstrates that providing a permanent replacement water supply cannot be completed within two years, the secretary may extend the time frame on case-by-case basis; and (4) Pay all reasonable costs incurred by the real property owner in securing a water supply. (g) A person as described in subsection (b) of this section aggrieved under the provisions of subsections (b), (e) or (f) of this section may seek relief in court... (i) Notwithstanding the denial of the operator of responsibility for the damage to the real property owner's water supply or the status of any appeal on determination of liability for the damage to the real property owner's water supply, the operator may not discontinue providing the required water service until authorized to do so by the secretary or a court of competent jurisdiction.

Written Comment:

Pursuant to West Virginia Code § 22-6A-11(a), all persons described in subsection (b), section ten of this article may file written comments with the secretary as to the location or construction of the applicant's proposed well work within thirty days after the application is filed with the secretary. All persons described in West Virginia Code § 22-6A-10(b) may file written comments as to the location or construction of the applicant's proposed well work to the Secretary at:

Chief, Office of Oil and Gas
Department of Environmental Protection
601 57th St. SE
Charleston, WV 25304
(304) 926-0450

Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water. **NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.**

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Office of Oil and Gas
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WV Department of
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Environmental Protection

Time Limits and Methods for Filing Comments.

The law requires these materials to be served on or before the date the operator files its Application. You have **THIRTY (30) DAYS** after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

Pursuant to West Virginia Code § 22-6A-11(c)(2), Any objections of the affected coal operators and coal seam owners and lessees shall be addressed through the processes and procedures that exist under sections fifteen, seventeen and forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article. The written comments filed by the parties entitled to notice under subdivisions (1), (2), (4), (5) and (6), subsection (b), section ten of this article shall be considered by the secretary in the permit issuance process, but the parties are not entitled to participate in the processes and proceedings that exist under sections fifteen, seventeen or forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article.

Comment Requirements

Your comments must be in writing and include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

Disclaimer: All comments received will be placed on our web site <http://www.dep.wv.gov/oil-and-gas/Horizontal-Permits/Pages/default.aspx> and the applicant will automatically be forwarded an email notice that such comments have been submitted. The applicant will be expected to provide a response to comments submitted by any surface owner, water purveyor or natural gas storage operator noticed within the application.

Permit Denial or Condition

The Chief has the power to deny or condition a well work permit. Pursuant to West Virginia Code § 22-6A-8(d), the permit may not be issued or be conditioned, including conditions with respect to the location of the well and access roads prior to issuance if the director determines that:

- (1) The proposed well work will constitute a hazard to the safety of persons;
- (2) The plan for soil erosion and sediment control is not adequate or effective;
- (3) Damage would occur to publicly owned lands or resources; or
- (4) The proposed well work fails to protect fresh water sources or supplies.

A permit may also be denied under West Virginia Code § 22-6A-7(k), the secretary shall deny the issuance of a permit if the secretary determines that the applicant has committed a substantial violation of a previously issued permit for a horizontal well, including the applicable erosion and sediment control plan associated with the previously issued permit, or a substantial violation of one or more of the rules promulgated under this article, and in each instance has failed to abate or seek review of the violation within the time prescribed by the secretary pursuant to the provisions of subdivisions (1) and (2), subsection (a), section five of this article and the rules promulgated hereunder, which time may not be unreasonable.

Pursuant to West Virginia Code § 22-6A-10(g), any person entitled to submit written comments to the secretary pursuant to subsection (a), section eleven of this article, shall also be entitled to receive from the secretary a copy of the permit as issued or a copy of the order modifying or denying the permit if the person requests receipt of them as a part of the written comments submitted concerning the permit application. Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

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WV Department of
Environmental Protection
02/10/2017

WW-6A
(8-13)

API NO. 47- 085 - 10067 F
OPERATOR WELL NO. PEN2AHS
Well Pad Name: PEN2

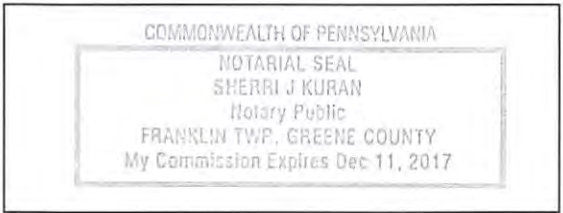
Notice is hereby given by:

Well Operator: CNX GAS COMPANY LLC 
Telephone: 724-485-3011
Email: MATTHANLEY@CONSOLEENERGY.COM

