

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

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Office of Oil and Gas
JUN 17 2021
WV Department of
Environmental Protection

API 47-095-02652 County TYLER District CENTERVILLE
Quad WEST UNION Pad Name SHR38 Field/Pool Name _____
Farm name ASH Well Number SHR38QHSM
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 4358030.15 Easting 514187.40
Landing Point of Curve Northing 4358213.39 Easting 514406.59
Bottom Hole Northing 4359950.81 Easting 513763.80

Elevation (ft) 1,011' 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 10.18.2019 Date drilling commenced 10.30.2019 Date drilling ceased 12.09.2019
Date completion activities began 2/27/2021 Date completion activities ceased 3/7/2021
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 225' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 1,920' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 430, 580, 900 TRACES: 160, 260, 1360, 1400, 1480, 1500 Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by:
DAH

08/27/2021

JUN 17 2021

WR-35
Rev. 8/23/13

API 47-095 - 02652

Farm name ASH

WV Department of
Environmental Protection

Well number SHR38QHSM

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"	596'	NEW	J-55 54.5 lb/ft	N/A	Y - CEMENT TO SURFACE
Coal							
Intermediate 1	12.25"	9.625"	2,561'	NEW	J-55 36 lb/ft	N/A	Y - CEMENT TO SURFACE
Intermediate 2							
Intermediate 3							
Production	8.75" & 8.5"	5.5"	13,269'	NEW	P-110 20 lb/ft	N/A	Y - TOC @ 554'
Tubing	5.5"	2.875"	7,137'	NEW	P-110CY 6.5 lb/ft	N/A	N/A
Packer type and depth set							

Comment Details ALL DEPTHS ARE REFERENCE TO GROUND LEVEL (-28' 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	500	15.8	1.169	585	0	8
Coal							
Intermediate 1	HALCEM	845	15.8	1.147	970	0	8
Intermediate 2							
Intermediate 3							
Production	EXP NEOCEM / NEOCEM	1,160(L) / 1,620 (T)	15	1.135 (L) / 1.132 (T)	1,317(L) / 1,834 (T)	554'	8
Tubing							

Drillers TD (ft) 13,295'

Loggers TD (ft) 13,295'

Deepest formation penetrated MARCELLUS

Plug back to (ft) N/A

Plug back procedure N/A

Kick off depth (ft) 6,156'

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 = 33: Centralize every other joint from shoe to surface
 PRODUCTION = 270: 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

08/27/2021

API 47- 095 - 02652 Farm name ASH Well number SHR38QHSM

PRODUCING FORMATION(S) DEPTHS
MARCELLUS 6530.78 TVD 7028 MD

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 1400 psi Bottom Hole 0 psi DURATION OF TEST 24 hrs

OPEN FLOW Gas Oil NGL Water GAS MEASURED BY
8444.8 mcfpd 157 bpd 0 bpd 920 bpd Estimated Orifice Pilot

LITHOLOGY/ FORMATION	TOP	BOTTOM	TOP	BOTTOM	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	
	<u>0</u>		<u>0</u>		
					RECEIVED Office of Oil and Gas
					FORMATION LOG ATTACHED JUN 17 2021
					WV Department of Environmental Protection

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.

Completed by Michael Honce Telephone 304-406-8909
Signature [Signature] Title Completions Superintendent Date 6/11/2021

