WR-35
Rev. 8/23/13

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

API 47 - 095 - 02667 County TYLER District CENTERVILLE
Quad WEST UNION Pad Name SHR37 Field/Pool Name
Farm name CNX GAS COMPANY LLC Well Number SHR37DHSM
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	4355990.26	Easting	513306.08
Landing Point of Curve	Northing	4356184.57	Easting	512684.37
Bottom Hole	Northing	4359408.98	Easting	511519.39

Elevation (ft) 828' 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 01.08.2020 Date drilling commenced 03.19.2020 Date drilling ceased 03.30.2020
Date completion activities began 3/30/2021 Date completion activities ceased 4/13/2021
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 92', 126', 144', 148', 150', 176', 220' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 1,748' 2,458' Void(s) encountered (Y/N) depths N
Coal depth(s) ft No mineable seams; trace @ 154', 528', 618', 955', 982, 1044, Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

RECEIVED
Office of Oil and Gas
JUL 12 2021
WV Department of
Environmental Protection

Reviewed by: DmH
08/27/2021

WR-35
Rev. 8/23/13

API 47- 095 - 02667 Farm name CNX GAS COMPANY LLC Well number SHR37DHSM

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"	100'	NEW	94 lb/ft	N/A	GROUT TO SURFACE
Surface	17.5"	13.375"	433'	NEW	J-55 54.5 lb/ft	N/A	Y - CEMENT TO SURFACE
Coal							
Intermediate 1	12.25"	9.625"	5,221'	NEW	J-55 36 lb/ft	N/A	Y - CEMENT TO SURFACE
Intermediate 2							
Intermediate 3							
Production	8.75" & 8.5"	5.5"	18,360'	NEW	VAEP P-110Y 20 lb/ft	N/A	Y - TOC @ 846'
Tubing	5.5"	2.875	6,862.2	NEW	P-110 6.5 LB/FT	N/A	N/A
Packer type and depth set							

Comment Details ALL DEPTHS ARE REFERENCE TO GROUND LEVEL (-26' KB)

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft^3/sks)	Volume (ft^3)	Cement Top (MD)	WOC (hrs)
Conductor							
Surface	HALCEM	355	15.8	1.17	415	0	8
Coal							
Intermediate 1	HALCEM	835	15.8	1.20	1,002	0	8
Intermediate 2							
Intermediate 3							
Production	EXP NEOCEM / NEOCEM	1,030 (L) / 2,800 (T)	15	1.14 (L) / 1.13 (T)	1,174 (L) / 3,164(T)	846'	8
Tubing							

Drillers TD (ft) 18,391' (MD @GL) Loggers TD (ft) 18,391' (MD @GL)
Deepest formation penetrated MARCELLUS Plug back to (ft) N/A
Plug back procedure N/A

Kick off depth (ft) 5,813' (MD @GL)

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 = 8: Centralize every other joint from shoe to surface
INTERMEDIATE = 63: Centralize every other joint from shoe to surface
PRODUCTION = 430; Centralize every joint from shoe to TOC

WAS WELL COMPLETED AS SHOT HOLE ☐ Yes ■ No DETAILS Plug and Perforation

WAS WELL COMPLETED OPEN HOLE? ☐ Yes ■ No DETAILS

WERE TRACERS USED ☐ Yes ■ No TYPE OF TRACER(S) USED

RECEIVED
Office of Oil and Gas
JUL 12 2021
WV Department of
Environmental Protection 08/27/2021

WR-35
Rev. 8/23/13

API 47- 095 - 02667 Farm name CNX GAS COMPANY LLC Well number SHR37DHSM

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
	SEE	ATTACHMENT	1		

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
		SEE	ATTACHMENT	2				

Please insert additional pages as applicable.

WR-35
Rev. 8/23/13

API 47- 095 - 02667 Farm name CNX GAS COMPANY LLC Well number SHR37DHSM

PRODUCING FORMATION(S)	DEPTHS			
MARCELLUS	6,975'	TVD	6,275.7'	MD

Please insert additional pages as applicable.

GAS TEST ☐ Build up ☐ Drawdown ■ Open Flow OIL TEST ■ Flow ☐ Pump

SHUT-IN PRESSURE Surface 1750 psi Bottom Hole _____ psi DURATION OF TEST 24 hrs

OPEN FLOW	Gas	Oil	NGL	Water	GAS MEASURED BY
	4,824.6 mcfpd	139 bpd	0 bpd	876 bpd	☐ Estimated ■ Orifice ☐ Pilot

LITHOLOGY/ FORMATION NAME	TOP DEPTH IN FT 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_2S, ETC)
	0		0		
					FORMATION LOG ATTACHED

Please insert additional pages as applicable.