Address: 1000 Consol Energy Drive, Canonsburg PA 15317
Facsimile: 724-485-4932

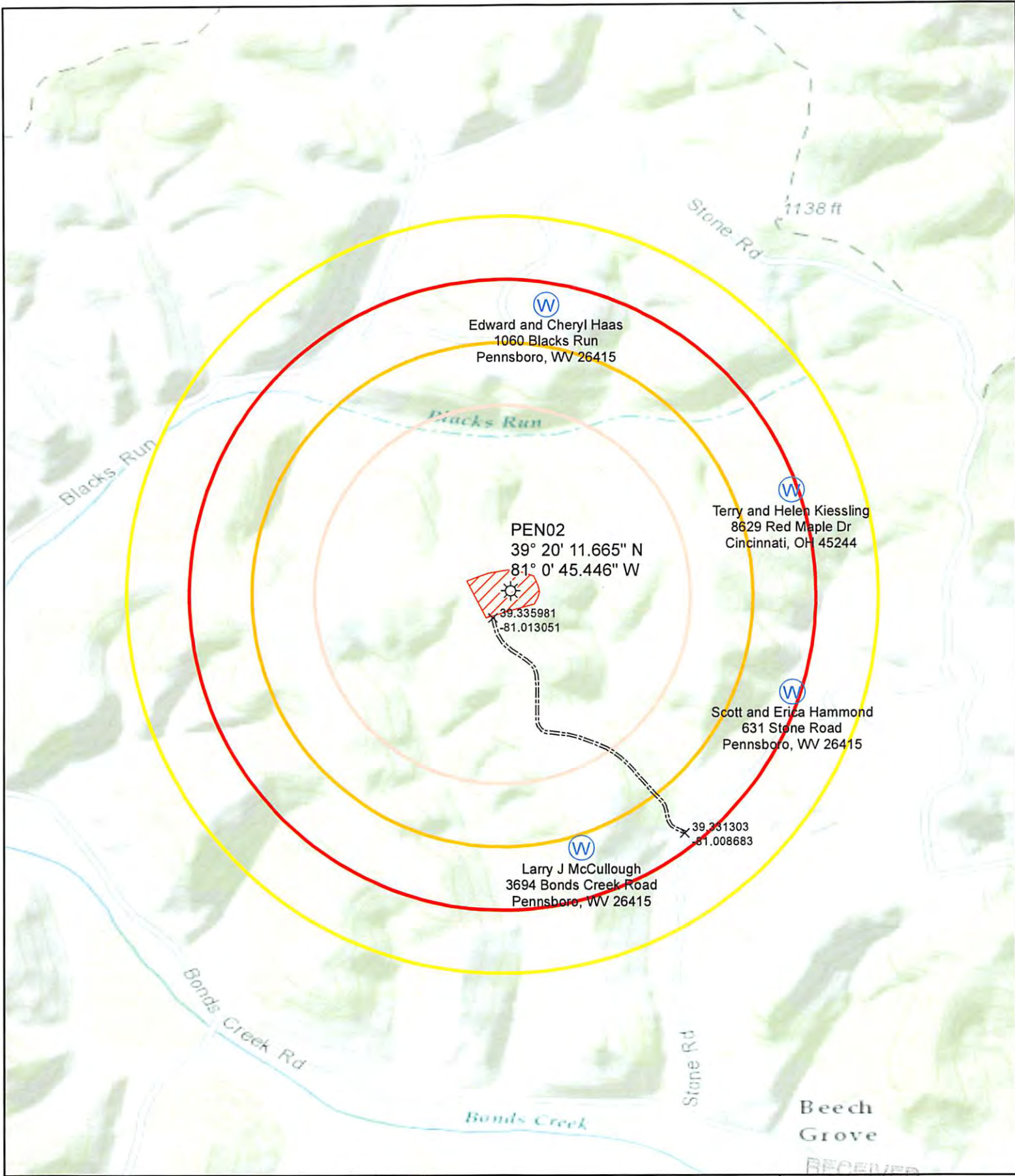
Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.