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

SHR38QHSM – PERFORATION RECORD – ATTACHMENT 1

Stage No.	Perforation Date	Perforation from MD ft.	Perforation to MD ft.	Number of Perforations	Formation(s)
1	2/27/2021	13,134.1	13,238.9	24	Marcellus Shale
2	2/27/2021	12,891.5	13,072.7	40	Marcellus Shale
3	2/28/2021	12,667.5	12,848.7	40	Marcellus Shale
4	2/28/2021	12,444.4	12,624.8	40	Marcellus Shale
5	2/28/2021	12,221.4	12,401.8	40	Marcellus Shale
6	2/28/2021	11,998.4	12,178.8	40	Marcellus Shale
7	2/28/2021	11,775.4	11,955.8	40	Marcellus Shale
8	2/28/2021	11,552.4	11,732.8	40	Marcellus Shale
9	3/1/2021	11,329.4	11,509.8	40	Marcellus Shale
10	3/1/2021	11,106.4	11,286.8	40	Marcellus Shale
11	3/1/2021	10,883.4	11,063.8	40	Marcellus Shale
12	3/1/2021	10,660.4	10,840.8	40	Marcellus Shale
13	3/1/2021	10,437.4	10,617.8	40	Marcellus Shale
14	3/1/2021	10,214.4	10,394.8	40	Marcellus Shale
15	3/1/2021	9,991.4	10,171.8	40	Marcellus Shale
16	3/2/2021	9,768.4	9,948.8	40	Marcellus Shale
17	3/2/2021	9,545.4	9,725.8	40	Marcellus Shale
18	3/4/2021	9,322.4	9,502.8	40	Marcellus Shale
19	3/4/2021	9,099.4	9,279.8	40	Marcellus Shale
20	3/5/2021	8,876.4	9,056.8	40	Marcellus Shale
21	3/5/2021	8,653.4	8,833.8	40	Marcellus Shale
22	3/5/2021	8,430.4	8,610.8	80	Marcellus Shale
23	3/6/2021	8,207.4	8,387.8	40	Marcellus Shale
24	3/6/2021	7,984.4	8,164.8	40	Marcellus Shale
25	3/6/2021	7,761.4	7,941.8	40	Marcellus Shale
26	3/7/2021	7,538.4	7,718.8	40	Marcellus Shale

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08/27/2021

SHR38QDHSM – 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	2/27/2021	99	8,313.0	9,609.0	3,095.0	300,000.00	6,175.0	N/A
2	2/28/2021	99	8,472.0	9,142.0	4,251.0	364,000.00	6,169.0	N/A
3	2/28/2021	98	8,366.0	9,072.0	4,446.0	400,000.00	6,165.0	N/A
4	2/28/2021	97	8,060.0	8,910.0	3,896.0	400,000.00	6,160.0	N/A
5	2/28/2021	97	8,523.0	9,211.0	4,312.0	400,000.00	6,155.0	N/A
6	2/28/2021	96	7,872.0	8,745.0	3,526.0	400,000.00	6,150.0	N/A
7	2/28/2021	96	8,272.0	9,055.0	3,818.0	400,000.00	6,145.0	N/A
8	2/28/2021	98	8,281.0	9,078.0	4,147.0	400,000.00	6,140.0	N/A
9	3/1/2021	96	8,214.0	9,087.0	3,517.0	400,000.00	6,135.0	N/A
10	3/1/2021	96	8,617.0	9,493.0	3,244.0	400,000.00	6,130.0	N/A
11	3/1/2021	86	7,958.0	8,591.0	3,734.0	400,000.00	6,125.0	N/A
12	3/1/2021	95	8,358.0	9,420.0	5,056.0	320,000.00	6,120.0	N/A
13	3/1/2021	95	8,084.0	8,959.0	3,684.0	380,000.00	6,115.0	N/A
14	3/1/2021	95	7,806.0	8,319.0	3,764.0	400,000.00	6,110.0	N/A
15	3/1/2021	97	7,869.0	8,996.0	3,590.0	400,000.00	6,105.0	N/A
16	3/2/2021	96	7,950.0	9,025.0	3,600.0	400,000.00	6,100.0	N/A
17	3/3/2021	96	7,853.0	8,820.0	4,317.0	400,000.00	6,095.0	N/A
18	3/4/2021	96	7,896.0	8,925.0	3,935.0	400,000.00	6,090.0	N/A
19	3/4/2021	96	7,649.0	8,083.0	3,814.0	405,000.00	6,085.0	N/A
20	3/5/2021	96	7,937.0	8,933.0	4,310.0	400,000.00	6,080.0	N/A
21	3/5/2021	95	7,834.0	8,986.0	3,459.0	400,000.00	6,075.0	N/A
22	3/6/2021	94	7,545.0	8,014.0	3,791.0	400,000.00	6,071.0	N/A
23	3/6/2021	100	7,884.0	9,197.0	4,698.0	400,000.00	6,066.0	N/A
24	3/6/2021	100	7,838.0	8,779.0	3,360.0	395,000.00	6,061.0	N/A
25	3/7/2021	99	7,774.0	8,293.0	3,814.0	400,000.00	6,056.0	N/A
26	3/7/2021	100	7,544.0	8,079.0	3,822.0	405,000.00	6,051.0	N/A

