

State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Well Operator's Report of Well Work

OCT 28 2019

WV Department of
Environmental Protection

API 47-061-01793 County MONONGALIA District BATTELLE
Quad WADESTOWN Pad Name WDTN5 Field/Pool Name _____
Farm name WISE Well Number WDTN5IHSM
Operator (as registered with the OOG) CNX GAS COMPANY, LLC
Address 1000 CONSOL ENERGY DRIVE City CANONSBURG State PA Zip 15317

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 440491.08 (NAD 27) Easting 1764431.99 (NAD 27)
Landing Point of Curve Northing 440440.10 (NAD 27) Easting 1764039.51 (NAD 27)
Bottom Hole Northing 445846.93 (NAD 27) Easting 1758341.88 (NAD 27)

Elevation (ft) 1388 GL Type of Well New Existing Type of Report Interim Final
Permit Type Deviated Horizontal Horizontal 6A Vertical Depth Type Deep Shallow
Type of Operation Convert Deepen Drill Plug Back Redrilling Rework Stimulate
Well Type Brine Disposal CBM Gas Oil Secondary Recovery Solution Mining Storage Other _____
Type of Completion Single Multiple Fluids Produced Brine Gas NGL Oil Other _____
Drilled with Cable Rotary

Drilling Media Surface hole Air Mud Fresh Water Intermediate hole Air Mud Fresh Water Brine
Production hole Air Mud Fresh Water Brine

Mud Type(s) and Additive(s)
SYNTHETIC BASED FLUID

ADDITIVES: ABS MUL (EMULSIFIER), CALCIUM CHLORIDE, FLR PLUS (GILSONITE), CLAYTONE EM (SUSPENSION AGENT), AES WA II (WETTING AGENT), LIME

Date permit issued 1/4/2019 Date drilling commenced 1/4/2019 Date drilling ceased 4/26/2019
Date completion activities began 8/5/2019 Date completion activities ceased 9/3/2019
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/A

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft 399 Open mine(s) (Y/N) depths N
Salt water depth(s) ft 1730, 2479, 2509 Void(s) encountered (Y/N) depths N
Coal depth(s) ft 830, 1170 TRACE: 1810, 1820, 1912, 1918, 2100 Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by: MSJK 11/26/19

API 47-061 - 01793 Farm name WISE Well number WDTN5IHSM

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/ N) * Provide details below*
Conductor	24"	20"	129	NEW	94lb/ft	N/A	GROUT TO SURFACE
Surface	17.5"	13.375"	1358	NEW	J-55 54.5lb/ft	N/A	Y - CEMENT TO SURFACE
Coal							
Intermediate 1	12.25"	9.625"	2971	NEW	J-55 36lb/ft	N/A	Y - CEMENT TO SURFACE
Intermediate 2							
Intermediate 3							
Production	8.75" & 8.5"	5.5"	16328	NEW	P-110 20lb/ft	N/A	Y - TOC @ 1600'
Tubing							
Packer type and depth set							

Comment Details ALL DEPTHS ARE REFERENCED TO RKB = 29' GLE

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ²)	Cement Top (MD)	WOC (hrs)
Conductor							
Surface	HALCEM	1010	15.8	1.169	1181	0	8
Coal							
Intermediate 1	HALCEM	965	15.8	1.147	1107	0	8
Intermediate 2							
Intermediate 3							
Production	NEOCEM	1155 (LEAD) / 1950 (TAIL)	14.5	1.168 (LEAD) / 1.165 (TAIL)	1349 (LEAD) / 2272 (TAIL)	1600	8
Tubing							

Drillers TD (ft) 16,366' Loggers TD (ft) 16,366'
 Deepest formation penetrated MARCELLUS Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 7028

Check all wireline logs run caliper density deviated/directional induction
 neutron resistivity gamma ray temperature sonic

Well cored Yes No Conventional Sidewall Were cuttings collected Yes No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING _____
SURFACE: Centralize every other joint from shoe to surface
INTERMEDIATE: Centralize every 3rd joint from shoe to surface
PRODUCTION: Centralize every joint from shoe to 2,467'

WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS _____

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____ RECEIVED
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WERE TRACERS USED Yes No TYPE OF TRACER(S) USED _____ OCT 28 2019

API 47- 061 - 01793 Farm name WISE Well number WDTN5IHSM

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>MARCELLUS</u>	<u>8,009</u> TVD	<u>8,418</u> MD
_____	_____	_____
_____	_____	_____
_____	_____	_____

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Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 1858 psi Bottom Hole _____ psi DURATION OF TEST _____ hrs

OPEN FLOW Gas 6446.70 mcfpd Oil 0 bpd NGL 0 bpd Water 1344 bpd
GAS MEASURED BY Estimated Orifice Pilot

LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
UNDIFFERENTIATED SAND	0	440	0	440	SANDSTONE / SILTSTONE/ TRACES OF LIMESTONE
UNDIFFERENTIATED LIME	440	470	440	470	LIME STONE / SANDSTONE
UNDIFFERENTIATED SAND	470	510	470	510	SANDSTONE / LIMESTONE
UNDIFFERENTIATED SILT	510	830	510	830	SILTSTONE / LIMESTONE/ TRACES OF SANDSTONE & RED SHALE
WAYNESBURG	830	832	830	832	COAL / SILTSTONE / SANDSTONE
UNDIFFERENTIATED SILT	832	850	832	850	SILTSTONE / SANDSTONE
UNDIFFERENTIATED SAND	850	950	850	950	SANDSTONE
UNDIFFERENTIATED SILT	950	1000	950	1000	SILTSTONE / LIMESTONE
UNDIFFER. LIME / SILT	1000	1170	1000	1170	LIMESTONE / SILTSTONE
PITTSBURGH COAL	1170	1180	1170	1180	COAL / LIMESTONE / SILTSTONE
UNDIFFERENTIATED LIME	1180	1230	1180	1230	LIMESTONE / SILTSTONE
UNDIFFERENTIATED SILT	1230	1400	1230	1400	SILTSTONE / LIMESTONE / RED SHALE
UNDIFFERENTIATED SILT	1400	1730	1400	1730	SILTSTONE / SANDSTONE
UPPER FREEPORT	1730	1740	1730	1740	SANDSTONE

Please insert additional pages as applicable.

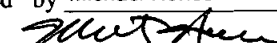
Drilling Contractor PATTERSON-UTI DRILLING COMPANY
Address 207 CARLTON DRIVE City EIGHTY FOUR State PA Zip 15330

Logging Company DIVERSIFIED WELL LOGGING LLC
Address 71 N. MAIN STREET City WASHINGTON State PA Zip 15301

Cementing Company HALLIBURTON
Address 121 CHAMPION WAY SUITE #210 City CANONSBURG State PA Zip 15317

Stimulating Company KEANE
Address 5825 North Sam Houston Parkway West Suite 600 City Houston State TX Zip 77086

Please insert additional pages as applicable.

Completed by Michael Honce Telephone 304-884-2138
Signature  Title Superintendent Completions Date 10/22/2019

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry



LITHOLOGIES CONTINUED

LITHOLOGY / FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT NAME TVD	TOP DEPTH IN FT NAME MD	BOTTOM DEPTH IN FT NAME MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H2S, ETC)
UNDIFFERENTIATED SAND	1740	1810	1740	1810	SANDSTONE
LOWER FREEPORT	1810	1820	1810	1820	SANDSTONE/ SILTSTONE/ TRACES OF COAL
UNDIFFERENTIATED SAND	1820	1912	1820	1912	SANDSTONE/ SILTSTONE/ TRACES OF COAL
MIDDLE KITTANING	1912	1918	1912	1918	SANDSTONE/ SILTSTONE/ TRACES OF COAL
UNDIFFERENTIATED SAND	1918	2100	1918	2100	SANDSTONE/ SILTSTONE/ TRACES OF COAL
UNDIFFERENTIATED SILT	2100	2280	2100	2280	SILTSTONE/ TRACES OF COAL
UNDIFFERENTIATED SAND	2280	2300	2280	2300	SANDSTONE
UNDIFFERENTIATED SILT	2300	2340	2300	2340	SILTSTONE
UNDIFFERENTIATED SHALE	2340	2380	2340	2380	RED SHALE
UNDIFFERENTIATED SILT	2380	2420	2380	2420	SILTSTONE/ RED SHALE
BIG LIME	2420	2480	2420	2480	LIMESTONE/ SILTSTONE
KEENER	2480	2510	2480	2510	SANDSTONE/ SILTSTONE
BIG INJUN	2510	2690	2510	2690	SANDSTONE
BIG INJUN BASE	2690	3080	2690	3080	SILTSTONE
50 FOOT	3080	3140	3080	3140	SILTSTONE
GORDON	3140	3305	3140	3305	SANDSTONE/ SILTSTONE
FIFTH	3305	3352	3305	3352	SILTSTONE
BAYARD	3352	5290	3352	5290	SILTSTONE/ TRACES RED & GREY SHALES
ELK	5290	7432	5290	7484	SILTSTONE/ GREY SHALE
RHIESTREET	7432	7678	7484	7750	GREY SHALE
CASHAQUA	7678	7794	7750	7900	GREY SHALE
BURKET	7794	7814	7900	7930	GREY SHALE
TULLY	7814	7868	7930	8020	LIMESTONE/ GRAY SHALE
HAMILTON	7868	7966	8020	8260	GREY SHALE
MARCELLUS	7966		8260		BLACK SHALE
TD (MARCELLUS)				16366	

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WDTN5IHSM – PERFORATION RECORD – ATTACHMENT 1

Stage No.	Perforation Date	Perforation from MD ft.	Perforation to MD ft.	Number of Perforations	Formation(s)
1	8/5/2019	16,179.0	16,273.9	40	Marcellus Shale
2	8/5/2019	15,932.8	16,117.2	40	Marcellus Shale
3	8/5/2019	15,704.8	15,889.2	40	Marcellus Shale
4	8/6/2019	15,476.8	15,661.2	40	Marcellus Shale
5	8/6/2019	15,248.8	15,433.2	40	Marcellus Shale
6	8/7/2019	15,020.8	15,205.2	40	Marcellus Shale
7	8/7/2019	14,792.8	14,977.2	40	Marcellus Shale
8	8/8/2019	14,564.8	14,749.2	40	Marcellus Shale
9	8/8/2019	14,336.8	14,521.2	40	Marcellus Shale
10	8/9/2019	14,108.8	14,293.2	40	Marcellus Shale
11	8/9/2019	13,880.8	14,065.2	40	Marcellus Shale
12	8/10/2019	13,652.8	13,837.2	40	Marcellus Shale
13	8/11/2019	13,424.8	13,609.2	40	Marcellus Shale
14	8/11/2019	13,196.8	13,381.2	40	Marcellus Shale
15	8/12/2019	12,968.8	13,153.2	40	Marcellus Shale
16	8/12/2019	12,740.8	12,925.2	40	Marcellus Shale
17	8/13/2019	12,512.8	12,697.2	40	Marcellus Shale
18	8/13/2019	12,284.8	12,469.2	40	Marcellus Shale
19	8/14/2019	12,056.8	12,241.2	40	Marcellus Shale
20	8/14/2019	11,828.8	12,013.2	40	Marcellus Shale
21	8/15/2019	11,600.8	11,785.2	40	Marcellus Shale
22	8/15/2019	11,372.8	11,557.2	40	Marcellus Shale
23	8/15/2019	11,144.8	11,329.2	40	Marcellus Shale
24	8/16/2019	10,916.8	11,101.2	40	Marcellus Shale
25	8/16/2019	10,688.8	10,873.2	40	Marcellus Shale
26	8/17/2019	10,461.7	10,645.3	40	Marcellus Shale
27	8/17/2019	10,234.7	10,418.3	40	Marcellus Shale
28	8/17/2019	10,007.7	10,191.3	40	Marcellus Shale
29	8/18/2019	9,780.7	9,964.3	40	Marcellus Shale
30	8/18/2019	9,553.7	9,737.3	40	Marcellus Shale
31	8/19/2019	9,326.7	9,510.3	40	Marcellus Shale
32	8/19/2019	9,099.7	9,283.3	40	Marcellus Shale
33	8/20/2019	8,872.7	9,056.3	40	Marcellus Shale
34	8/20/2019	8,645.7	8,829.3	40	Marcellus Shale
35	8/21/2019	8,418.7	8,602.3	40	Marcellus Shale