Drilling Contractor PATTERSON UTI DRILLING
Address 207 Carlton Drive City Eighty Four State PA Zip 15330

Logging Company WORKOVER SOLUTIONS
Address 13996 US-6 City Mansfield State PA Zip 16933

Cementing Company HALLIBURTON
Address 121 Champion Way, Suite #210 City Canonsburg State PA Zip 15317

Stimulating Company NexTier Oilfield Solutions Inc.
Address 3990 Rogerdale Rd City Houston State TX Zip 77042

Please insert additional pages as applicable.

RECEIVED
Office of Oil and Gas
JUL 12 2021
WV Department of Environmental Protection

Completed by Michael Honce Telephone 304-406-8909
Signature _____ Title Completions Superintendent Date 6/29/2021

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

08/27/2021

SHR37DHSM – PERFORATION RECORD – ATTACHMENT 1					
Stage No.	Perforation Date	Perforation from MD ft.	Perforation to MD ft.	Number of Perforations	Formation(s)
1	3/30/2021	18,243.9	18,334.0	24	Marcellus Shale
2	3/30/2021	18,000.4	18,182.0	40	Marcellus Shale
3	3/31/2021	17,775.4	17,957.0	40	Marcellus Shale
4	3/31/2021	17,550.4	17,732.0	40	Marcellus Shale
5	3/31/2021	17,325.4	17,507.0	40	Marcellus Shale
6	3/31/2021	17,100.4	17,282.0	40	Marcellus Shale
7	4/1/2021	16,875.4	17,057.0	40	Marcellus Shale
8	4/2/2021	16,650.4	16,812.0	40	Marcellus Shale
9	4/2/2021	16,425.4	16,607.0	40	Marcellus Shale
10	4/2/2021	16,200.4	16,382.0	40	Marcellus Shale
11	4/3/2021	15,975.4	16,157.0	40	Marcellus Shale
12	4/3/2021	15,750.4	15,932.0	40	Marcellus Shale
13	4/3/2021	15,525.4	15,707.0	40	Marcellus Shale
14	4/3/2021	15,300.4	15,482.0	40	Marcellus Shale
15	4/4/2021	15,075.4	15,257.0	40	Marcellus Shale
16	4/4/2021	14,850.4	15,032.0	40	Marcellus Shale
17	4/4/2021	14,625.4	14,807.0	40	Marcellus Shale
18	4/5/2021	14,400.4	14,582.0	40	Marcellus Shale
19	4/5/2021	14,175.4	14,357.0	40	Marcellus Shale
20	4/5/2021	13,950.4	14,132.0	40	Marcellus Shale
21	4/5/2021	13,725.4	13,907.0	40	Marcellus Shale
22	4/6/2021	13,500.4	13,682.0	40	Marcellus Shale
23	4/6/2021	13,275.4	13,457.0	40	Marcellus Shale
24	4/6/2021	13,050.4	13,232.0	40	Marcellus Shale
25	4/7/2021	12,825.4	13,007.0	40	Marcellus Shale
26	4/7/2021	12,600.4	12,782.0	40	Marcellus Shale
27	4/8/2021	12,375.4	12,557.0	40	Marcellus Shale
28	4/8/2021	12,150.4	12,332.0	40	Marcellus Shale
29	4/8/2021	11,925.4	12,107.0	40	Marcellus Shale
30	4/8/2021	11,700.4	11,882.0	40	Marcellus Shale
31	4/9/2021	11,475.4	11,657.0	40	Marcellus Shale
32	4/9/2021	11,250.4	11,432.0	40	Marcellus Shale
33	4/9/2021	11,025.4	11,207.0	40	Marcellus Shale
34	4/9/2021	10,800.4	10,982.0	40	Marcellus Shale
35	4/10/2021	10,575.4	10,757.0	40	Marcellus Shale
36	4/10/2021	10,350.4	10,532.0	40	Marcellus Shale
37	4/10/2021	10,125.4	10,307.0	40	Marcellus Shale
38	4/10/2021	9,900.4	10,082.0	40	Marcellus Shale
39	4/11/2021	9,675.4	9,857.4	40	Marcellus Shale
40	4/11/2021	9,450.4	9,632.4	40	Marcellus Shale
41	4/11/2021	9,225.4	9,407.4	40	Marcellus Shale
42	4/11/2021	9,000.4	9,182.4	40	Marcellus Shale
43	4/11/2021	8,775.4	8,957.4	40	Marcellus Shale
44	4/11/2021	8,550.4	8,732.4	40	Marcellus Shale
45	4/12/2021	8,325.4	8,507.4	40	Marcellus Shale
46	4/12/2021	8,100.4	8,282.4	40	Marcellus Shale
47	4/12/2021	7,875.4	8,057.4	40	Marcellus Shale
48	4/12/2021	7,650.4	7,832.4	40	Marcellus Shale
49	4/12/2021	7,425.4	7,607.4	40	Marcellus Shale
50	4/13/2021	7,200.4	7,382.4	40	Marcellus Shale
51	4/13/2021	6,975.4	7,157.4	40	Marcellus Shale