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API: 47-095-02652		FARM NAME: ASH			WELL NUMBER: SHR38QHSM
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	250	0	250	Sandstone / Traces of Siltstone & Limestone & Coal
Undifferentiated Silt	250	300	250	300	Siltstone / Traces of Sandstone & Coal
Undifferentiated Sand	300	400	300	400	Sandstone / Traces of Siltstone & Limestone
Undifferentiated Shale	400	430	400	430	Red Shale / Traces of Siltstone
Washington Coal	430	431	430	431	Sandstone / Red Shale / Coal
Undifferentiated Sand	431	480	431	480	Sandstone / Red Shale
Undifferentiated Shale	480	510	480	510	Red Shale / Traces of Sandstone & Gray Shale
Undifferentiated Quartz	510	580	510	580	Quartz / Traces of Red Shale, Siltstone & Sandstone
Waynesburg Coal	580	582	580	582	Quartz / Traces of Gray Shale, Coal, Siltstone & Sandstone
Undifferentiated Sand	582	610	582	610	Sandstone / Traces of Gray Shale, Quartz & Siltstone
Undifferentiated Silt	610	740	610	740	Siltstone / Traces of Gray Shale, Quartz & Siltstone
Undifferentiated Sand	740	760	740	760	Sandstone / Traces of Red Shale
Undifferentiated Shale	760	900	760	900	Red Shale / Traces of Siltstone, Sandstone, Limestone
Pittsburgh Coal	900	901	900	901	Sandstone / Coal
Undifferentiated Sand	901	940	901	940	Sandstone / Traces of Gray Shale, Limestone & Siltstone
Undifferentiated Shale	940	980	940	980	Red Shale / Traces of Limestone & Sandstone
Undifferentiated Sand	980	1,000	980	1,000	Sandstone / Traces of Red Shale
Undifferentiated Shale	1,000	1,040	1,000	1,040	Gray Shale / Traces of Limestone, Siltstone & Sandstone
Undifferentiated Sand	1,040	1,060	1,040	1,060	Sandstone / Siltstone
Undifferentiated Quartz	1,060	1,100	1,060	1,100	Quartz / Traces of Sandstone & Siltstone
Undifferentiated Lime	1,100	1,120	1,100	1,120	Limestone / Traces of Sandstone & Siltstone
Undifferentiated Sand	1,120	1,160	1,120	1,160	Sandstone / Siltstone
Undifferentiated Silt	1,160	1,280	1,160	1,280	Siltstone / Traces of Sandstone & Limestone
Undifferentiated Quartz	1,280	1,320	1,280	1,320	Quartz
Undifferentiated Silt	1,320	1,340	1,320	1,340	Siltstone / Traces of Sandstone
Undifferentiated Quartz	1,340	1,380	1,340	1,380	Quartz / Traces of Siltstone & Sandstone
Upper Kitanning	1,380	1,480	1,380	1,480	Quartz & Siltstone / Traces of Sandstone & Coal
Lower Kitanning	1,480	1,840	1,480	1,840	Sandstone & Siltstone / Traces of Quartz & Coal
Big Lime	1,840	1,920	1,840	1,920	Limestone / Traces of Siltstone
Big Injun	1,920	2,060	1,920	2,060	Sandstone & Limestone / Traces of Siltstone
Price	2,060	2,210	2,060	2,210	Siltstone / Traces of Red Shale
Weir	2,210	2,360	2,210	2,360	Sandstone & Siltstone / Traces of Limestone
Berea	2,360	2,540	2,360	2,540	Siltstone
Gordon	2,540	3,350	2,540	3,350	Siltstone / Traces of Sandstone & Pyrite