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WDTNSIHSM – STIMULATION INFORMATION PER STAGE – ATTACHMENT 2

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (ibs)	Amount of Water (bbls)	Amount of Nitrogen/Other (units)
1	8/5/2019	95	8,910.0	6,859.0	4,585.0	541,235.0	10,416.00	N/A
2	8/5/2019	92	9,327.0	7,096.0	5,728.0	541,277.0	10,282.00	N/A
3	8/6/2019	89	9,004.0	6,264.0	5,951.0	542,555.0	10,071.00	N/A
4	8/6/2019	88	9,220.0	6,612.0	5,761.0	540,992.0	10,208.00	N/A
5	8/7/2019	90	9,540.0	6,840.0	5,777.0	538,452.0	10,159.00	N/A
6	8/7/2019	87	9,249.0	7,111.0	5,559.0	548,050.0	10,141.98	N/A
7	8/8/2019	91	9,619.0	7,019.0	6,074.0	538,947.0	10,117.00	N/A
8	8/8/2019	91	9,241.0	6,984.0	5,685.0	545,469.0	10,091.98	N/A
9	8/9/2019	90	9,262.0	7,009.0	5,768.0	539,387.0	10,133.00	N/A
10	8/9/2019	93	9,307.0	7,011.0	5,917.0	538,313.0	10,066.98	N/A
11	8/10/2019	93	9,136.0	6,925.0	5,917.0	537,424.0	10,101.00	N/A
12	8/10/2019	92	9,248.0	7,516.0	5,931.0	542,093.0	10,044.98	N/A
13	8/11/2019	93	9,240.0	7,700.0	6,002.0	539,324.0	9,722.00	N/A
14	8/12/2019	95	9,260.0	7,590.0	5,894.0	548,478.0	9,703.98	N/A
15	8/12/2019	93	9,272.0	7,394.0	5,819.0	538,022.0	8,456.00	N/A
16	8/13/2019	96	9,244.0	7,395.0	6,006.0	539,758.0	8,297.98	N/A
17	8/13/2019	93	9,207.0	7,428.0	5,819.0	541,646.0	8,438.00	N/A
18	8/14/2019	97	8,868.0	7,467.0	5,881.0	544,010.0	8,327.00	N/A
19	8/14/2019	100	9,256.0	6,973.0	5,884.0	541,067.0	8,300.00	N/A
20	8/14/2019	98	9,146.0	6,806.0	5,435.0	541,813.0	8,313.00	N/A
21	8/15/2019	100	9,280.0	6,311.0	5,824.0	538,873.0	7,813.00	N/A
22	8/15/2019	98	9,028.0	6,673.0	5,773.0	548,963.0	8,535.00	N/A
23	8/16/2019	97	9,663.0	6,572.0	5,256.0	509,641.0	7,993.00	N/A
24	8/16/2019	99	9,906.0	6,853.0	5,813.0	494,657.0	8,297.00	N/A
25	8/17/2019	97	9,228.0	6,821.0	6,131.0	543,892.0	8,238.00	N/A
26	8/17/2019	99	9,988.0	7,431.0	5,987.0	546,186.0	8,002.00	N/A
27	8/17/2019	98	9,173.0	6,621.0	5,698.0	537,267.0	8,175.00	N/A
28	8/18/2019	99	10,032.0	6,911.0	5,958.0	534,755.0	7,722.00	N/A
29	8/18/2019	99	9,317.0	7,401.0	5,880.0	521,675.0	7,636.00	N/A
30	8/19/2019	99	8,902.0	7,038.0	5,711.0	546,463.0	8,256.00	N/A
31	8/19/2019	98	9,662.0	7,707.0	5,672.0	538,102.0	7,763.00	N/A
32	8/19/2019	97	9,211.0	7,203.0	5,323.0	335,168.0	7,400.00	N/A
33	8/20/2019	99	9,251.0	6,423.0	4,946.0	573,196.0	9,029.00	N/A
34	8/21/2019	91	7,790.0	7,825.0	5,882.0	547,304.0	8,699.00	N/A
35	8/21/2019	100	8,697.0	7,291.0	6,077.0	537,222.0	7,692.00	N/A

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	8/5/2019
Job End Date:	8/21/2019
State:	West Virginia
County:	Monongalia
API Number:	47-061-01793-00-00
Operator Name:	CNX Gas Company LLC
Well Name and Number:	WDTN5 IHSM
Latitude:	39.70646600
Longitude:	-80.33708700
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	8,082
Total Base Water Volume (gal):	12,610,248
Total Base Non Water Volume:	0

Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	CNX	Carrier/Base Fluid	Water	7732-18-5	100.00000	84.98087	None
Sand (Proppant)	Keane	Proppant	Crystalline silica: Quartz (SiO2)	14808-60-7	100.00000	14.18931	None
Hydrochloric Acid (15%)	Keane	Acidizing	Water	7732-18-5	85.00000	0.34697	None
			Hydrochloric Acid	7647-01-0	15.00000	0.06123	None
Hydrochloric Acid (7.5%)	Keane	Acid Inhibitor	Water	7732-18-5	92.50000	0.27130	None
			Hydrochloric Acid	7647-01-0	7.50000	0.02200	None
KFR-48	Keane	Friction Reducer	Water	7732-18-5	47.00000	0.03314	None
			alkanes, C16-20-iso-	90622-59-6	25.00000	0.01763	None
			butene, homopolymer	9003-29-6	25.00000	0.01763	None
			Alcohols, C12-18, ethoxylated	68213-23-0	3.00000	0.00212	None
KWG-111LS	Keane	Gel					



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			Distillates (petroleum), hydrotreated light	64742-47-8	55.00000	0.00772	None	
			Guar gum	9000-30-0	55.00000	0.00772	None	
KSI-22	Keane	Scale Inhibitor	Methanol	67-56-1	50.00000	0.01088	None	
			2-propenoic acid, polymer with 2-(1-oxo-2-propenyl) amino-1-propensulfonic acid monosodium salt and sodium phosphinite	110224-99-2	10.00000	0.00218	None	
MBC-516	Keane	Biocide	glutaral	111-30-8	26.70000	0.00458	None	
			didecyldimethylammonium chloride	7173-51-5	8.00000	0.00137	None	
			quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	68424-85-1	5.30000	0.00091	None	
			Ethanol	64-17-5	2.80000	0.00048	None	
KFEAC-20	Keane	Iron Control	acetic acid	64-19-7	50.00000	0.00158	None	
			Citric acid	77-92-9	30.00000	0.00095	None	
KAI-18	Keane	Acid Inhibitor	methanol	67-56-1	65.00000	0.00101	None	
			formic acid	64-18-6	20.00000	0.00031	None	
			alkyl pyridine quaternary ammonium chloride surfactant	68909-18-2	20.00000	0.00031	None	
			Proprietary		10.00000	0.00016	None	
			propargyl alcohol	107-19-7	5.00000	0.00008	None	
KWBO-2	Keane	Breaker	Sodium persulfate	7775-27-1	99.00000	0.00014	None	
Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.								
Other Chemical(s)	Listed Above	See Trade Name(s) List	Water	7732-18-5	85.00000	0.34697		
			Water	7732-18-5	92.50000	0.27130		
			alkanes, C16-20-iso-	90622-59-6	25.00000	0.01763		
			butene, homopolymer	9003-29-6	25.00000	0.01763		
			Distillates (petroleum), hydrotreated light	64742-47-8	55.00000	0.00772		
			2-propenoic acid, polymer with 2-(1-oxo-2-propenyl) amino-1-propensulfonic acid monosodium salt and sodium phosphinite	110224-99-2	10.00000	0.00218		
			Alcohols, C12-18, ethoxylated	68213-23-0	3.00000	0.00212		
			didecyldimethylammonium chloride	7173-51-5	8.00000	0.00137		
			Citric acid	77-92-9	30.00000	0.00095		
			quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	68424-85-1	5.30000	0.00091		



CNX GAS COMPANY, LLC
 Location: Monongalia County, WV
 Field: Monongalia
 Facility: WTN-5-Pad

Slot: Slot 1
 Well: WDTN-51-HSM
 Wellbore: WDTN-51-HSM-PWB



Plot reference weights in WTN-5-PAD	Grid System: NAD83 / Lambert Vertical / UTM Zone 18N
True vertical depths are referenced to Patterson 801 (RKB)	North Reference Contour
Measured depths are referenced to Patterson 801 (RKB)	Scale: True Distance
Patterson 801 (RKB) to Mean Sea Level: 1410.0 ft	Origin are in Meter
Mean Sea Level to Slot 1 (RKB): 1387.0 ft	Created by: wellpro on 20/04/2019
Coordinates are in feet referenced to Slot 1	Drawn: W.A. King, 4/23/2019, G.M.



Projected MD at TD: 16366' : 90.68' Inc. 16366.00ft MD, 7955.29ft TVD, 8104.49ft VS

VES Gyro <17-1/2> (100-1279) : 0.59' Inc. 100.00ft MD, 100.00ft TVD, -0.32ft VS

APS EM <12-1/4> (1279)(1403-2971) : 0.13' Inc. 1403.00ft MD, 1402.99ft TVD, -2.79ft VS

APS EM <8-3/4> (2971)(3053-7028) : 0.63' Inc. 3053.00ft MD, 3052.95ft TVD, 4.36ft VS

API: 47-061-01793-0000
BH Job #: 109627480
Rig: Patterson 801
Duration: 4/15/2019-4/23/2019

True Vertical Depth (ft)

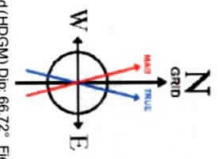
Location Information

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
WTN-5-Pad	1764427.480	4405530.830	39°42'23.382"N	80°20'14.303"W
Slot	Local E (ft)	Grid East (US ft)	Local N (ft)	Grid North (US ft)
Slot 1	-30.75	1764431.000	440491.080	440491.080
Patterson 801 (RKB) to Mud line (At Slot Slot 1)				
Mean Sea Level to Mud line (At Slot Slot 1)				
Patterson 801 (RKB) to Mean Sea Level				

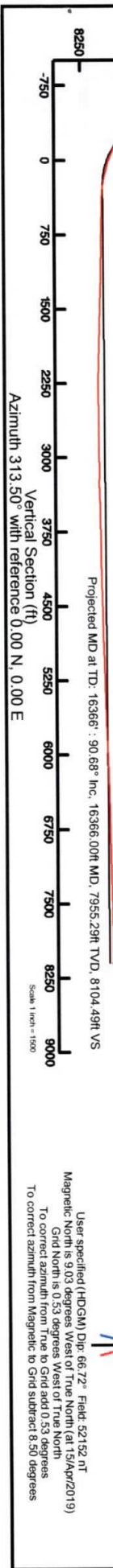
Well Profile Data

Design Comment	MD (ft)	Inc. (")	Az. (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (V/100ft)	VS (ft)
Tra On	1279.00	0.000	107.180	1278.99	-1.22	2.70	0.11	-2.80
Prog to Bottom	1388.00	0.080	107.180	1387.99	-1.27	2.85	0.00	-2.94
DH1 Out	1438.20	0.080	107.180	1438.19	-1.29	2.92	0.00	-3.01
End of Drop	1446.20	0.000	161.745	1446.19	-1.29	2.92	1.00	-3.01
KOP 1	3792.00	0.000	161.745	3791.99	-1.29	2.92	3.00	-24.00
End of Build	4094.01	0.000	161.745	4092.74	-23.92	10.39	3.00	-24.00
Curve KOP	7252.46	9.000	161.745	7211.78	-496.26	168.19	8.00	-462.15
Landing Pt.	8479.62	90.200	313.500	8025.00	-50.99	-392.50	8.00	-249.61
BH	16334.88	90.200	313.500	7967.58	5396.17	-4690.47	0.00	8104.82