08/27/2021

SHR37DHSM – 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 (lbs)	Amount of Water (bbls)	Amount of Nitrogen /Other (Units)
1	3/30/2021	99	9,157.0	9,595.0	3,502.0	6,976.19	6,976.19	N/A
2	3/30/2021	95	9,211.0	9,756.0	3,756.0	6,714.14	6,714.14	N/A
3	3/31/2021	99	9,479.0	9,750.0	4,173.0	6,784.67	6,784.67	N/A
4	3/31/2021	101	9,465.0	9,760.0	3,892.0	6,563.36	6,563.36	N/A
5	3/31/2021	99	9,347.0	9,728.0	3,810.0	6,707.62	6,707.62	N/A
6	4/1/2021	93	9,221.0	9,814.0	3,740.0	8,321.67	8,321.67	N/A
7	4/1/2021	85	9,224.0	10,054.0	4,058.0	7,671.81	7,671.81	N/A
8	4/2/2021	93	9,025.0	9,793.0	4,125.0	6,874.05	6,874.05	N/A
9	4/2/2021	100	9,401.0	9,711.0	3,690.0	6,145.64	6,145.64	N/A
10	4/3/2021	100	9,379.0	9,737.0	3,898.0	6,043.00	6,043.00	N/A
11	4/3/2021	101	9,217.0	9,749.0	4,226.0	6,196.40	6,196.40	N/A
12	4/3/2021	99	9,254.0	9,717.0	4,149.0	5,961.50	5,961.50	N/A
13	4/3/2021	101	9,217.0	9,770.0	3,840.0	6,246.17	6,246.17	N/A
14	4/4/2021	101	9,361.0	9,728.0	3,926.0	6,163.90	6,163.90	N/A
15	4/4/2021	101	9,113.0	9,749.0	4,391.0	6,263.79	6,263.79	N/A
16	4/4/2021	99	9,097.0	9,719.0	4,438.0	6,162.88	6,162.88	N/A
17	4/4/2021	102	9,211.0	9,698.0	4,162.0	6,119.48	6,119.48	N/A
18	4/5/2021	100	9,124.0	9,780.0	4,214.0	6,148.26	6,148.26	N/A
19	4/5/2021	98	8,913.0	9,533.0	4,128.0	6,295.24	6,295.24	N/A
20	4/5/2021	103	9,249.0	9,718.0	3,540.0	6,149.71	6,149.71	N/A
21	4/6/2021	104	9,005.0	9,566.0	3,532.0	6,197.90	6,197.90	N/A
22	4/6/2021	100	8,645.0	9,634.0	3,756.0	6,144.95	6,144.95	N/A
23	4/6/2021	101	8,938.0	9,654.0	4,673.0	6,196.48	6,196.48	N/A
24	4/7/2021	104	8,881.0	9,369.0	4,577.0	5,958.62	5,958.62	N/A
25	4/7/2021	102	8,574.0	9,148.0	4,683.0	6,123.86	6,123.86	N/A
26	4/8/2021	103	8,685.0	9,279.0	4,220.0	6,265.07	6,265.07	N/A
27	4/8/2021	103	8,689.0	9,431.0	4,237.0	5,943.26	5,943.26	N/A
28	4/8/2021	104	8,396.0	8,829.0	4,508.0	6,301.52	6,301.52	N/A
29	4/8/2021	102	8,733.0	9,245.0	4,624.0	6,263.00	6,263.00	N/A
30	4/8/2021	104	8,710.0	9,507.0	5,074.0	6,020.40	6,020.40	N/A
31	4/9/2021	104	8,640.0	9,636.0	4,456.0	6,037.24	6,037.24	N/A
32	4/9/2021	104	8,422.0	9,043.0	3,723.0	5,963.55	5,963.55	N/A
33	4/9/2021	104	8,530.0	8,993.0	3,778.0	6,010.19	6,010.19	N/A
34	4/9/2021	104	8,454.0	9,680.0	4,546.0	6,055.12	6,055.12	N/A
35	4/10/2021	103	8,334.0	9,475.0	3,825.0	6,020.24	6,020.24	N/A
36	4/10/2021	104	8,146.0	9,063.0	3,643.0	5,991.95	5,991.95	N/A
37	4/10/2021	104	8,039.0	8,552.0	3,723.0	6,117.21	6,117.21	N/A
38	4/11/2021	104	7,993.0	8,858.0	3,923.0	5,894.88	5,894.88	N/A
39	4/11/2021	105	8,133.0	8,949.0	3,825.0	5,947.81	5,947.81	N/A
40	4/11/2021	104	8,065.0	9,164.0	4,400.0	5,765.10	5,765.10	N/A
41	4/11/2021	104	7,989.0	8,920.0	3,582.0	6,139.52	6,139.52	N/A
42	4/11/2021	104	8,087.0	8,837.0	3,597.0	5,938.07	5,938.07	N/A
43	4/11/2021	104	8,012.0	9,170.0	4,086.0	5,864.52	5,864.52	N/A
44	4/12/2021	104	7,911.0	8,641.0	3,831.0	5,899.19	5,899.19	N/A
45	4/12/2021	105	7,797.0	8,710.0	3,737.0	5,914.07	5,914.07	N/A
46	4/12/2021	105	7,729.0	8,678.0	3,622.0	5,633.81	5,633.81	N/A
47	4/12/2021	104	7,747.0	8,223.0	3,789.0	6,092.86	6,092.86	N/A
48	4/12/2021	103	7,721.0	8,690.0	3,796.0	5,860.88	5,860.88	N/A
49	4/12/2021	104	7,600.0	8,820.0	4,713.0	6,115.64	6,115.64	N/A
50	4/13/2021	105	7,441.0	8,873.0	4,380.0	6,483.93	6,483.93	N/A
51	4/13/2021	104	7,368.0	8,231.0	3,975.0	6,108.40	6,108.40	N/A