Subscribed and sworn before me this 21st day of December, 2016.
Sherrri J. Kuran Notary Public
My Commission Expires 12-11-17

RECEIVED
Office of Oil and Gas
JAN 03 2017
WV Department of
Environmental Protection
02/10/2017



Legend

- Wellbore
- Water Wells
- Access Points
- Well Pad
- Access Road

Buffers

- 1500
- 2000
- 2500
- 3000

0 500 1,000 2,000 3,000 Feet

1 inch = 1,000 feet

This map is property of CNX Land Resources, Inc. and contains information that is proprietary and confidential in nature and may not be copied or reproduced without prior consent.
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RECEIVED
 Office of Oil and Gas
 Canonsburg, PA

JAN 03 2017

PEN2
Water Parveyer Map

02/10/2017

Environmental Protection

Prepared By: M. Keener
 Original Date: 12/15/2016
 Revision Date:
 Revision Date:

**STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF PLANNED OPERATION**

Notice Time Requirement: notice shall be provided no later than the **filing date of permit application.**

Date of Notice: 1-3-17 **Date Permit Application Filed:** 1-3-17

Delivery method pursuant to West Virginia Code § 22-6A-16(c)

- CERTIFIED MAIL** **HAND**
RETURN RECEIPT REQUESTED **DELIVERY**

Pursuant to W. Va. Code § 22-6A-16(c), no later than the date for filing the permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner whose land will be used for the drilling of a horizontal well notice of the planned operation. The notice required by this subsection shall include: (1) A copy of this code section; (2) The information required to be provided by subsection (b), section ten of this article to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. (d) The notices required by this section shall be given to the surface owner at the address listed in the records of the sheriff at the time of notice.

Notice is hereby provided to the SURFACE OWNER(s)
(at the address listed in the records of the sheriff at the time of notice):

Name: Terry and Helen Kiessling
Address: 8629 Red Maple Drive
Cincinnati, OH 45244

Name: Frank Grass
Address: 5115 Lansins Drive
Charlotte, NC 28270

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-16(c), notice is hereby given that the undersigned well operator has developed a planned operation on the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State: <u>West Virginia</u>	UTM NAD 83 Easting: <u>498907.682</u>
County: <u>085</u>	Northing: <u>4354126.437</u>
District: <u>Clay</u>	Public Road Access: <u>County Road 6/3</u>
Quadrangle: <u>Pennsboro</u>	Generally used farm name: <u>Keissling</u>
Watershed: <u>Northfork of Hughes River HUC10 / Bonds Creek</u>	

This Notice Shall Include:

Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: (1) A copy of this code section; (2) The information required to be provided by W. Va. Code § 22-6A-10(b) to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Well Operator: CNX GAS COMPANY LLC
Telephone: 724-485-3011
Email: MattHanley@consolenergy.com

Address: 1000 Consol Energy Dr.
Canonsburg PA 15317
Facsimile: 724-485-4932

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

85-10067F



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
Division of Highways

1900 Kanawha Boulevard East • Building Five • Room 110
Charleston, West Virginia 25305-0430 • (304) 558-3505

Earl Ray Tomblin
Governor

Paul A. Mattox, Jr., P. E.
Secretary of Transportation/
Commissioner of Highways

January 5, 2017

James A. Martin, Chief
Office of Oil and Gas
Department of Environmental Protection
601 57th Street, SE
Charleston, WV 25304

Subject: DOH Permit for the Pens-2 Well Site, Ritchie County

AHS Well Site	BHS Well Site	HHS well Site
JHS Well Site	KHS Well Site	



Dear Mr. Martin,

The West Virginia Division of Highways has transferred Permit #03-2013-0290 for the subject site to CNX Gas Company LLC for access to the State Road for the well site located off of Ritchie County Route 6/3 SLS.

The operator has signed an OIL AND GAS ROAD MAINTENANCE BONDING AGREEMENT and provided the required Bond. This operator is currently in compliance with the DOH OIL AND GAS POLICY dated January 3, 2012.

RECEIVED
Office of Oil and Gas
Very Truly Yours,
JAN 12 2017

Gary K. Clayton
Gary K. Clayton
Regional Maintenance Engineer
Central Office Oil & Gas Coordinator

Cc: Matt Hanley
CNX Energy LLC.
CH, OM, D-3
File

02/10/2017



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

1900 Kanawha Boulevard East • Building Five • Room 110
 Charleston, West Virginia 25305-0430 • (304) 558-3505

Earl Ray Tomblin
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Very Truly Yours,

Gary K. Clayton
 Regional Maintenance Engineer
 Central Office Oil & Gas Coordinator

Cc: Matt Hanley
 CNX Energy LLC.
 CH, OM, D-3
 File

85-10067 F



LOCATION MAP
SCALE 1"=200'

APPROVED
WVDEP OOG
RHS
Modification
1/26/2017



CNX GAS COMPANY, LLC
200 EVERGREENE DRIVE
WAYNESBURG, PA 15370

PENNSBORO 2 WELL SITE PAD EXPANSION



LOCATION MAP
PROPERTY PA 134 USGS QUADRANGLE
SCALE 1"=500'