BH AT Curve <8-1/2> (7028)(7072-16341) : 7022.83ft TVD, 514.27ft S, 162.04ft E
 APS EM <8-3/4> (2971)(3053-7028) : 3052.95ft TVD, 5.02ft N, 1.24ft W
 APS EM <12-1/4> (1279)(1403-2971) : 1402.99ft TVD, 1.10ft S, 6.39ft E
 VES Gyro <17-1/2> (100-1279) : 100.00ft TVD, 0.10ft S, 0.35ft E



User specified (HDGM) Dip: 66.72° Field: 52152 nT
 Magnetic North is 9.03 degrees West of True North (at 15/Apr/2019)
 Grid North is 0.53 degrees West of True North
 To correct azimuth from True to Grid add 0.53 degrees
 To correct azimuth from Magnetic to Grid subtract 8.50 degrees

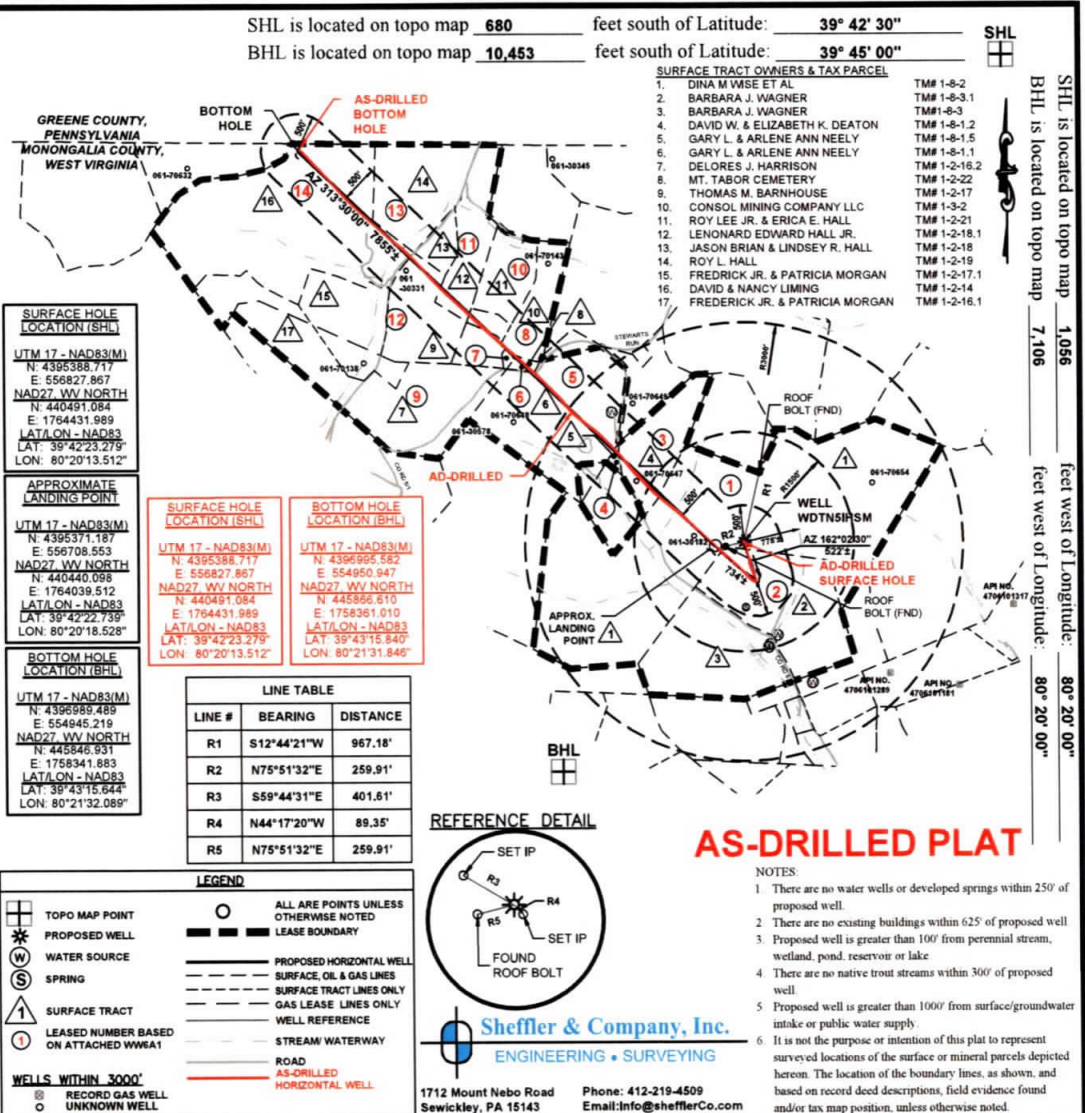


Projected MD at TD: 16366' : 90.68' Inc. 16366.00ft MD, 7955.29ft TVD, 8104.49ft VS
 Azimuth 313.50° with reference 0.00 N, 0.00 E

SHL is located on topo map 680 feet south of Latitude: 39° 42' 30"
 BHL is located on topo map 10,453 feet south of Latitude: 39° 45' 00"

SHL

SHL is located on topo map 1,056 feet west of Longitude: 80° 20' 00"
 BHL is located on topo map 7,106 feet west of Longitude: 80° 20' 00"



SURFACE TRACT OWNERS & TAX PARCEL

1. DINA M WISE ET AL	TMF# 1-8-2
2. BARBARA J. WAGNER	TMF# 1-8-3.1
3. BARBARA J. WAGNER	TMF# 1-8-3
4. DAVID W. & ELIZABETH K. DEATON	TMF# 1-8-1.2
5. GARY L. & ARLENE ANN NEELY	TMF# 1-8-1.5
6. GARY L. & ARLENE ANN NEELY	TMF# 1-8-1.1
7. DELORES J. HARRISON	TMF# 1-2-16.2
8. MT. TABOR CEMETERY	TMF# 1-2-22
9. THOMAS M. BARNHOUSE	TMF# 1-2-17
10. CONSOL MINING COMPANY LLC	TMF# 1-3-2
11. ROY LEE JR. & ERICA E. HALL	TMF# 1-2-21
12. LENONARD EDWARD HALL JR.	TMF# 1-2-18.1
13. JASON BRIAN & LINDSEY R. HALL	TMF# 1-2-18
14. ROY L. HALL	TMF# 1-2-19
15. FREDRICK JR. & PATRICIA MORGAN	TMF# 1-2-17.1
16. DAVID & NANCY LIMING	TMF# 1-2-14
17. FREDERICK JR. & PATRICIA MORGAN	TMF# 1-2-16.1

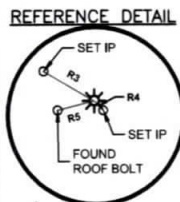
SURFACE HOLE LOCATION (SHL)
 UTM 17 - NAD83(M)
 N: 4395388.717
 E: 556927.867
 NAD27 W.W. NORTH
 N: 440491.084
 E: 1764431.989
 LAT: 39°42'23.279"
 LON: 80°20'13.512"

APPROXIMATE LANDING POINT
 UTM 17 - NAD83(M)
 N: 4395371.187
 E: 556708.553
 NAD27 W.W. NORTH
 N: 440440.088
 E: 1764039.512
 LAT: 39°42'22.739"
 LON: 80°20'18.528"

BOTTOM HOLE LOCATION (BHL)
 UTM 17 - NAD83(M)
 N: 4395989.489
 E: 554945.219
 NAD27 W.W. NORTH
 N: 445548.331
 E: 1758341.683
 LAT: 39°43'15.644"
 LON: 80°21'32.089"

SURFACE HOLE LOCATION (SHL)
 UTM 17 - NAD83(M)
 N: 4395388.717
 E: 556927.867
 NAD27 W.W. NORTH
 N: 440491.084
 E: 1764431.989
 LAT: 39°42'23.279"
 LON: 80°20'13.512"

BOTTOM HOLE LOCATION (BHL)
 UTM 17 - NAD83(M)
 N: 4395955.582
 E: 554950.947
 NAD27 W.W. NORTH
 N: 445856.610
 E: 1758361.010
 LAT: 39°43'15.840"
 LON: 80°21'31.849"



AS-DRILLED PLAT

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 herein. The location of the boundary lines, as shown, and based on record deed descriptions, field evidence found and/or tax map position, unless otherwise noted.

Sheffler & Company, Inc.
 ENGINEERING • SURVEYING
 1712 Mount Nebo Road
 Sewickley, PA 15143
 Phone: 412-219-4509
 Email: info@shefflerCo.com

FILE #: WDTN5IISM
 DRAWING #: 3601 - WDTN5I - AD.DWG
 SCALE: 1"=2000'
 MINIMUM DEGREE OF ACCURACY: 1/2500
 PROVEN SOURCE: USGS MONUMENT JX1864: 1,496.32'

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.: 21452 L.L.S.: P.S. NO. _____



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

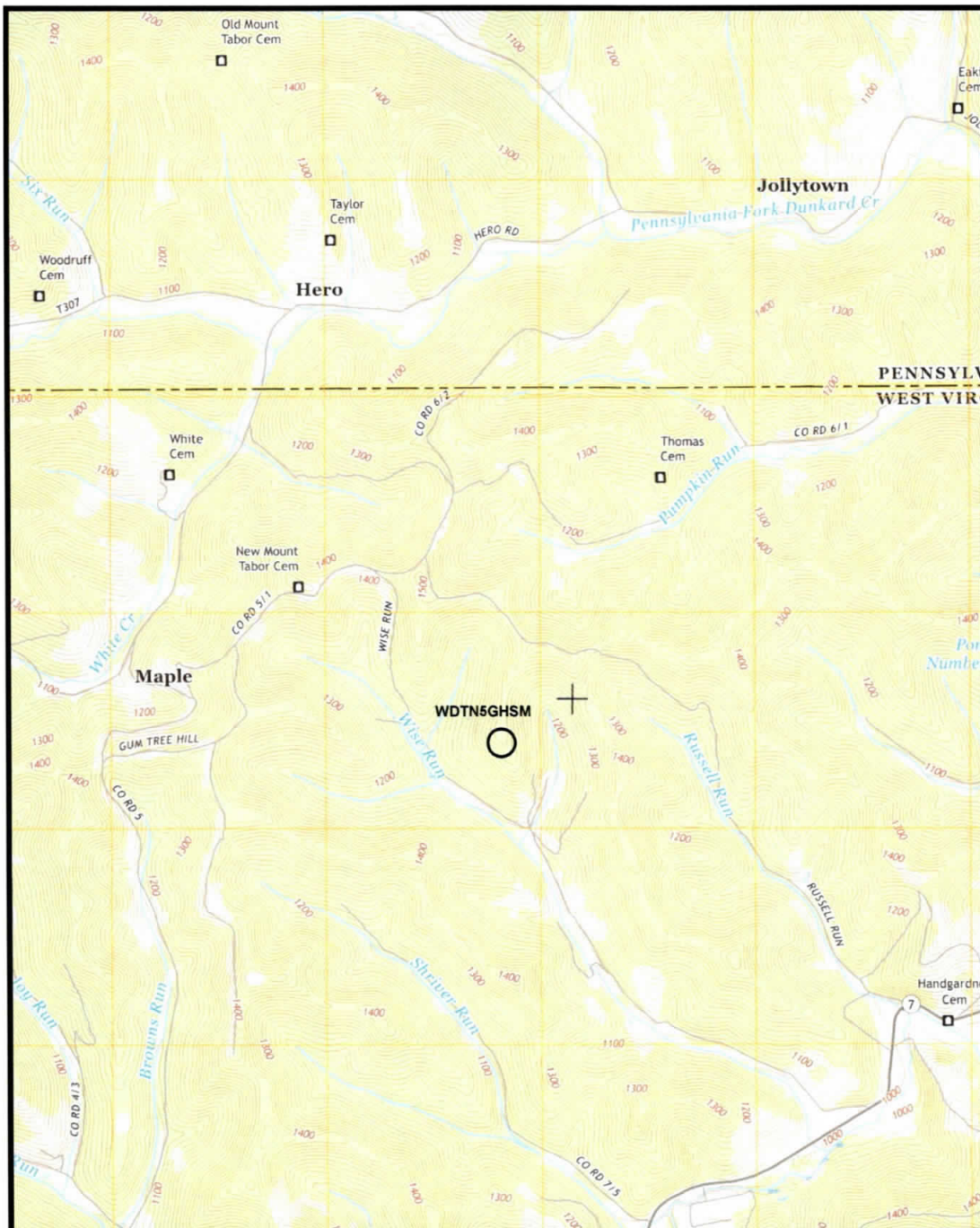
DATE: September 21, 2018, Rev. July 10, 2019
 OPERATOR'S WELL #: WDTN5IISM
 API WELL # 47 061 01793
 STATE COUNTY PERMIT