08/27/2021

47-095-02667

API: 47-095-02667

FARM NAME: CNX GAS COMPANY LLC

WELL NUMBER: SHR37DHSM

Lithologies

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	0	456	0	456	SANDSTONE / TRACES OF SILTSTONE & LIMESTONE & COAL
HARLEM COAL	456	459	456	459	COAL
UNDIFFERENTIATED SAND & SILTSTONE	459	1,621	459	1,621	SANDSTONE / TRACES OF GRAY SHALE, COAL, QUARTZ & SILTSTONE
BIG LIME	1,621	1,740	1,621	1,741	LIMESTONE / TRACES OF SILTSTONE
BIG INJUN SAND	1,740	1,980	1,741	1,981	SANDSTONE & LIMESTONE / TRACES OF SILTSTONE
PRICE FORMATION	1,980	2,130	1,981	2,131	SILTSTONE / TRACES OF RED SHALE
BEREA SAND	2,130	2,220	2,131	2,221	SANDSTONE / TRACES OF SILTSTONE & PYRITE
GORDON SAND	2,220	3,128	2,221	2,231	SANDSTONE / TRACES OF SILTSTONE & PYRITE
WARREN SAND	3,128	3,198	3,130	3,201	SANDSTONE AND SILTSTONE
UNDIFFERENTIATED SHALE	3,198	4,721	3,201	4,998	GRAY SHALE
BENSON	4,721	4,909	4,998	5,256	SANDSTONE
ALEXANDER	4,909	5,014	5,256	5,361	SANDSTONE AND SILTSTONE
UNDIFFERENTIATED SHALE	5,014	6,116	5,361	6,836	GRAY SHALE
MIDDLESEX	6,096	6,138	6,417	6,502	GRAY SHALE / TRACES OF SILTSTONE
WEST RIVER	6,138	6,208	6,502	6,666	GRAY SHALE
BURKET SHALE	6,208	6,242	6,666	6,776	BLACK SHALE, GAS SHOW
TULLY LIMESTONE	6,242	6,262	6,776	6,869	GRAY SHALE
HAMILTON SHALE	6,262	6,273	6,869	6,398	GRAY SHALE & LIMESTONE
UPPER MARCELLUS SHALE	6,273	6,288	6,398	7,050	BLACK SHALE
MIDDLE MARCELLUS SHALE	6,288	TD	7,050	TD	BLACK SHALE, GAS SHOW
TD - MARCELLUS		6,325		18,420	

47-095-02667

Drilling Contractor

Patterson-UTI Drilling Company
4000 Town Center Boulevard Suite 240
Canonsburg, PA 15317