PROPERTY OWNERS

- 1. FRANK GRASS, MARY ADKINS, & ANNE ABBINGTON
03-06-21
- 2. TERRY & HELEN KIESSLING
03-06-10.1, 03-06-10

SITE LOCATION

HEADING NORTH ON ROUTE 74 OUT OF PENNSBORO, TRAVEL APPROXIMATELY 2.73 MILES TO TURN LEFT ON ROUTE 6. TRAVEL APPROXIMATELY 3.47 MILES WEST, UNTIL YOU REACH ROUTE 6/5 ON THE RIGHT. TRAVEL APPROXIMATELY .5 MILES UNTIL YOU SEE THE ENTRANCE OF THE SITE ON YOUR LEFT.

NOTE

ENTRANCE PERMIT, FLOODPLAIN DETAILS, AND MISS UTILITY INFORMATION CAN ALL BE OBTAINED FROM THE ORIGINAL PENNSBORO 2 WELL PAD PERMIT.

WELL SITE LOCATION

NAD 83 - LAT: N 39° 20' 11.70"; LONG: W 81° 00' 44.95"
NAD 27 - LAT: N 39° 20' 11.42"; LONG: W 81° 00' 45.55"
UTM (METER) - N: 4354137.438'; E: 498938.427'

ENTRANCE LOCATION

NAD 83 - LAT: N 39° 19' 53.06"; LONG: W 80° 18' 34.45"
NAD 27 - LAT: N 39° 19' 52.74"; LONG: W 80° 18' 35.13"
UTM (METERS) - N: 4353791.241'; E: 559522.278'

CLAY DISTRICT,
RITCHIE COUNTY, WEST VIRGINIA
DATE: DECEMBER 15, 2016



NOTE: DRAWING WAS CREATED ON 22x34 PAPER. 11x17 DRAWINGS ARE HALF SCALE. REFER TO SCALE BAR FOR PROPER SCALING.

ENVIRONMENTAL NOTES

A WETLAND DELINEATION WAS PERFORMED ON FEBRUARY 28 & MARCH 1, 2013 BY ARM GROUP INC. TO REVIEW THE SITE FOR WATERS AND WETLANDS THAT ARE MOST LIKELY WITHIN THE REGULATORY PURVIEW OF THE U.S. ARMY CORPS OF ENGINEERS AND/OR THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION. THE MAY 2, 2013 REPORT FOR THE PENNS 2 WELL SITE, WHICH WAS PREPARED BY ARM GROUP INC, SUMMARIZES THE RESULTS OF THE FIELD DELINEATION. THE REPORT DOES NOT, IN ANY WAY, REPRESENT A JURISDICTIONAL DETERMINATION OF THE LANDWARD LIMITS OF WATERS AND WETLANDS WHICH MAY BE REGULATED BY THE USACE OR WVDEP. IT IS STRONGLY RECOMMENDED THAT THE AFOREMENTIONED AGENCIES BE CONSULTED IN AN EFFORT TO GAIN CONFIRMATION OF THE DELINEATION DESCRIBED BY THE REPORT PRIOR TO ENGAGING CONSTRUCTION ON THE PROPERTY DESCRIBED HEREIN. THE DEVELOPER SHALL OBTAIN THE APPROPRIATE PERMITS FROM THE FEDERAL AND/OR STATE REGULATORY AGENCIES PRIOR TO ANY PROPOSED IMPACTS TO WATERS OF THE U.S., INCLUDING WETLAND FILLS AND STREAM CROSSINGS.

GEOTECHNICAL NOTES

THIS DESIGN WAS PERFORMED WITHOUT A GEOTECHNICAL INVESTIGATION. THEREFORE, BLUE MOUNTAIN INC. SHALL ASSUME NO RESPONSIBILITY FOR ANY UNFORESEEN SITE CONDITIONS DURING OR AFTER CONSTRUCTION, INCLUDING ANY POTENTIAL SLOPE OR EMBANKMENT FAILURES DUE TO A SURCHARGE LOAD OR OTHER CAUSES.