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API: 47-095-02652		FARM NAME: ASH			WELL NUMBER: SHR38QHSM	
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)	
Warren Sand	3,350	4,940	3,350	4,940	Siltstone & Sandstone	
Benson	4,940	5,150	4,940	5,150	Siltstone & Sandstone	
Alexander	5,150	6,321	5,150	6,573	Siltstone / Traces of Gray Shale	
Middlesex	6,321	6,363	6,573	6,638	Gray Shale / Traces of Siltstone	
West River	6,363	6,430	6,638	6,767	Gray Shale	
Burket	6,430	6,468	6,767	6,861	Gray Shale	
Tully	6,468	6,489	6,861	6,934	Gray Shale	
Hamilton	6,489	6,503	6,934	7,002	Gray Shale & Limestone	
Upper Marcellus	6,503	6,6523	7,002	7,022	Gray Shale	
Middle Marcellus	6,523		7,022		Gray Shale	
Td - Marcellus						

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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

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	2/27/2021
Job End Date:	3/7/2021
State:	West Virginia
County:	Tyler
API Number:	47-095-02652-00-00
Operator Name:	CNX Gas Company LLC
Well Name and Number:	SHR38 M2 QHSM
Latitude:	39.37162200
Longitude:	-80.83529300
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,553
Total Base Water Volume (gal):	6,922,970
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	84.43253	None
Proppant (Sand)	Nextier	Proppant	Crystalline silica: Quartz (SiO2)	14808-60-7	100.00000	14.97864	None
7.5% HCl	Chemstream	Acid	Water	7732-18-5	92.50000	0.48113	None
7.5% HCl	Chemstream	Acid	Hydrochloric Acid	7647-01-0	7.50000	0.03901	None
StimStream FR 9800	Chemstream	Friction Reducer	Water	7732-18-5	47.00000	0.01726	None
StimStream SC-398	Chemstream	Scale Inhibitor	Non-Hazardous substances	Proprietary	90.00000	0.01137	None
StimStream FR 9800	Chemstream	Friction Reducer	alkanes, C16-20 iso-	90622-59-6	25.00000	0.00918	None
StimStream FR 9800	Chemstream	Friction Reducer	butene, homopolymer	9003-29-6	25.00000	0.00918	None
Clearal 268	Chemstream	Biocide	Non-Hazardous substances	Proprietary	80.00000	0.00800	None

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 2/27/2021

CoilStream VB 625	Chemstream	Gelling Agent					
			Heavy Aliphatic Naphtha	64742-96-7	60.00000	0.00320	None
CoilStream VB 625	Chemstream	Gelling Agent					
			Guara Gum	9000-30-0	50.00000	0.00267	None
Clearal 268	Chemstream	Biocide					
			Glutaraldehyde	111-30-8	20.00000	0.00200	None
StimStream FR 9775	Chemstream	Friction Reducer					
			Water	7732-18-5	65.00000	0.00143	None
StimStream SC-398	Chemstream	Scale Inhibitor					
			Bis(HexaMethylene Triamone Penta(Methylene Phoshonic Acid) (BHMT))	34690-00-1	10.00000	0.00126	None
StimStream FR 9800	Chemstream	Friction Reducer					
			Alcohols, C12-18, ethoxylated	68213-23-0	3.00000	0.00110	None
StimStream FR 9775	Chemstream	Friction Reducer					
			Distillates (petroleum), hydrotreated light	64742-47-8	30.00000	0.00066	None
PVS Iron Control 1	Chemstream	Iron Control					
			Citric Acid	77-92-9	50.50000	0.00047	None
PVS Iron Control 1	Chemstream	Iron Control					
			Water	7732-18-5	49.50000	0.00046	None
ACI-250	Chemstream	Acid Inhibitor					
			Methyl Alcohol	67-56-1	45.00000	0.00031	None
Clearal 268	Chemstream	Biocide					
			Didecyl dimethyl ammonium chloride	7173-51-5	3.00000	0.00030	None
Clearal 268	Chemstream	Biocide					
			Quaternary Ammonium Compounds	68424-85-1	3.00000	0.00030	None
CoilStream VB 625	Chemstream	Gelling Agent					
			Trade Secret	Proprietary	5.00000	0.00027	None
Ammonium Persulfate	Chemstream	Breaker					
			Ammonium persulfate	7727-54-0	100.00000	0.00019	None
CoilStream VB 625	Chemstream	Gelling Agent					
			Trade Secret	Proprietary	3.00000	0.00016	None
CoilStream VB 625	Chemstream	Gelling Agent					
			Trade Secret	Proprietary	3.00000	0.00016	None
Clearal 268	Chemstream	Biocide					
			Ethanol	64-17-5	1.50000	0.00015	None
ACI-250	Chemstream	Acid Inhibitor					
			Ethylene Glycol	107-21-1	20.00000	0.00014	None
StimStream FR 9775	Chemstream	Friction Reducer					
			Alcohols C12-16 ethoxylated	68551-12-2	5.00000	0.00011	None
ACI-250	Chemstream	Acid Inhibitor					
			Trade Secret	Proprietary	15.00000	0.00010	None
ACI-250	Chemstream	Acid Inhibitor					