Cementing Company

Halliburton
121 Champion Way Suite #210
Canonsburg, PA 15317

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	3/30/2021
Job End Date:	4/13/2021
State:	West Virginia
County:	Tyler
API Number:	47-095-02667-00-00
Operator Name:	CNX Gas Company LLC
Well Name and Number:	SHR37 M1 DHSM
Latitude:	39.35313000
Longitude:	-80.84573600
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,300
Total Base Water Volume (gal):	13,870,011
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	Operator	Carrier/Base Fluid					
			Water	7732-18-5	100.00000	84.47589	None
Proppant (Sand)	Nextier	Proppant					
			Crystalline silica: Quartz (SiO2)	14808-60-7	100.00000	14.77162	None
7.5% HCl	NexTier	Acid					
			Water	7732-18-5	92.50000	0.60158	None
7.5% HCl	NexTier	Acid					
			Hydrochloric Acid	7647-01-0	7.50000	0.04878	None
StimStream FR 9800	Chemstream	Friction Reducer					
			Water	7732-18-5	47.00000	0.03294	None
StimStream FR 9800	Chemstream	Friction Reducer					
			butene, homopolymer	9003-29-6	25.00000	0.01752	None
StimStream FR 9800	Chemstream	Friction Reducer					
			alkanes, C16-20-iso-	90622-59-6	25.00000	0.01752	None
StimStream SC-398	Chemstream	Scale Inhibitor					
			Non-Hazerdous substances	Proprietary	90.00000	0.01161	None
Clearal 268	Chemstream	Biocide					
			Non-Hazerdous substances	Proprietary	80.00000	0.00820	None

CoilStream VB 625	Chemstream	Gelling Agent					
			Heavy Aliphatic Naphtha	64742-96-7	60.00000	0.00396	None
CoilStream VB 625	Chemstream	Gelling Agent					
			Guara Gum	9000-30-0	50.00000	0.00330	None
StimStream FR 9800	Chemstream	Friction Reducer					
			Alcohols, C12-18, ethoxylated	68213-23-0	3.00000	0.00210	None
Clearal 268	Chemstream	Biocide					
			Glutaraldehyde	111-30-8	20.00000	0.00205	None
StimStream SC-398	Chemstream	Scale Inhibitor					
			Bis(HexaMethylene Triamone Penta(Methylene Phoshonic Acid) (BHMT))	34690-00-1	10.00000	0.00129	None
PVS Iron Control 1	Chemstream	Iron Control					
			Citric Acid	77-92-9	50.50000	0.00058	None
PVS Iron Control 1	Chemstream	Iron Control					
			Water	7732-18-5	49.50000	0.00057	None
ACI-250	Chemstream	Acid Inhibitor					
			Methyl Alchohol	67-56-1	45.00000	0.00038	None
CoilStream VB 625	Chemstream	Gelling Agent					
			Trade Secret	Proprietary	5.00000	0.00033	None
Clearal 268	Chemstream	Biocide					
			Quaternary Ammonium Compounds	68424-85-1	3.00000	0.00031	None
Clearal 268	Chemstream	Biocide					
			Didecyl dimethyl ammonium chloride	7173-51-5	3.00000	0.00031	None
Ammonium Persulfate	Chemstream	Breaker					
			Ammonium persulfate	7727-54-0	100.00000	0.00030	None
CoilStream VB 625	Chemstream	Gelling Agent					
			Trade Secret	Proprietary	3.00000	0.00020	None
CoilStream VB 625	Chemstream	Gelling Agent					
			Trade Secret	Proprietary	3.00000	0.00020	None
ACI-250	Chemstream	Acid Inhibitor					
			Ethylene Glycol	107-21-1	20.00000	0.00017	None
Clearal 268	Chemstream	Biocide					
			Ethanol	64-17-5	1.50000	0.00015	None
ACI-250	Chemstream	Acid Inhibitor					
			Trade Secret	Proprietary	15.00000	0.00013	None
ACI-250	Chemstream	Acid Inhibitor					
			N, N-Dimethylformamide	68-12-2	10.00000	0.00008	None
ACI-250	Chemstream	Acid Inhibitor					
			Water	7732-18-5	10.00000	0.00008	None
ACI-250	Chemstream	Acid Inhibitor					
			2-Butoxyethanol	111-76-2	5.00000	0.00004	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.

* Total Water Volume sources may include fresh water, produced water, and/or recycled water
** Information is based on the maximum potential for concentration and thus the total may be over 100%

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.
Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