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

WATERSHED: DUNKARD CREEK ELEVATION: 1412'
 COUNTY/DISTRICT: MONONGALIA / BATTELLE QUADRANGLE: WADESTOWN, WV
 SURFACE OWNER: JOHN M. WISE, ET UX., ET AL. ACREAGE: 207.36
 OIL & GAS ROYALTY OWNER: RICHARD W. WISE, ET AL. ACREAGE: 207.36

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

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TVD: 7,715' ± TMD: 16,018' ±
 WELL OPERATOR: CNX GAS COMPANY, LLC DESIGNATED AGENT: CHRIS TURNER
 Address: 1000 CONSOL ENERGY DRIVE Address: 1 DOMINION DRIVE
 City CANONSBURG State PA Zip Code 15317 City JANE LEW State WV Zip Code 26378



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



DATE: September 21, 2018, Rev. July 10, 2019

OPERATOR'S WELL #: WDTN5HSU

API WELL #	<u>47</u>	<u>061</u>	<u>01793</u>
	STATE	COUNTY	PERMIT

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

WATERSHED DUNKARD CREEK ELEVATION: 1412'
 COUNTY/DISTRICT: MONONGALIA / BATTELLE QUADRANGLE: WADESTOWN, WV
 SURFACE OWNER: JOHN M. WISE, ET UX., ET AL. ACREAGE: 207.36
 OIL & GAS ROYALTY OWNER: RICHARD W. WISE, ET AL. ACREAGE: 207.36

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 City CANONSBURG State PA Zip Code 15317 City JANE LEW State WV Zip Code 26378

Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc
1	1-8-2	189010000	Richard L. McCauley	CNX Gas Company LLC
			Judy A. Eckman	CNX Gas Company LLC
			Thomas E. McCauley	CNX Gas Company LLC
			Regina Wise Myers, aka Violet Regina Myers	CNX Gas Company LLC
			Evaldes A. Everly Shaheen	CNX Gas Company LLC
			Zelda Ruth Brummage	CNX Gas Company LLC
			Dexter Murle Stewart	CNX Gas Company LLC
			Walter C. Ord	CNX Gas Company LLC
			James Freeman Stewart	CNX Gas Company LLC
			Clifford J. Wise	CNX Gas Company LLC
			Victor E. Wise, a single man	CNX Gas Company LLC
			Jesse D. Jones, a married man	CNX Gas Company LLC
			Phyllis J. Petrosky, a widowed woman	CNX Gas Company LLC
			Annette E. Stewart, single	CNX Gas Company LLC
			Harold M. Jones, Jr., a single man	CNX Gas Company LLC
			Robert Stewart	CNX Gas Company LLC
			Richard W. Wise	CNX Gas Company LLC
			Walter R. Currence	CNX Gas Company LLC
			Donald D. Wise, aka Donald G. Wise	CNX Gas Company LLC
			Maureen S. Currence	CNX Gas Company LLC
			Opal Jane Wise, Life Estate Holder and John Matthew Wise and Dina M. Wise, Remaindermen	CNX Gas Company LLC
			Michelle L. Currence	CNX Gas Company LLC
			Justin P. Stewart, single	CNX Gas Company LLC
			Debra Goff	CNX Gas Company LLC
			Eleanor J. Wise, single	CNX Gas Company LLC
			Donald E. Nunley and Deborah L. Nunley	CNX Gas Company LLC
			Fred C. Wise and Alice F. Wise	CNX Gas Company LLC
			Patricia J. Mumaw and Richard L. Mumaw	CNX Gas Company LLC
			Richard A. Nunley and Diana K. Nunley	CNX Gas Company LLC
			Mary Nunley Stepelton and Donald Stepelton	CNX Gas Company LLC
			Linda Stapp	CNX Gas Company LLC
			Melissa A. Bookout	CNX Gas Company LLC
			Jane Irons, widow	CNX Gas Company LLC
			Eileen Ann Lyle	CNX Gas Company LLC
			Robert Eugene Michael, Sr.	CNX Gas Company LLC
			Frank Dennis Michael, Jr.	CNX Gas Company LLC
			Evelyn June Michael	CNX Gas Company LLC
			Tonya Chersin	CNX Gas Company LLC
Boyd Hawkins	CNX Gas Company LLC			
Becky L. Hawkins f/k/a Becky Bortnick	CNX Gas Company LLC			
Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc
2	1-8-3 1-8-3.1	204769000	Barbara J. Wagner, a widow	CNX Gas Company LLC
			Donald L. White, et al	CNX Gas Company LLC
			Arnold D. Anderson, individually, and as Trustee of the Arnold D. Anderson and Barbara J. Anderson Living Trust UTD May 14th, 2008	CNX Gas Company LLC
Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc
3	1-8-1.2	205005000	CBC Holdings, LLC	CNX Gas Company LLC
			David W. Deaton and Elizabeth K. Deaton, h/w	CNX Gas Company LLC
			Earl W. Kennedy	CNX Gas Company LLC
Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc
4	1-8-1.5	204774000	CBC Holdings, LLC	CNX Gas Company LLC
			Gary L. Neely and Arlene Ann Neely	CNX Gas Company LLC
			Earl W. Kennedy	CNX Gas Company LLC
Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc
5	1-8-1.1	189587000	CBC Holdings, LLC	CNX Gas Company LLC
			Gary L. Neely and Arlene Ann Neely	CNX Gas Company LLC
			Earl W. Kennedy	CNX Gas Company LLC
Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc
6	p/o 1-2-22	189584000	Mt. Tabor Methodist Episcopal Church	CNX Gas Company LLC
Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc
7	p/o 1-2-22	189584000	Mt. Tabor Methodist Episcopal Church	CNX Gas Company LLC
Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc
8	p/o 1-3-2	204777000	David C. White, et ux	CNX Gas Company LLC
			Bettyann Reed	CNX Gas Company LLC
			Nancy Emerick	CNX Gas Company LLC

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



Sheffler & Company, Inc.
 ENGINEERING • SURVEYING

1712 Mount Nebo Road Phone: 412-219-4509
 Sewickley, PA 15143 Email: info@shefflerCo.com

DATE: September 21, 2018, Rev. July 10, 2019

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

OPERATOR'S WELL #: WDTN5HSU

API WELL # 47 061 01793
 STATE COUNTY PERMIT

WATERSHED DUNKARD CREEK ELEVATION: 1412'
 COUNTY/DISTRICT: MONONGALIA / BATTELLE QUADRANGLE: WADESTOWN, WV
 SURFACE OWNER: JOHN M. WISE, ET UX., ET AL. ACREAGE: 207.36
 OIL & GAS ROYALTY OWNER: RICHARD W. WISE, ET AL. ACREAGE: 207.36

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 CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY)

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TVD: 7,715' ± TMD: 16,018' ±
 WELL OPERATOR: CNX GAS COMPANY, LLC DESIGNATED AGENT: CHRIS TURNER
 Address: 1000 CONSOL ENERGY DRIVE Address: 1 DOMINION DRIVE
 City CANONSBURG State PA Zip Code 15317 City JANE LEW State WV Zip Code 26378

Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc
8 (CONT.)	p/o 1-3-2	20477900	Edith B. White	CNX Gas Company LLC
			Mary Ann Borkowski, et vir	CNX Gas Company LLC
			Jian W. Ellison, et vir	CNX Gas Company LLC
			Jane E. McIntyre, et vir	CNX Gas Company LLC
			Richard H. Benson II	CNX Gas Company LLC
			Carol Sue Davis	CNX Gas Company LLC
			Karen Imogene Meyers	CNX Gas Company LLC
			Edwin Ray White II	CNX Gas Company LLC
			Anita Susan Talbott	CNX Gas Company LLC
			Alvy Scott White	CNX Gas Company LLC
			Robert L. Tate Jr.	CNX Gas Company LLC
			Frederick C. Tate	CNX Gas Company LLC
			Robert S. Elliot	CNX Gas Company LLC
			Lucy Mae Stickley	CNX Gas Company LLC
			Timothy J. Tate	CNX Gas Company LLC
			Alex Tate	CNX Gas Company LLC
			Jennifer Marie Carrington	CNX Gas Company LLC
			Marian Rebecca Stone Garrett	CNX Gas Company LLC
			Patricia Kathleen White Hoekstra	CNX Gas Company LLC
			Donald Edward Stone	CNX Gas Company LLC
			Doris Jean White	CNX Gas Company LLC
			David Ray Stone	CNX Gas Company LLC
			Sandra Frazier	CNX Gas Company LLC
			Victor White	CNX Gas Company LLC
			Melinda Reid Hatton	CNX Gas Company LLC
			Dennis Frederick Hatton Jr.	CNX Gas Company LLC
			Amanda Hatton	CNX Gas Company LLC
Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc
9	1-2-16.2 p/o 1-2-16.1 p/o 1-2-17 p/o 1-2-17.1	18857800	XTO Energy, Inc.	CNX Gas Company, LLC
			Three Rivers Royalty II, LLC	CNX Gas Company, LLC
			Elizabeth A. Martineau, a/k/a, Elizabeth Ada Snyder, a/k/a, Elizabeth Snyder Martineau	CNX Gas Company, LLC
			Rebecca Snyder Bromley, a/k/a Alice Rebecca Snyder Bromley	CNX Gas Company, LLC
			James Brant Snyder	CNX Gas Company, LLC
			Sharon White Bartholomew, a/k/a Sharon K. W. Bartholomew, a/k/a, Sharon Ruth White Bartholomew	CNX Gas Company, LLC
			David T. White and Sarah K. White, h/w, as JTROS	CNX Gas Company, LLC
			Glenn L. White, individually and as trustee of Glenn L. White Trust	CNX Gas Company, LLC
			Alice T. Boone	CNX Gas Company, LLC
			Eldon Bryant Tucker, et ux	CNX Gas Company, LLC
			Charles Tucker, et ux	CNX Gas Company, LLC
			Robert Earl, et ux	CNX Gas Company, LLC
			David Tucker	CNX Gas Company, LLC
			James Tucker, et ux	CNX Gas Company, LLC
			Cheryl Moleasky	CNX Gas Company, LLC
			Laurence D. Hare	CNX Gas Company, LLC
			James F. Hare III, et ux	CNX Gas Company, LLC
			Lacy L. Adams, et vir	CNX Gas Company, LLC
			Donald Pelger	CNX Gas Company, LLC
			Carl L. Anderson, et ux	CNX Gas Company, LLC
			David Wayne Anderson	CNX Gas Company, LLC
			Deborah Horton, Trustee and Beneficiary of the Ronald L. Horton Revocable Living Trust	CNX Gas Company, LLC
			Chris Pelger	CNX Gas Company, LLC
			Shannon Harker	CNX Gas Company, LLC
			Chase Schwiersenska	CNX Gas Company, LLC
			John Pelger	CNX Gas Company, LLC
			Holly Pelger	CNX Gas Company, LLC
			Brenda Murphy	EQT Production Company
			Vickie L. Simmons	EQT Production Company
			Sherry C. McCoy	EQT Production Company
			David C. Anderson	EQT Production Company
			Kelly Dilbeck	CNX Gas Company, LLC
Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc
10	1-2-21	204778000	Cheryl Lynn Bennett Frankenfield	CNX Gas Company, LLC
			Connie Lee Norwood	CNX Gas Company, LLC
			Beth Ellen Younciak, a/k/a Beth Ellen Bennett	CNX Gas Company, LLC
			Ewing Albert Bennett	CNX Gas Company, LLC
			Wilma Bennet Patterson	CNX Gas Company, LLC
			Emily B. Vallin	CNX Gas Company, LLC
			Jennifer Sue Carpenter	CNX Gas Company, LLC
			Shirley Dotterer Wadsworth	CNX Gas Company, LLC
			Kathryn Dotterer Vahl	CNX Gas Company, LLC
			Thelma R. Dotterer Chowning	CNX Gas Company, LLC

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



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DATE: September 21, 2018, Rev. July 10, 2019

Well Type: Oil Waste Disposal Production Deep

OPERATOR'S WELL #: WDTN5IHSU

Gas Liquid Injection Storage Shallow

API WELL # 47 061 01793
STATE COUNTY PERMIT

WATERSHED: DUNKARD CREEK

ELEVATION: 1412'

COUNTY/DISTRICT: MONONGALIA / BATTELLE

QUADRANGLE: WADESTOWN, WV

SURFACE OWNER: JOHN M. WISE, ET UX., ET AL.