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			N, N-Dimethylformamide	68-12-2	10.00000	0.00007	None
ACI-250	Chemstream	Acid Inhibitor					
			Water	7732-18-5	10.00000	0.00007	None
ACI-250	Chemstream	Acid Inhibitor					
			2-Butoxyethanol	111-76-2	5.00000	0.00003	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.

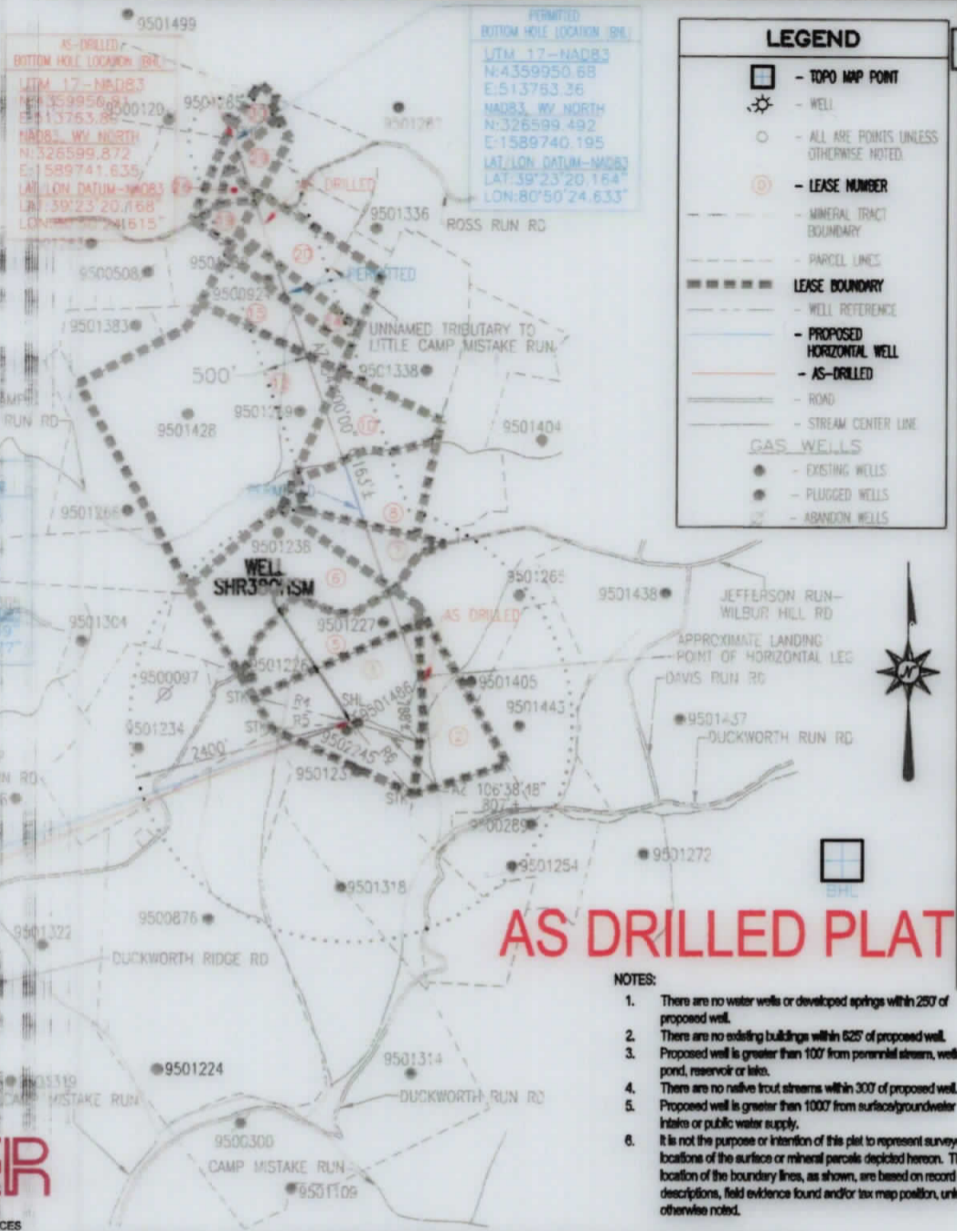
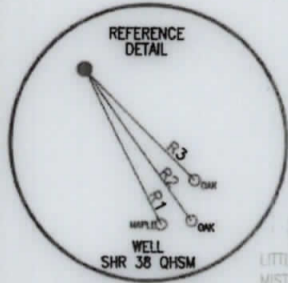
- * Total Water Volume sources may include fresh water, produced water, and/or recycled water
- ** Information is based on the maximum potential for concentration and thus the total may be over 100%