RESTRICTIONS

1. THERE ARE NO NATURALLY PRODUCING TROUT STREAMS WITHIN 300' OF THE PAD & LOD.
2. THERE ARE NO GROUNDWATER INTAKE OR PUBLIC WATER SUPPLY FACILITIES WITHIN 1000' OF THE PAD AND LOD.
3. THERE ARE NO EXISTING WATER WELLS OR DEVELOPED SPRINGS WITHIN 250' OF THE WELLS BEING DRILLED.
4. THERE ARE NO OCCUPIED DWELLING STRUCTURES WITHIN 625' OF THE CENTER OF THE PAD.
5. THERE ARE NO AGRICULTURAL BUILDINGS LARGER THAN 2,500 SQUARE FEET WITHIN 625' OF THE CENTER OF THE PAD.
6. THERE ARE NO PERENNIAL STREAMS, LAKES, PONDS OR RESERVOIRS WITHIN 100' OF THE PROPOSED LIMITS OF DISTURBANCE.

CERTIFICATION:

I DO HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THAT THE EROSION AND SEDIMENT CONTROL PLAN AND SITE RESTORATION PLAN AND POST CONSTRUCTION BMPs ARE TRUE AND CORRECT, REPRESENT ACTUAL FIELD CONDITIONS AND ARE IN ACCORDANCE WITH THE 25 PA. CODE CHAPTERS 78 AND 102 OF THE DEPARTMENT'S RULES AND REGULATIONS. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.

SIGNATURE: *[Signature]*

DATE: 12/20/16

SHEET INDEX	
DRAWING NUMBER	DRAWING NAME
1	COVER SHEET
2	GENERAL NOTES (1 OF 2)
3	GENERAL NOTES (2 OF 2)
4	EXISTING CONDITIONS
5	OVERALL SITE PLAN
6	OVERALL SITE PLAN w/ ORTHO
7	X-SECTIONS
8	RECLAMATION
9	CONSTRUCTION DETAILS (1 OF 4)
10	CONSTRUCTION DETAILS (2 OF 4)
11	CONSTRUCTION DETAILS (3 OF 4)
12	CONSTRUCTION DETAILS (4 OF 4)
13	MATERIAL QUANTITIES



CNX GAS COMPANY, LLC
200 EVERGREENE DRIVE
WAYNESBURG, PA 15370



PENNS-2 PAD EXPANSION
COVER SHEET

REVISIONS

DATE	BY

DESIGNED BY: LPF
CHECKED BY: JMB
DATE: 12/27/16
SCALE: AS SHOWN
JOB NO.:
DRAWING NAME: PENNS-2 PAD EXP

SHEET NO. 1



EARTHWORK QUANTITIES		
DESCRIPTION	TOTAL QUANTITY	UNITS
TOPSOIL 1/2" DEPTH	---	CY
CUT	6,463	CY
FILL	563	CY
EXCESS	5,900	CY