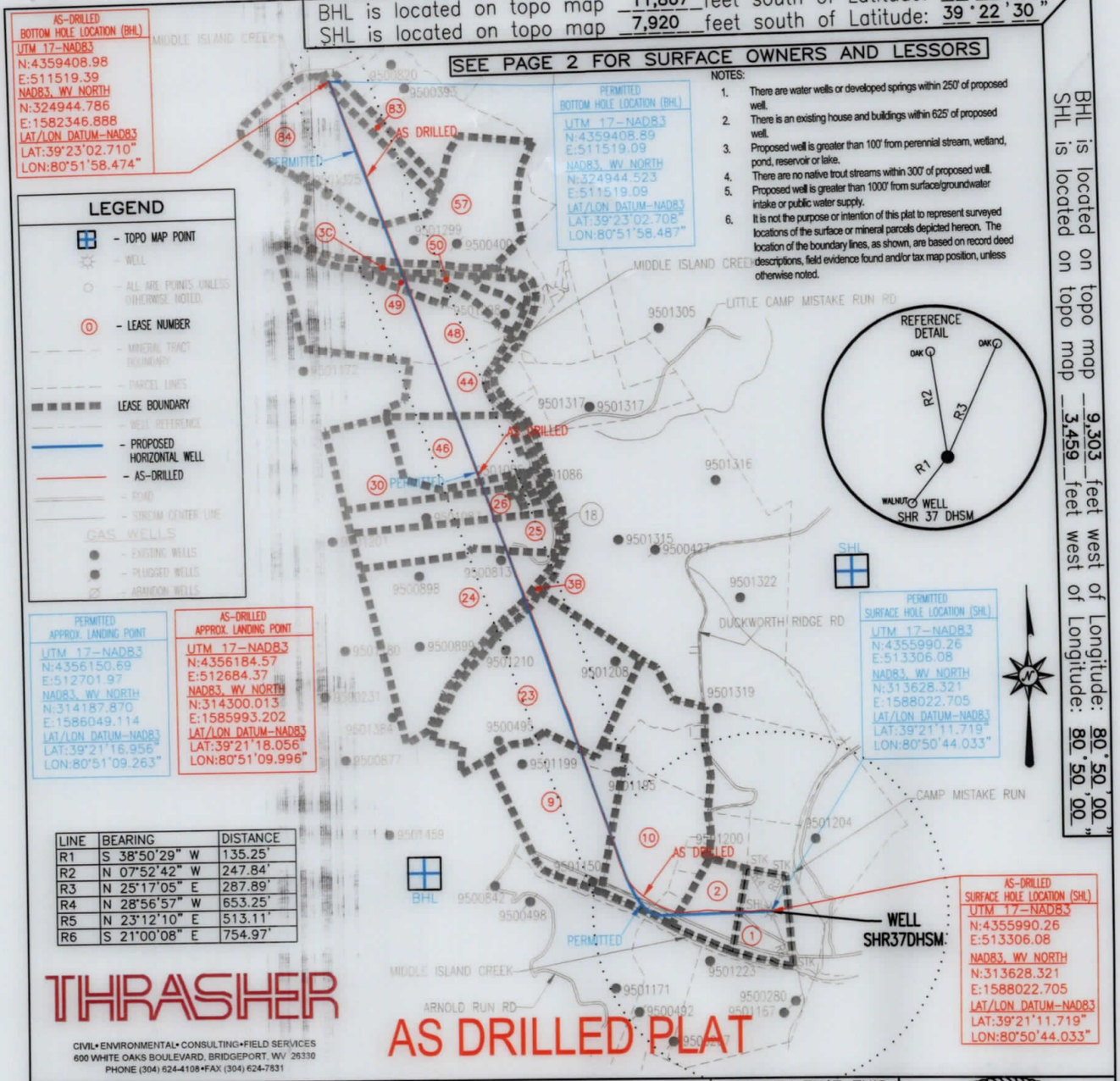
BHL is located on topo map 11,867 feet south of Latitude: 39 ° 25 ' 00 "
SHL is located on topo map 7,920 feet south of Latitude: 39 ° 22 ' 30 "

BHL is located on topo map 9,303 feet west of Longitude: 80 ° 50 ' 00 "
SHL is located on topo map 3,459 feet west of Longitude: 80 ° 50 ' 00 "

SEE PAGE 2 FOR SURFACE OWNERS AND LESSORS

NOTES:

1. There are water wells or developed springs within 250' of proposed well.
2. There is an existing house and 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.



LINE	BEARING	DISTANCE
R1	S 38°50'29" W	135.25'
R2	N 07°52'42" W	247.84'
R3	N 25°17'05" E	287.89'
R4	N 28°56'57" W	653.25'
R5	N 23°12'10" E	513.11'
R6	S 21°00'08" E	754.97'

THRASHER

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

AS DRILLED PLAT

FILE #: SHR 37 DHSM

DRAWING #: SHR 37 DHSM

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. 2346

JOSEPH H. LOWTHER ★ LICENSED ★ No. 2346 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: AUGUST 14, 2020

OPERATOR'S WELL #: SHR 37 DHSM

API WELL #: 47 (STATE) 095 (COUNTY) 02667-00-00 (PERMIT)

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

WATERSHED: HEADWATERS MIDDLE ISLAND CREEK ELEVATION: 828.57'±

COUNTY/DISTRICT: TYLER / CENTERVILLE QUADRANGLE: WEST UNION, WV 7.5'

SURFACE OWNER: CNX GAS COMPANY ACREAGE: 18±

OIL & GAS ROYALTY OWNER: ELEANOR V. & DEAN A. EARNHEART, ET AL ACREAGE: 72.5±

08/27/2021

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: 6,302'± TMD: 18,439'±

WELL OPERATOR CNX GAS COMPANY LLC
Address 1000 CONSOL ENERGY DRIVE
City CANONSBURG State PA Zip Code 15317