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)

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LINE	BEARING	DISTANCE
R1	S 26°29'54" E	237.39'
R2	S 35°24'02" E	254.66'
R3	S 44°58'14" E	214.61'
R4	N 75°46'14" W	1089.21'
R5	S 84°07'23" W	849.74'
R6	S 40°41'36" E	1040.41'

BHL is located on topo map 10,101 feet south of Latitude: 39°25'00"
 SHL is located on topo map 1,230 feet south of Latitude: 39°22'30"



LEGEND	
	- TOPO MAP POINT
	- WELL
	- ALL ARE POINTS UNLESS OTHERWISE NOTED
	- LEASE NUMBER
	- MINERAL TRACT BOUNDARY
	- PARCEL LINES
	- LEASE BOUNDARY
	- WELL REFERENCE
	- PROPOSED HORIZONTAL WELL
	- AS-DRILLED
	- ROAD
	- STREAM CENTER LINE
GAS WELLS	
	- EXISTING WELLS
	- PLUGGED WELLS
	- ABANDON WELLS

BHL is located on topo map 1,934 feet west of Longitude: 80°50'00"
 SHL is located on topo map 554 feet west of Longitude: 80°50'00"

AS-DRILLED APPROX. LANDING POINT
 UTM 17-NAD83
 N:4358213.39
 E:514405.59
 NAD83 WY NORTH
 N:320853.3
 E:1591759.81
 LAT/LON DATUM-NAD83
 LAT:39°22'23.771"
 LON:80°49'57.878"

PERMITTED APPROX. LANDING POINT
 UTM 17-NAD83
 N:4358185.90
 E:514404.28
 NAD83 WY NORTH
 N:320772.20
 E:1591745.686
 LAT/LON DATUM-NAD83
 LAT:39°22'22.999"
 LON:80°49'57.977"

PERMITTED SURFACE HOLE LOCATION (SHL)
 UTM 17-NAD83
 N:4358030.15
 E:514187.40
 NAD83 WY NORTH
 N:320274.010
 E:1591026.502
 LAT/LON DATUM-NAD83
 LAT:39°22'17.840"
 LON:80°50'07.053"

AS-DRILLED SURFACE HOLE LOCATION (SHL)
 UTM 17-NAD83
 N:4358030.15
 E:514187.40
 NAD83 WY NORTH
 N:320274.010
 E:1591026.502
 LAT/LON DATUM-NAD83
 LAT:39°22'17.840"
 LON:80°50'07.053"