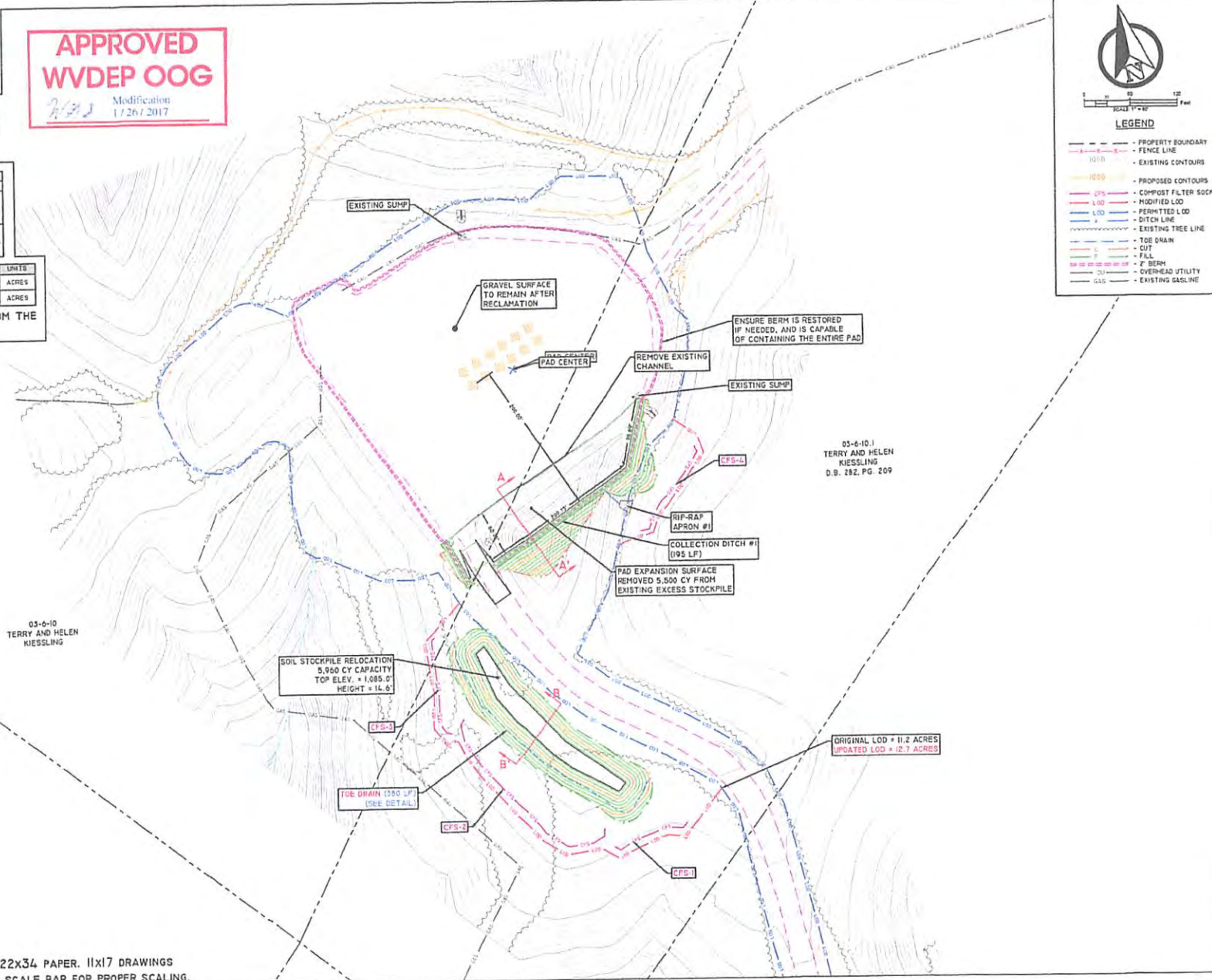
MODIFIED LOD AREA		
DESCRIPTION	QUANTITY	UNITS
CLEARING AND GRUBBING	---	---
TREE CLEARING	0.83	ACRES
MOWING	0.61	ACRES
LIMITS OF DISTURBANCE AREA	1.47	ACRES

COORDINATES			
DESCRIPTION	NAD 83	NAD 27	
ENTRANCE	LAT - 39° 19' 53.04" LONG - 80° 18' 34.65"	LAT - 39° 19' 52.74" LONG - 80° 18' 35.10"	
CENTER PAD	LAT - 39° 20' 11.70" LONG - 80° 00' 44.60"	LAT - 39° 20' 11.42" LONG - 80° 00' 45.53"	

LIMITS OF DISTURBANCE BY OWNER	TIN/PAN	AREA	UNITS
TERRY & HELEN KIESSLING	03-08-10	03	ACRES
TERRY & HELEN KIESSLING	03-20-10	1.44	ACRES

THERE IS TO BE NO DISCHARGE FROM THE PAD DURING DRILLING OPERATIONS.

APPROVED WVDEP OOG
Modification
1/26/2017



LEGEND

- PROPERTY BOUNDARY
- - - FENCE LINE
- - - EXISTING CONTOURS
- PROPOSED CONTOURS
- CFB --- COMPOST FILTER SOCK
- LOD --- MODIFIED LOD
- LODP --- PERMITTED LOD
- DITCH LINE
- EXISTING TREE LINE
- EXISTING LINE LINE
- TOE DRAIN
- CUT
- FILL
- 2' BERM
- OVERHEAD UTILITY
- EXISTING GASLINE

Blue Mountain Inc.
Engineers and Land Surveyors
10275 Mason Dixon Hwy
Baltimore, MD 21048

CNG GAS COMPANY, LLC
200 EVERGREEN DRIVE
WAYNESBURG, PA 15370

CNG GAS

PENNS-2 PAD EXPANSION OVERALL SITE PLAN

PROVISIONS

DATE	TYPE

JO SHUHA DUE REGISTERED 16852 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER

DRAWN BY: JLF
CHECKED BY: JMD
DATE: 11/15/2016
SCALE: 1" = 40'
JOB NO.
DRAWING NAME: PENNS-2 PAD EXP

NOTE: DRAWING WAS CREATED ON 22X34 PAPER. 11X17 DRAWINGS ARE HALF SCALE. REFER TO SCALE BAR FOR PROPER SCALING.