ACREAGE: 207.36

OIL & GAS ROYALTY OWNER: RICHARD W. WISE, ET AL.

ACREAGE: 207.36

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE

PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON

CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY)

TARGET FORMATION: MARCELLUS

ESTIMATED DEPTH: TVD: 7,715' ± TMD: 16,018' ±

WELL OPERATOR: CNX GAS COMPANY, LLC

DESIGNATED AGENT: CHRIS TURNER

Address: 1000 CONSOL ENERGY DRIVE

Address: 1 DOMINION DRIVE

City CANONSBURG State PA Zip Code 15317

City JANE LEW State WV Zip Code 26378

Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc
10 (CONT.)	1-2-21	204778000	Marc D. Prochazka	CNX Gas Company, LLC
			Richard Leslie Puchstein	CNX Gas Company, LLC
			Carl Eric Puchstein	CNX Gas Company, LLC
			Violet Jean Puchstein, a/k/a Jean Steen Puchstein, individually and as Trustee of the Jean Steen Puchstein Trust U/A dated October 8, 2014	CNX Gas Company, LLC
			John William Bennett	CNX Gas Company, LLC
			Jeffery Carpenter	CNX Gas Company, LLC
			Kent Prochazka	CNX Gas Company, LLC
11	1-2-18 1-2-18.1	188500000 204778000	Merrion Oil and Gas Corporation	EQT Production Company
			Hu's Land & Minerals, LLC	EQT Production Company
			Samuel William Stewart and Barbara C. Stewart	CNX Gas Company, LLC
			John Samuel Stewart	CNX Gas Company, LLC
12	1-2-17.2 p/o 1-2-17 p/o 1-2-17.1 p/o 1-2-16.1	239935000	XTO Energy, Inc.	CNX Gas Company, LLC
			Three Rivers Royalty II, LLC	CNX Gas Company, LLC
			Elizabeth A. Martineau, a/k/a, Elizabeth Ada Snyder, a/k/a, Elizabeth Snyder Martineau	CNX Gas Company, LLC
			Rebecca Snyder Bromley, a/k/a Alice Rebecca Snyder Bromley	CNX Gas Company, LLC
			James Brant Snyder	CNX Gas Company, LLC
			Sharon White Bartholomew, a/k/a Sharon R. W. Bartholomew, a/k/a, Sharon Ruth White Bartholomew	CNX Gas Company, LLC
			David T. White and Sarah K. White, h/w, as JTROS	CNX Gas Company, LLC
			Glenn L. White, individually and as trustee of Glenn L. White Trust	CNX Gas Company, LLC
			Alice T. Boone	CNX Gas Company, LLC
			Eldon Bryant Tucker, et ux	CNX Gas Company, LLC
			Charles Tucker, et ux	CNX Gas Company, LLC
			Robert Earl, et ux	CNX Gas Company, LLC
			David Tucker	CNX Gas Company, LLC
			James Tucker, et ux	CNX Gas Company, LLC
			Cheryl Molesky	CNX Gas Company, LLC
			Laurence D. Hare	CNX Gas Company, LLC
			James F. Hare III, et ux	CNX Gas Company, LLC
			Lacy L. Adams, et vir	CNX Gas Company, LLC
			Donald Pelger	CNX Gas Company, LLC
			Carl L. Anderson, et ux	CNX Gas Company, LLC
			David Wayne Anderson	CNX Gas Company, LLC
			Deborah Horton, Trustee and Beneficiary of the Ronald L. Horton Revocable Living Trust	CNX Gas Company, LLC
			Chris Pelger	CNX Gas Company, LLC
			Shannon Harker	CNX Gas Company, LLC
			Chase Schwarsenska	CNX Gas Company, LLC
			John Pelger	CNX Gas Company, LLC
			Holly Pelger	CNX Gas Company, LLC
			Brenda Murphy	EQT Production Company
			Vickie L. Simmons	EQT Production Company
			Sherry C. McCoy	EQT Production Company
			David C. Anderson	EQT Production Company
			Kelly Dilbeck	CNX Gas Company, LLC
			13	1-2-19
Hu's Land & Minerals, LLC	EQT Production Company			
14	1-2-14	188677000	XTO Energy, Inc.	CNX Gas Company, LLC
			David Liming and Nancy Liming	CNX Gas Company, LLC
			Three Rivers Royalty II, LLC	CNX Gas Company, LLC
			Elizabeth A. Martineau, a/k/a, Elizabeth Ada Snyder, a/k/a, Elizabeth Snyder Martineau	CNX Gas Company, LLC
			Rebecca Snyder Bromley, a/k/a Alice Rebecca Snyder Bromley	CNX Gas Company, LLC
			James Brant Snyder	CNX Gas Company, LLC
			Sharon White Bartholomew, a/k/a Sharon R. W. Bartholomew, a/k/a, Sharon Ruth White Bartholomew	CNX Gas Company, LLC
			David T. White and Sarah K. White, h/w, as JTROS	CNX Gas Company, LLC
			Glenn L. White, individually and as trustee of Glenn L. White Trust	CNX Gas Company, LLC
			Alice T. Boone	CNX Gas Company, LLC
			Eldon Bryant Tucker, et ux	CNX Gas Company, LLC
			Charles Tucker, et ux	CNX Gas Company, LLC
			Robert Earl, et ux	CNX Gas Company, LLC
			David Tucker	CNX Gas Company, LLC
			James Tucker, et ux	CNX Gas Company, LLC
			Cheryl Molesky	CNX Gas Company, LLC
			Laurence D. Hare	CNX Gas Company, LLC

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



Sheffler & Company, Inc. ENGINEERING • SURVEYING

1712 Mount Nebo Road Phone: 412-219-4509 Sewickley, PA 15143 Email: info@shefflerCo.com

DATE: September 21, 2018, Rev. July 10, 2019

Well Type: Oil Waste Disposal Production Deep

OPERATOR'S WELL #: WDTN5HSU

Gas Liquid Injection Storage Shallow

API WELL # 47 STATE 061 COUNTY PERMIT 01793

WATERSHED: DUNKARD CREEK

ELEVATION: 1412'

COUNTY/DISTRICT: MONONGALIA / BATTELLE

QUADRANGLE: WADESTOWN, WV

SURFACE OWNER: JOHN M. WISE, ET UX., ET AL.

ACREAGE: 207.36

OIL & GAS ROYALTY OWNER: RICHARD W. WISE, ET AL.

ACREAGE: 207.36

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE

PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON

CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY)

TARGET FORMATION: MARCELLUS

ESTIMATED DEPTH: TVD: 7,715' ± TMD: 16,018' ±

WELL OPERATOR: CNX GAS COMPANY, LLC

DESIGNATED AGENT: CHRIS TURNER

Address: 1000 CONSOL ENERGY DRIVE

Address: 1 DOMINION DRIVE

City CANONSBURG State PA Zip Code 15317

City JANE LEW State WV Zip Code 26378

Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc
14 (CONT.)	1-2-14	188577000	James F. Hare III, et ux	CNX Gas Company, LLC
			Lacy L. Adams, et vir	CNX Gas Company, LLC
			Donald Pelger	CNX Gas Company, LLC
			Carl L. Anderson, et ux	EQT Production Company
			David Wayne Anderson	CNX Gas Company, LLC
			Deborah Horton, Trustee and Beneficiary of the Ronald L. Horton Revocable Living Trust	CNX Gas Company, LLC
			Chris Pelger	CNX Gas Company, LLC
			Shannon Harker	CNX Gas Company, LLC
			Chase Schwarsenska	CNX Gas Company, LLC
			John Pelger	CNX Gas Company, LLC
			Holly Pelger	CNX Gas Company, LLC
			Brenda Murphy	EQT Production Company
			Vickie L. Simmons	EQT Production Company
			Sherry C. McCoy	EQT Production Company
			David C. Anderson	EQT Production Company
			Kelly Dilbeck	CNX Gas Company, LLC

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
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 OFFICE OF OIL & GAS
 601 57TH STREET
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1712 Mount Nebo Road Phone: 412-219-4509
 Sewickley, PA 15143 Email: info@shefflerCo.com

DATE: September 21, 2018, Rev. July 10, 2019

Well Type: Oil Waste Disposal Production Deep

OPERATOR'S WELL #: WDTN5IHSU

Gas Liquid Injection Storage Shallow

API WELL # 47 061 01793
 STATE COUNTY PERMIT

WATERSHED: DUNKARD CREEK ELEVATION: 1412'

COUNTY/DISTRICT: MONONGALIA / BATTELLE QUADRANGLE: WADESTOWN, WV

SURFACE OWNER: JOHN M. WISE, ET UX., ET AL. ACREAGE: 207.36

OIL & GAS ROYALTY OWNER: RICHARD W. WISE, ET AL. ACREAGE: 207.36

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
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Address: 1000 CONSOL ENERGY DRIVE

Address: 1 DOMINION DRIVE

City CANONSBURG State PA Zip Code 15317

City JANE LEW State WV Zip Code 26378

SHL is located on topo map 680 feet south of Latitude: 39° 42' 30"
 BHL is located on topo map 10,453 feet south of Latitude: 39° 45' 00"

SHL

SHL is located on topo map 1,056 feet west of Longitude: 80° 20' 00"
 BHL is located on topo map 7,106 feet west of Longitude: 80° 20' 00"

- SURFACE TRACT OWNERS & TAX PARCEL**
- | | |
|------------------------------------|--------------|
| 1. DINA M WISE ET AL | TM# 1-8-2 |
| 2. BARBARA J. WAGNER | TM# 1-8-3.1 |
| 3. BARBARA J. WAGNER | TM# 1-8-3 |
| 4. DAVID W. & ELIZABETH K. DEATON | TM# 1-8-1.2 |
| 5. GARY L. & ARLENE ANN NEELY | TM# 1-8-1.5 |
| 6. GARY L. & ARLENE ANN NEELY | TM# 1-8-1.1 |
| 7. DELORES J. HARRISON | TM# 1-2-16.2 |
| 8. MT. TABOR CEMETERY | TM# 1-2-22 |
| 9. THOMAS M. BARNHOUSE | TM# 1-2-17 |
| 10. CONSOL MINING COMPANY LLC | TM# 1-2-21 |
| 11. ROY LEE JR. & ERICA E. HALL | TM# 1-2-18.1 |
| 12. LENONARD EDWARD HALL JR. | TM# 1-2-18 |
| 13. JASON BRIAN & LINDSEY R. HALL | TM# 1-2-19 |
| 14. ROY L. HALL | TM# 1-2-17.1 |
| 15. FREDRICK JR. & PATRICIA MORGAN | TM# 1-2-14 |
| 16. DAVID & NANCY LIMING | TM# 1-2-16.1 |
| 17. FREDRICK JR. & PATRICIA MORGAN | TM# 1-2-16.1 |