DESIGNATED AGENT ANTHONY KENDZIORA
Address 1000 CONSOL ENERGY DRIVE
City CANONSBURG State PA Zip Code 15317

AS DRILLED PLAT

SHR 37 DHSM

PAGE 2 OF 2

	SURFACE OWNER	LESSOR	DIST-TM/PAR
1	CNX GAS COMPANY	ELEANOR V. EARNHEART AND DEAN A. EARNHEART, W/H	1-17/5
		CLELLA BOICE, WIDOW	
		LUELLA I. MCCONNELL, WIDOW	
		AGNES GODWIN, WIDOW	
		NANCY P. MCCLAIN AND RALPH E. MCCLAIN, W/H	
		GEORGIA P. SNYDER, DIVORCED	
		BRADIE PIPES AND GOLDIE PIPES, H/W	
		PURSIE PIPES AND NORMA J. PIPES, H/W	
		DOROTHY BELLE WELLS AND BYRON WELLS, W/H	
		MYRNA MORGAN AND DAVID MORGAN, H/W	
2	GAIL WILLIAMSON	ELEANOR V. EARNHEART AND DEAN A. EARNHEART, W/H	1-17/6
		CLELLA BOICE, WIDOW	
		LUELLA I. MCCONNELL, WIDOW	
		AGNES GODWIN, WIDOW	
		NANCY P. MCCLAIN AND RALPH E. MCCLAIN, W/H	
		GEORGIA P. SNYDER, DIVORCED	
		BRADIE PIPES AND GOLDIE PIPES, H/W	
		PURSIE PIPES AND NORMA J. PIPES, H/W	
		DOROTHY BELLE WELLS AND BYRON WELLS, W/H	
		MYRNA MORGAN AND DAVID MORGAN, W/H	
		REVA ROWLAND AND RONALD ROYCE ROWLAND	
3B	WEST VIRGINIA DIVISION OF NATURAL RESOURCES	WEST VIRGINIA DIVISION OF NATURAL RESOURCES	MIDDLE ISLAND CREEK
3C	WEST VIRGINIA DIVISION OF NATURAL RESOURCES	WEST VIRGINIA DIVISION OF NATURAL RESOURCES	MIDDLE ISLAND CREEK
9	JASON A. & KANDACE R. MIDDLE	VIOLET GREGG, ET AL	1-17/10
	GEORGE F. & KATHLEEN S. SPROWLS	COLUMBIA I. COLLINS	1-17/10.6
		ANTHONY STEPHANO	
		ELIZABETH BRYCE TROSCH. A/K/A, BRYCE PRIBBLE TROSCH AND CARL TROSCH, W/H	
10	ELDEN L. PRATT & CHRISTINE LEASURE	ARTIS HOPE JACK PARKER, ATTORNEY-IN-FACT FOR COLEN C. JACK	1-15/38
	TIMOTHY R. PRATT		1-15/39
	ELDEN L. , RODNEY DEAN & TIMOTHY RAY PRATT		1-17/11
	THOMAS D. II & CONNIE S. SNYDER		1-17/11.1
	ROGNEY D. PRATT		1-17/11.2
	WAYNE C. & RHONDA G. MUMBAUER		1-17/11.3
	WAYNE C. & RHONDA G. MUMBAUER		1-17/11.4
	STATE OF WEST VIRGINIA		1-17/11.5
	FORREST G. POWELL		1-17/11.6
	ROGER L. & MARJORIE P. WILLIAMS		1-17/11.7
	JASON L. & REBECCA M. PRATT		1-17/11.8
23	DAVID J. PRICE	AMANDA GREGG, ET AL	1-15/19
24	JOHN SR., & TINA B. JACENKIW	RALPH J. WESTFALL AND SHIRLEY A. WESTFALL, H/W	P/O 1-15/18
25		NANCY B. WESTFALL	
26	JAMIE M. FERGUSON & MICHAEL NEELEY	THELMA FERGUSON, ET AL	P/O 1-15/35
30	DONALD FERGUSON		P/O 1-15/36
44	EUGENE W. & LESLIE BENNETT	BARBARA ANN PARKER, FORMERLY BARBARA ANN FERGUSON	1-15/9
	JOHN JR., & TANYA LYNN JACENKIW	BETTY SUE EAKLE, FORMERLY,	1-15-9.1
		BETTY SUE FERGUSON AND HOWARD EAKLE, SR., W/H	
		PATRICIA ANN GORDON, FORMERLY PATRICIA ANN FERGUSON	
		DONALD L. SECKMAN AND DORA OLIVE SECKMAN, H/W	
		HUGH EDWIN FERGUSON	
		MARY ELIZABETH DEARTH, FORMERLY MARY ELIZABETH FERGUSON	
		ROGER L. FERGUSON	
		DONALD FERGUSON	
		VIRGINIA LYNN FERGUSON, WIDOW OF JAMES FERGUSON	
		MELVIN EUGENE FERGUSON AND SANDRA K. FERGUSON, H/W	
		LEE ROY FERGUSON AND TRACY FERGUSON, H/W	
		ROSEMARY DAVIS, FORMERLY ROSEMARY FERGUSON	
		RICHARD O. FERGUSON, JR.	
		RONALD H. WOODBURN	
		MARGARET E. OLEXA	
		BARBARA R. NELSON, F/K/A RENEE F. COLLINSWORTH, F/K/A RENEE MERRICK	
		JAMES E. ULLOM	
		WILLIAM STEVEN MORRIS	
		JOHN ANDREW MORRIS	
		DEBRA G. KYLE	
		DAVID D. HULL	
46	EUGENE W. & LESLIE BENNETT	DONALD L. SECKMAN AND DORA OLIVE SECKMAN, H/W	1-15/9
	LORETTA L. HAUGHT	ROGER L. FERGUSON	1-15/9.2
	HERBERT L. & DIXIE S. BUCKLEY	MELVIN EUGENE FERGUSON AND SANDRA K. FERGUSON, H/W	1-15/9.3
		LEE ROY FERGUSON AND TRACY FERGUSON, H/W	
		RICHARD O. FERGUSON, JR.	
		RONALD H. WOODBURN	
		MARGARET E. OLEXA	
		JAMES E. ULLOM	
		WILLIAM STEVEN MORRIS	
		JOHN ANDREW MORRIS	
		DEBRA G. KYLE	
		DAVID D. HULL	
48	CONRAD E. COSTILOW	CONRAD E. COSTILOW	1-15/8
		ANN LENZ DENLINGER, F/K/A, ANN HOKMAN LENZ DENLINGER, F/K/A, ANN HOKMAN LENZ	
49	RITA M. SHEPHERD	ERNEST LANTZ	1-15/2.2
		RITA MARIE SHEPHERD	
50	ROBERT W. GRAHAM	ERNEST LANTZ	1-15/2
	WILLIAM C. HENTHORN	RONALD LEE ASH	1-15/2.4
		RALPH ARNOLD ASH	
		RANDALL DALE ASH AND DORETTA LYNN ASH	
57	ROBERT W. GRAHAM	ERNEST LANTZ	1-15/2
		RONALD LEE ASH	
		RALPH ARNOLD ASH	
		RANDALL DALE ASH AND DORETTA LYNN ASH	
83	ROBERT C. & JAMES L. SINCLAIR	SANDRA L. SPENCE	P/O 1-12/19
84		BARBARA J. DRUCHNIAK	
		PATTY L. BUTERBAUGH	
		RICHARD B. SMITH	