GREENE COUNTY,
PENNSYLVANIA
MONONGALIA COUNTY,
WEST VIRGINIA

SURFACE HOLE LOCATION (SHL)
 UTM 17 - NAD83(M)
 N: 4395388.717
 E: 556827.867
 NAD27 WV NORTH
 N: 440491.084
 E: 1764431.989
 LAT/LON - NAD83
 LAT: 39°42'23.279"
 LON: 80°20'13.512"

APPROXIMATE LANDING POINT
 UTM 17 - NAD83(M)
 N: 4395371.187
 E: 556708.553
 NAD27 WV NORTH
 N: 440440.098
 E: 1764039.512
 LAT/LON - NAD83
 LAT: 39°42'22.739"
 LON: 80°20'18.528"

BOTTOM HOLE LOCATION (BHL)
 UTM 17 - NAD83(M)
 N: 4396989.489
 E: 554945.219
 NAD27 WV NORTH
 N: 445846.931
 E: 1758341.883
 LAT/LON - NAD83
 LAT: 39°43'15.644"
 LON: 80°21'32.089"

SURFACE HOLE LOCATION (SHL)
 UTM 17 - NAD83(M)
 N: 4395388.717
 E: 556827.867
 NAD27 WV NORTH
 N: 440491.084
 E: 1764431.989
 LAT/LON - NAD83
 LAT: 39°42'23.279"
 LON: 80°20'13.512"

BOTTOM HOLE LOCATION (BHL)
 UTM 17 - NAD83(M)
 N: 4396995.582
 E: 554950.947
 NAD27 WV NORTH
 N: 445866.610
 E: 1758361.010
 LAT/LON - NAD83
 LAT: 39°43'15.840"
 LON: 80°21'31.846"

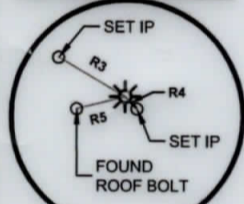
LINE TABLE

LINE #	BEARING	DISTANCE
R1	S12°44'21"W	967.18'
R2	N75°51'32"E	259.91'
R3	S59°44'31"E	401.61'
R4	N44°17'20"W	89.35'
R5	N75°51'32"E	259.91'

LEGEND

	TOPO MAP POINT		PROPOSED WELL
	WATER SOURCE		SPRING
	SURFACE TRACT		LEASED NUMBER BASED ON ATTACHED WW6A1
	WELLS WITHIN 3000'		RECORD GAS WELL
			UNKNOWN WELL
	ALL ARE POINTS UNLESS OTHERWISE NOTED		LEASE BOUNDARY
	PROPOSED HORIZONTAL WELL		SURFACE OIL & GAS LINES ONLY
	SURFACE TRACT LINES ONLY		GAS LEASE LINES ONLY
	WELL REFERENCE		STREAM/WATERWAY
	ROAD		AS-DRILLED HORIZONTAL WELL

REFERENCE DETAIL



Sheffler & Company, Inc.
 ENGINEERING • SURVEYING
 1712 Mount Nebo Road
 Sewickley, PA 15143
 Phone: 412-219-4509
 Email: info@shefflerCo.com

AS-DRILLED PLAT

- NOTES:**
- There are no water wells or developed springs within 250' of proposed well.
 - There are no existing buildings within 625' of proposed well.
 - Proposed well is greater than 100' from perennial stream, wetland, pond, reservoir or lake.
 - There are no native trout streams within 300' of proposed well.
 - Proposed well is greater than 1000' from surface/groundwater intake or public water supply.
 - 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, and based on record deed descriptions, field evidence found and/or tax map position, unless otherwise noted.

FILE #: WDTN5IHSM
 DRAWING #: 3601 - WDTN5I - AD.DWG
 SCALE: 1"=2000'
 MINIMUM DEGREE OF ACCURACY: 1/2500
 PROVEN SOURCE OF ELEVATION: USGS MONUMENT JX1864: 1,496.32'

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.: 21452 L.L.S.: P.S. NO. _____



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

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

WATERSHED: DUNKARD CREEK
 COUNTY/DISTRICT: MONONGALIA / BATTELLE
 SURFACE OWNER: JOHN M. WISE, ET UX., ET AL.
 OIL & GAS ROYALTY OWNER: RICHARD W. WISE, ET AL.

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

TARGET FORMATION: MARCELLUS
 WELL OPERATOR: CNX GAS COMPANY, LLC
 Address: 1000 CONSOL ENERGY DRIVE
 City CANONSBURG State PA Zip Code 15317

DATE: September 21, 2018, Rev. July 10, 2019
 OPERATOR'S WELL #: WDTN5IHSM
 API WELL # 47 061 01793
 STATE COUNTY PERMIT

ELEVATION: 1412'
 QUADRANGLE: WADESTOWN, WV
 ACREAGE: 207.36
 ACREAGE: 207.36

ESTIMATED DEPTH: TVD: 7,715' ± TMD: 16,018' ±
 DESIGNATED AGENT: CHRIS TURNER
 Address: 1 DOMINION DRIVE
 City JANE LEW State WV Zip Code 26378





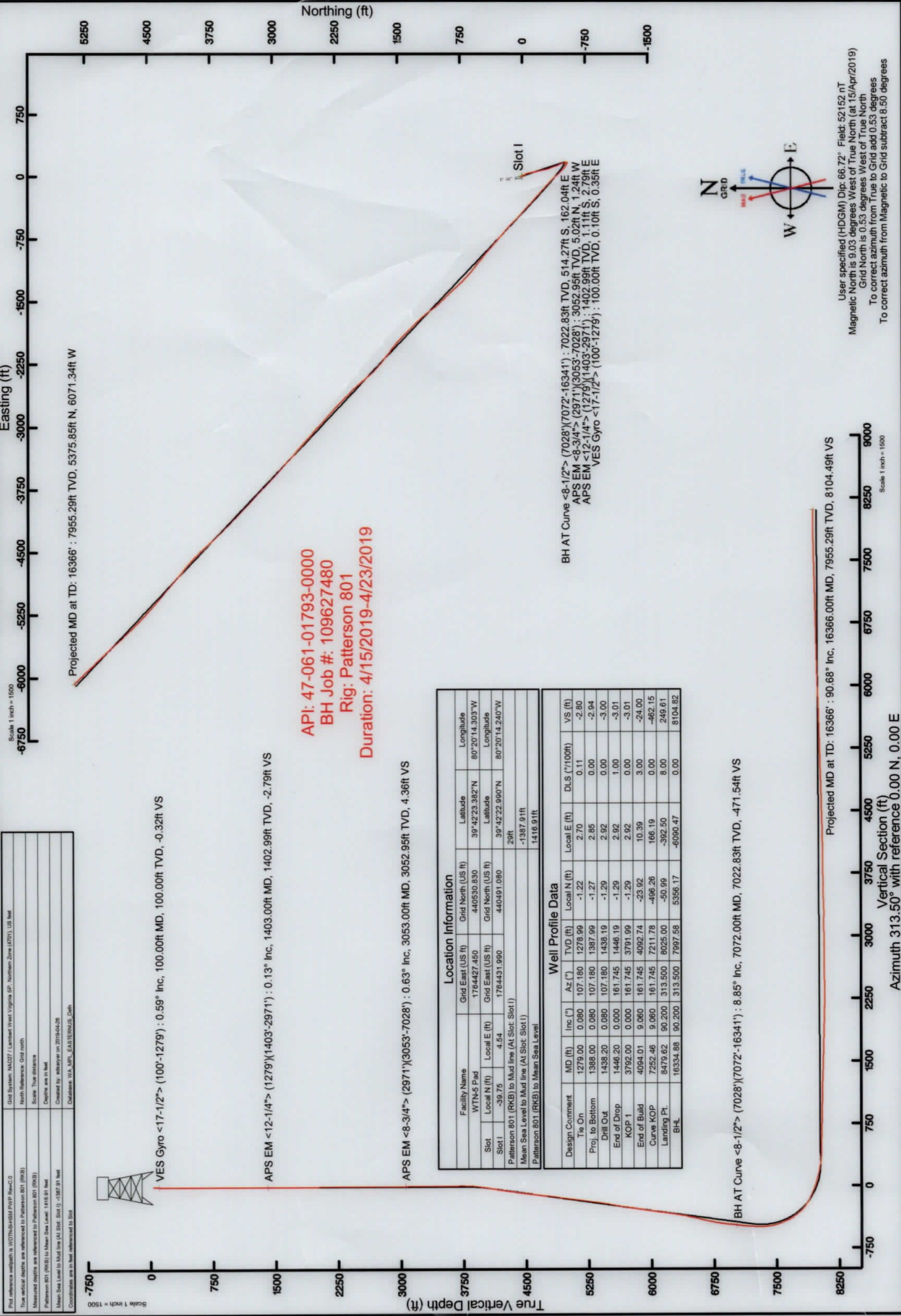
CNX GAS COMPANY, LLC

Location: Monongalia County, WV
Field: Monongalia
Facility: WTN-5 Pad

Slot: Slot I
Well: WDTN-5I-HSM
Wellbore: WDTN-5I-HSM.PWB



Field reference weights is WDTN-5I-HSM PWB Rev C-0
These vertical depths are referenced to Patterson 801 (RKB)
Scale: True distance
North reference: Grid north
Diagrams are in feet
Measured depths are referenced to Patterson 801 (RKB)
Wellbore 801 (RKB) to Mean Sea Level: 1416.9 ft
Mean Sea Level to Mud line (At Slot, Slot I): -1387.9 ft
Coordinates are in feet referenced to Slot



Projected MD at TD: 16366' : 7955.29ft TVD, 5375.85ft N, 6071.34ft W

VES Gyro <17-1/2"> (100'-1279') : 0.59° Inc, 100.00ft MD, 100.00ft TVD, -0.32ft VS

APS EM <12-1/4"> (1279')(1403'-2971') : 0.13° Inc, 1403.00ft MD, 1402.99ft TVD, -2.79ft VS

APS EM <8-3/4"> (2971')(3053'-7028') : 0.63° Inc, 3053.00ft MD, 3052.95ft TVD, 4.36ft VS

BH AT Curve <8-1/2"> (7028')(7072'-16341') : 7022.83ft TVD, 514.27ft S, 162.04ft E
APS EM <8-3/4"> (2971')(3053'-7028') : 3052.95ft TVD, 5.02ft N, 1.24ft W
APS EM <12-1/4"> (1279')(1403'-2971') : 1402.99ft TVD, 1.1ft S, 2.79ft E
VES Gyro <17-1/2"> (100'-1279') : 100.00ft TVD, 0.10ft S, 0.36ft E

API: 47-061-01793-0000
BH Job #: 109627480
Rig: Patterson 801
Duration: 4/15/2019-4/23/2019

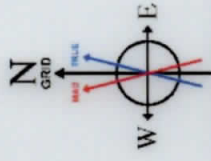
Location Information			
Facility Name	Grid East (US ft)	Grid North (US ft)	Longitude
WTN-5 Pad	1764427.450	440530.830	80°20'14.303"W
Slot	Local E (ft)	Grid North (US ft)	Longitude
Slot I	-38.75	1764431.990	80°20'14.240"W
Patterson 801 (RKB) to Mud line (At Slot, Slot I)	4.54	440491.080	29ft
Mean Sea Level to Mud line (At Slot, Slot I)			-1387.9ft
Patterson 801 (RKB) to Mean Sea Level			-1416.9ft

Well Profile Data			
Design Comment	MD (ft)	Inc (")	Az (°)
The On	1279.00	0.060	107.180
Prod. to Bottom	1388.00	0.060	107.180
Drill Out	1438.20	0.060	107.180
End of Drop	1446.20	0.000	161.745
KOP 1	3792.00	0.000	161.745
End of Build	4094.01	9.060	161.745
Curve KOP	7552.46	9.060	161.745
Landing Pt.	8479.62	90.200	313.500
BHL	16334.88	90.200	313.500
			7997.58
			5356.17
			-6090.47
			0.00
			8104.82

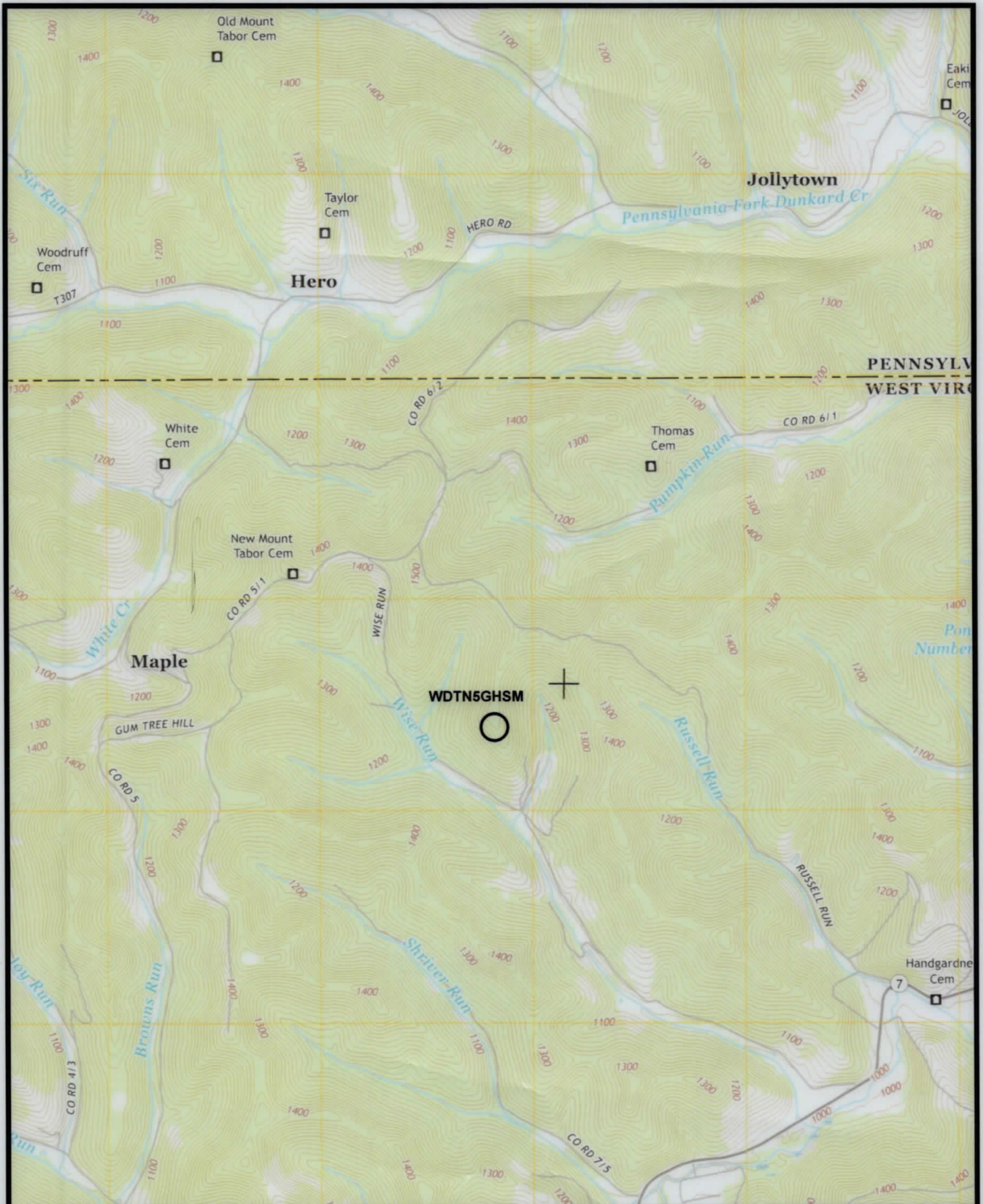
BH AT Curve <8-1/2"> (7028')(7072'-16341') : 8.85° Inc, 7072.00ft MD, 7022.83ft TVD, -471.54ft VS

Projected MD at TD: 16366' : 90.68° Inc, 16366.00ft MD, 7955.29ft TVD, 8104.49ft VS

Vertical Section (ft)
Azimuth 313.50° with reference 0.00 N, 0.00 E



User specified (HDGM) Dip: 66.72° Field: 52152 nT
Magnetic North is 9.03 degrees West of True North (at 15/Apr/2019)
Grid North is 0.53 degrees West of True North
To correct azimuth from True to Grid add 0.53 degrees
To correct azimuth from Magnetic to Grid subtract 8.50 degrees



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



DATE: September 21, 2018, Rev. July 10, 2019

OPERATOR'S WELL #: WDTN5IHSU

API WELL #	<u>47</u>	<u>061</u>	<u>01793</u>
	STATE	COUNTY	PERMIT

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

WATERSHED: DUNKARD CREEK

ELEVATION: 1412'

COUNTY/DISTRICT: MONONGALIA / BATTELLE

QUADRANGLE: WADESTOWN, WV

SURFACE OWNER: JOHN M. WISE, ET UX., ET AL.

ACREAGE: 207.36

OIL & GAS ROYALTY OWNER: RICHARD W. WISE, ET AL.

ACREAGE: 207.36

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

TARGET FORMATION: MARCELLUS

ESTIMATED DEPTH: TVD: 7,715' ± TMD: 16,018' ±

WELL OPERATOR: CNX GAS COMPANY, LLC

DESIGNATED AGENT: CHRIS TURNER

Address: 1000 CONSOL ENERGY DRIVE

Address: 1 DOMINION DRIVE

City CANONSBURG State PA Zip Code 15317

City JANE LEW State WV Zip Code 26378

Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc
1	1-8-2	189010000	Richard L. McCauley	CNX Gas Company LLC
			Judy A. Eckman	CNX Gas Company LLC
			Thomas E. McCauley	CNX Gas Company LLC
			Regina Wise Myers, aka Violet Regina Myers	CNX Gas Company LLC
			Evalee A. Everly Shaheen	CNX Gas Company LLC
			Zelda Ruth Brummage	CNX Gas Company LLC
			Dexter Murle Stewart	CNX Gas Company LLC
			Walter C. Ord	CNX Gas Company LLC
			James Freeman Stewart	CNX Gas Company LLC
			Clifford J. Wise	CNX Gas Company LLC
			Victor E. Wise, a single man	CNX Gas Company LLC
			Jesse D. Jones, a married man	CNX Gas Company LLC
			Phyllis J. Petrosky, a widowed woman	CNX Gas Company LLC
			Annette E. Stewart, single	CNX Gas Company LLC
			Harold M. Jones, Jr., a single man	CNX Gas Company LLC
			Robert Stewart	CNX Gas Company LLC
			Richard W. Wise	CNX Gas Company LLC
			Walter R. Currence	CNX Gas Company LLC
			Donald D. Wise, aka Donald G. Wise	CNX Gas Company LLC
			Maureen S. Currence	CNX Gas Company LLC
			Opal Jane Wise, Life Estate Holder and John Matthew Wise and Dina M. Wise, Remaindermen	CNX Gas Company LLC
			Michelle L. Currence	CNX Gas Company LLC
			Justin P. Stewart, single	CNX Gas Company LLC
			Debra Goff	CNX Gas Company LLC
			Eleanor J. Wise, single	CNX Gas Company LLC
			Donald E. Nunley and Deborah L. Nunley	CNX Gas Company LLC
			Fred C. Wise and Alice F. Wise	CNX Gas Company LLC
			Patricia J. Mumaw and Richard L. Mumaw	CNX Gas Company LLC
			Richard A. Nunley and Diana K. Nunley	CNX Gas Company LLC
			Mary Nunley Stepelton and Donald Stepelton	CNX Gas Company LLC
			Linda Stapp	CNX Gas Company LLC
			Melissa A. Bookout	CNX Gas Company LLC
Jane Irons, widow	CNX Gas Company LLC			
Eileen Ann Lyle	CNX Gas Company LLC			
Robert Eugene Michael, Sr.	CNX Gas Company LLC			
Frank Dennis Michael, Jr.	CNX Gas Company LLC			
Evelyn June Michael	CNX Gas Company LLC			
Tonya Chersin	CNX Gas Company LLC			
Boyd Hawkins	CNX Gas Company LLC			
Becky L. Hawkins f/k/a Becky Bortnick	CNX Gas Company LLC			
Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc
2	1-8-3 1-8-3.1	204769000	Barbara J. Wagner, a widow	CNX Gas Company LLC
			Donald L. White, et al	CNX Gas Company LLC
			Arnold D. Anderson, individually, and as Trustee of the Arnold D. Anderson and Barbara J. Anderson Living Trust UTD May 14th, 2008	CNX Gas Company LLC
Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc
3	1-8-1.2	205005000	CBC Holdings, LLC	CNX Gas Company LLC
			David W. Deaton and Elizabeth K. Deaton, h/w	CNX Gas Company LLC
			Earl W. Kennedy	CNX Gas Company LLC
Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc
4	1-8-1.5	204774000	CBC Holdings, LLC	CNX Gas Company LLC
			Gary L. Neely and Arlene Ann Neely	CNX Gas Company LLC
			Earl W. Kennedy	CNX Gas Company LLC
Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc
5	1-8-1.1	188587000	CBC Holdings, LLC	CNX Gas Company LLC
			Gary L. Neely and Arlene Ann Neely	CNX Gas Company LLC
			Earl W. Kennedy	CNX Gas Company LLC
Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc
6	p/o 1-2-22	188584000	Mt. Tabor Methodist Episcopal Church	CNX Gas Company LLC
Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc
7	p/o 1-2-22	188584000	Mt. Tabor Methodist Episcopal Church	CNX Gas Company LLC
Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc
8	p/o 1-3-2	204777000	David C. White, et ux	CNX Gas Company LLC
			Bettyann Reed	CNX Gas Company LLC
			Nancy Emerick	CNX Gas Company LLC

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



1712 Mount Nebo Road Phone: 412-219-4509 Sewickley, PA 15143 Email: info@shefflerCo.com

DATE: September 21, 2018, Rev. July 10, 2019

Well Type: Oil Waste Disposal Production Deep
 Gas Liquid Injection Storage Shallow
 OPERATOR'S WELL #: WDTN5IHSU
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 47 061 01793
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 OIL & GAS ROYALTY OWNER: RICHARD W. WISE, ET AL. ACREAGE: 207.36

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TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TVD: 7,715' ± TMD: 16,018' ±
 WELL OPERATOR: CNX GAS COMPANY, LLC DESIGNATED AGENT: CHRIS TURNER
 Address: 1000 CONSOL ENERGY DRIVE Address: 1 DOMINION DRIVE
 City CANONSBURG State PA Zip Code 15317 City JANE LEW State WV Zip Code 26378

Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc
8 (CONT.)	p/o 1-3-2	204777000	Edith B. White	CNX Gas Company LLC
			Mary Ann Borkowski, et vir	CNX Gas Company LLC
			Jan W. Ellison, et vir	CNX Gas Company LLC
			Jane E. McIntyre, et vir	CNX Gas Company LLC
			Richard H. Benson II	CNX Gas Company LLC
			Carol Sue Davis	CNX Gas Company LLC
			Karen Imogene Meyers	CNX Gas Company LLC
			Edwin Ray White II	CNX Gas Company LLC
			Anita Susan Talbott	CNX Gas Company LLC
			Alvy Scott White	CNX Gas Company LLC
			Robert L. Tate Jr.	CNX Gas Company LLC
			Frederick C. Tate	CNX Gas Company LLC
			Robert S. Elliot	CNX Gas Company LLC
			Lucy Mae Stickley	CNX Gas Company LLC
			Timothy J. Tate	CNX Gas Company LLC
			Alex Tate	CNX Gas Company LLC
			Jennifer Marie Carrington	CNX Gas Company LLC
			Marian Rebecca Stone Garrett	CNX Gas Company LLC
			Patricia Kathleen White Hoekstra	CNX Gas Company LLC
			Donald Edward Stone	CNX Gas Company LLC
			Doris Jean White	CNX Gas Company LLC
			David Ray Stone	CNX Gas Company LLC
			Sandra Pixler	CNX Gas Company LLC
			Victor White	CNX Gas Company LLC
			Melinda Reid Hatton	CNX Gas Company LLC
			Dennis Frederick Hatton Jr.	CNX Gas Company LLC
			Amanda Hatton	CNX Gas Company LLC
Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc
9	1-2-16 1-2-16.2 p/o 1-2-16.1 p/o 1-2-17 p/o 1-2-17.1	188578000	XTO Energy, Inc.	CNX Gas Company, LLC
			Three Rivers Royalty II, LLC	CNX Gas Company, LLC
			Elizabeth A. Martineau, a/k/a, Elizabeth Ada Snyder, a/k/a/, Elizabeth Snyder Martineau	CNX Gas Company, LLC
			Rebecca Snyder Bromley, a/k/a Alice Rebecca Snyder Bromley	CNX Gas Company, LLC
			James Brant Snyder	CNX Gas Company, LLC
			Sharon White Bartholomew, a/k/a Sharon R. W. Bartholomew, a/k/a, Sharon Ruth White Bartholomew	CNX Gas Company, LLC
			David T. White and Sarah K. White, h/w, as JTROS	CNX Gas Company, LLC
			Glenn L. White, individually and as trustee of Glenn L. White Trust	CNX Gas Company, LLC
			Alice T. Boone	CNX Gas Company, LLC
			Eldon Bryant Tucker, et ux	CNX Gas Company, LLC
			Charles Tucker, et ux	CNX Gas Company, LLC
			Robert Earl, et ux	CNX Gas Company, LLC
			David Tucker	CNX Gas Company, LLC
			James Tucker, et ux	CNX Gas Company, LLC
			Cheryl Molesky	CNX Gas Company, LLC
			Laurence D. Hare	CNX Gas Company, LLC
			James F. Hare III, et ux	CNX Gas Company, LLC
			Lacy L. Adams, et vir	CNX Gas Company, LLC
			Donald Pelger	CNX Gas Company, LLC
			Carl L. Anderson, et ux	CNX Gas Company, LLC
			David Wayne Anderson	CNX Gas Company, LLC
			Deborah Horton, Trustee and Beneficiary of the Ronald L. Horton Revocable Living Trust	CNX Gas Company, LLC
			Chris Pelger	CNX Gas Company, LLC
			Shannon Harker	CNX Gas Company, LLC
			Chase Schwarsenska	CNX Gas Company, LLC
			John Pelger	CNX Gas Company, LLC
			Holly Pelger	CNX Gas Company, LLC
			Brenda Murphy	EQT Production Company
			Vickie L. Simmons	EQT Production Company
			Sherry C. McCoy	EQT Production Company
David C. Anderson	EQT Production Company			
Kelly Dilbeck	CNX Gas Company, LLC			
Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc
10	1-2-21	204778000	Cheryl Lynn Bennett Frankenfield	CNX Gas Company, LLC
			Connie Lee Norwood	CNX Gas Company, LLC
			Beth Ellen Younciak, a/k/a Beth Ellen Bennett	CNX Gas Company, LLC
			Ewing Albert Bennett	CNX Gas Company, LLC
			Wilma Bennet Patterson	CNX Gas Company, LLC
			Emily B. Vallin	CNX Gas Company, LLC
			Jennifer Sue Carpenter	CNX Gas Company, LLC
			Shirley Dotterer Wadsworth	CNX Gas Company, LLC
			Kathryn Dotterer Vahl	CNX Gas Company, LLC
			Thelma R. Dotterer Chowling	CNX Gas Company, LLC

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



Sheffler & Company, Inc.
ENGINEERING • SURVEYING
1712 Mount Nebo Road Sewickley, PA 15143 Phone: 412-219-4509 Email: info@shefflerCo.com

DATE: September 21, 2018, Rev. July 10, 2019

Well Type: Oil Waste Disposal Production Deep
 Gas Liquid Injection Storage Shallow
OPERATOR'S WELL #: WDTN5IHSU
API WELL # 47 STATE 061 COUNTY 01793 PERMIT
WATERSHED: DUNKARD CREEK ELEVATION: 1412'
COUNTY/DISTRICT: MONONGALIA / BATTELLE QUADRANGLE: WADESTOWN, WV
SURFACE OWNER: JOHN M. WISE, ET UX., ET AL. ACREAGE: 207.36
OIL & GAS ROYALTY OWNER: RICHARD W. WISE, ET AL. ACREAGE: 207.36

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

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TVD: 7,715' ± TMD: 16,018' ±
WELL OPERATOR: CNX GAS COMPANY, LLC DESIGNATED AGENT: CHRIS TURNER
Address: 1000 CONSOL ENERGY DRIVE Address: 1 DOMINION DRIVE
City CANONSBURG State PA Zip Code 15317 City JANE LEW State WV Zip Code 26378

Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc
10 (CONT.)	1-2-21	204778000	Marc D. Prochazka	CNX Gas Company, LLC
			Richard Leslie Puchstein	CNX Gas Company, LLC
			Carl Eric Puchstein	CNX Gas Company, LLC
			Violet Jean Puchstein, a/k/a Jean Steen Puchstein, individually and as Trustee of the Jean Steen Puchstein Trust U/A dated October 8, 2014	CNX Gas Company, LLC
			John William Bennett	CNX Gas Company, LLC
			Jeffery Carpenter	CNX Gas Company, LLC
			Kent Prochazka	CNX Gas Company, LLC
Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc
11	1-2-18 1-2-18.1	188580000 204779000	Merrion Oil and Gas Corporation	EQT Production Company
			Hu's Land & Minerals, LLC	EQT Production Company
			Samuel William Stewart and Barbara C. Stewart	CNX Gas Company LLC
			John Samuel Stewart	CNX Gas Company LLC
Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc
12	1-2-17.2 p/o 1-2-17 p/o 1-2-17.1 p/o 1-2-16.1	239935600	XTO Energy, Inc.	CNX Gas Company, LLC
			Three Rivers Royalty II, LLC	CNX Gas Company, LLC
			Elizabeth A. Martineau, a/k/a, Elizabeth Ada Snyder, a/k/a/, Elizabeth Snyder Martineau	CNX Gas Company, LLC
			Rebecca Snyder Bromley, a/k/a Alice Rebecca Snyder Bromley	CNX Gas Company, LLC
			James Brant Snyder	CNX Gas Company, LLC
			Sharon White Bartholomew, a/k/a Sharon R. W. Bartholomew, a/k/a, Sharon Ruth White Bartholomew	CNX Gas Company, LLC
			David T. White and Sarah K. White, h/w, as JTROS	CNX Gas Company, LLC
			Glenn L. White, individually and as trustee of Glenn L. White Trust	CNX Gas Company, LLC
			Alice T. Boone	CNX Gas Company, LLC
			Eldon Bryant Tucker, et ux	CNX Gas Company, LLC
			Charles Tucker, et ux	CNX Gas Company, LLC
			Robert Earl, et ux	CNX Gas Company, LLC
			David Tucker	CNX Gas Company, LLC
			James Tucker, et ux	CNX Gas Company, LLC
			Cheryl Molesky	CNX Gas Company, LLC
			Laurence D. Hare	CNX Gas Company, LLC
			James F. Hare III, et ux	CNX Gas Company, LLC
			Lacy L. Adams, et vir	CNX Gas Company, LLC
			Donald Pelger	CNX Gas Company, LLC
			Carl L. Anderson, et ux	CNX Gas Company, LLC
			David Wayne Anderson	CNX Gas Company, LLC
			Deborah Horton, Trustee and Beneficiary of the Ronald L. Horton Revocable Living Trust	CNX Gas Company, LLC
			Chris Pelger	CNX Gas Company, LLC
			Shannon Harker	CNX Gas Company, LLC
			Chase Schwersenska	CNX Gas Company, LLC
			John Pelger	CNX Gas Company, LLC
			Holly Pelger	CNX Gas Company, LLC
			Brenda Murphy	EQT Production Company
			Vickie L. Simmons	EQT Production Company
			Sherry C. McCoy	EQT Production Company
			David C. Anderson	EQT Production Company
			Kelly Dilbeck	CNX Gas Company, LLC
			Tract ID	Tax Map & Parcel
13	1-2-19	204780000	Merrion Oil and Gas Corporation	EQT Production Company
			Hu's Land & Minerals, LLC	EQT Production Company
Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc
14	1-2-14	188577000	XTO Energy, Inc.	CNX Gas Company, LLC
			David Liming and Nancy Liming	CNX Gas Company, LLC
			Three Rivers Royalty II, LLC	CNX Gas Company, LLC
			Elizabeth A. Martineau, a/k/a, Elizabeth Ada Snyder, a/k/a/, Elizabeth Snyder Martineau	CNX Gas Company, LLC
			Rebecca Snyder Bromley, a/k/a Alice Rebecca Snyder Bromley	CNX Gas Company, LLC
			James Brant Snyder	CNX Gas Company, LLC
			Sharon White Bartholomew, a/k/a Sharon R. W. Bartholomew, a/k/a, Sharon Ruth White Bartholomew	CNX Gas Company, LLC
			David T. White and Sarah K. White, h/w, as JTROS	CNX Gas Company, LLC
			Glenn L. White, individually and as trustee of Glenn L. White Trust	CNX Gas Company, LLC
			Alice T. Boone	CNX Gas Company, LLC
			Eldon Bryant Tucker, et ux	CNX Gas Company, LLC
			Charles Tucker, et ux	CNX Gas Company, LLC
			Robert Earl, et ux	CNX Gas Company, LLC
			David Tucker	CNX Gas Company, LLC
			James Tucker, et ux	CNX Gas Company, LLC
			Cheryl Molesky	CNX Gas Company, LLC
			Laurence D. Hare	CNX Gas Company, LLC

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Sewickley, PA 15143 Email: info@shefflerCo.com

DATE: September 21, 2018, Rev. July 10, 2019

Well Type: Oil Waste Disposal Production Deep
 Gas Liquid Injection Storage Shallow
OPERATOR'S WELL #: WDTN5IHSU
API WELL # 47 061 01793
STATE COUNTY PERMIT

WATERSHED: DUNKARD CREEK ELEVATION: 1412'
COUNTY/DISTRICT: MONONGALIA / BATTELLE QUADRANGLE: WADESTOWN, WV
SURFACE OWNER: JOHN M. WISE, ET UX., ET AL. ACREAGE: 207.36
OIL & GAS ROYALTY OWNER: RICHARD W. WISE, ET AL. ACREAGE: 207.36

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TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TVD: 7,715' ± TMD: 16,018' ±
WELL OPERATOR: CNX GAS COMPANY, LLC DESIGNATED AGENT: CHRIS TURNER
Address: 1000 CONSOL ENERGY DRIVE Address: 1 DOMINION DRIVE
City CANONSBURG State PA Zip Code 15317 City JANE LEW State WV Zip Code 26378

Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc
14 (CONT.)	1-2-14	188577000	James F. Hare III, et ux	CNX Gas Company, LLC
			Lacy L. Adams, et vir	CNX Gas Company, LLC
			Donald Pelger	CNX Gas Company, LLC
			Carl L. Anderson, et ux	EQT Production Company
			David Wayne Anderson	CNX Gas Company, LLC
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			Shannon Harker	CNX Gas Company, LLC
			Chase Schwesenska	CNX Gas Company, LLC
			John Pelger	CNX Gas Company, LLC
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			Vickie L. Simmons	EQT Production Company
			Sherry C. McCoy	EQT Production Company
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 City CANONSBURG State PA Zip Code 15317 City JANE LEW State WV Zip Code 26378