PERMITTED SURFACE HOLE LOCATION (SHL)	AS-DRILLED SURFACE HOLE LOCATION (SHL)
UTM 17-NAD83	UTM 17-NAD83
N:4355990.26	N:4355990.26
E:513306.08	E:513306.08
NAD83, WV NORTH	NAD83, WV NORTH
N:313628.321	N:313628.321
E:1588022.705	E:1588022.705
LAT/LON DATUM-NAD83	LAT/LON DATUM-NAD83
LAT:39°21'11.719"	LAT:39°21'11.719"
LON:80°50'44.033"	LON:80°50'44.033"

PERMITTED APPROX. LANDING POINT	AS-DRILLED APPROX. LANDING POINT
UTM 17-NAD83	UTM 17-NAD83
N:4356150.69	N:4356184.57
E:512701.97	E:512684.37
NAD83, WV NORTH	NAD83, WV NORTH
N:314187.870	N:314300.013
E:1586049.114	E:1585993.202
LAT/LON DATUM-NAD83	LAT/LON DATUM-NAD83
LAT:39°21'16.956"	LAT:39°21'18.056"
LON:80°51'09.263"	LON:80°51'09.996"

PERMITTED BOTTOM HOLE LOCATION (BHL)	AS-DRILLED BOTTOM HOLE LOCATION (BHL)
UTM 17-NAD83	UTM 17-NAD83
N:4359408.89	N:4359408.98
E:511519.09	E:511519.39
NAD83, WV NORTH	NAD83, WV NORTH
N:324944.523	N:324944.786
E:511519.09	E:1582346.888
LAT/LON DATUM-NAD83	LAT/LON DATUM-NAD83
LAT:39°23'02.708"	LAT:39°23'02.710"
LON:80°51'58.487"	LON:80°51'58.474"

08/27/2021

API WELL #:

47	095	02667-00-00
STATE	COUNTY	PERMIT

AUGUST 14, 2020

THRASHER

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