THRASHER

CIVIL-ENVIRONMENTAL-CONSULTING-FIELD SERVICES
 800 WHITE OAKS BOULEVARD, BRIDGEPORT, WV 25330
 PHONE (304) 824-4108-FAX (304) 624-7831

SEE PAGE 2 & 3 FOR SURFACE OWNERS AND LESSORS

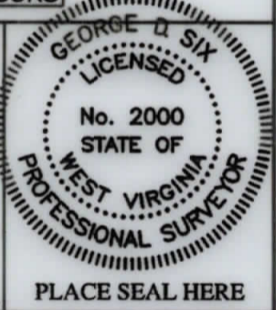
AS DRILLED PLAT

- 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, are based on record descriptions, field evidence found and/or tax map position, unless otherwise noted.

FILE #: SHR 38 QHSM
 DRAWING #: SHR 38 QHSM
 SCALE: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY: 1/2500
 PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT THOMAS 1498.81'

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

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



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



DATE: FEBRUARY 14, 2020
 OPERATOR'S WELL #: SHR 38 QHSM
 API WELL #: 47 95 02652
 STATE COUNTY PERMIT

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

WATERSHED: HEADWATERS MIDDLE ISLAND CREEK ELEVATION: 1012±
 COUNTY/DISTRICT: TYLER / CENTERVILLE QUADRANGLE: WEST UNION, WV 7.5'
 SURFACE OWNER: JAMES E. ASH ET AL ACREAGE: 111±
 OIL & GAS ROYALTY OWNER: JAMES E. ASH ET AL ACREAGE: 363.118±

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

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TVD: 6,480± TMD: 13,181±
 WELL OPERATOR CNX GAS COMPANY LLC DESIGNATED AGENT ANTHONY KENDZIORA
 Address 1000 CONSOL ENERGY DRIVE Address 1000 CONSOL ENERGY DRIVE
 City CANONSBURG State PA Zip Code 15317 City CANONSBURG State PA Zip Code 15317

08/27/2021

SHR 38 QHSM PAGE 2 OF 3

AS DRILLED PLAT

	SURFACE OWNER	LESSOR	DIST-TM/PAR
1 5	JAMES E. ASH ET AL	VERNA O. ASH, JAMES E. ASH AND THELMA B. ASH, BESSIE HAUGHT AND HAROLD WARNER ERNEST G. SECKMAN AND O. JOANNE SECKMAN RALPH E. PHILLIPS AND VELINDA PHILLIPS H/W	P/O 1-16/19
2	JAMES E. ASH ET AL	VERNA O. ASH, JAMES E. ASH AND THELMA B. ASH, BESSIE HAUGHT AND HAROLD WARNER ERNEST G. SECKMAN AND O. JOANNE SECKMAN RALPH E. PHILLIPS AND VELINDA PHILLIPS H/W MARTHA SUE MUZIO, F/K/A MARTHA SUE LOCOCO MARY LYNNE SLATTERY, F/K/A MARY LYNNE LOCOCO RITA G. JARVIS JO ELLEN HARPER DAY WILLIAM PAUL HARPER MARION R. BACHELOR AND GLORIA JEAN BACHELOR, H/W BERDINA ROSE AND NORMAN W. ROSE, W/H DAVID PAUL LOCOCO ELIZABETH FLORENCE LOCOCO MARY LEE LULLY MICHELLE LOCOCO BUSHMIRE, F/K/A MICHELLE LUCRETTA BUSHMIRE DONALD VINCENT LOCOCO MARGO KIEHL JOHN MICHEL LEONIAN JOHN FULTON LEONIAN JEFFREY TODD HEFLIN JASON S. HEFLIN AND JESSICA L. HEFLIN, H/W NILA ASH SAYLOR REVOCABLE TRUST, BY JOSEPH F. SILEK, JR., TRUSTEE PHILIP LEONIAN, A/K/A PHILIP MARSHALL LEONIAN ROBERT LEONIAN A/K/A JOSEPH ROBERT LEONIAN BAILEY ANN MILLS ARMEN LEONIAN, A/K/A ARMEN LANHAM LEONIAN THERESA LEE ROBERTSON ROSE MARIE VANHEUWLEN COMMONWEALTH ENERGY, INC. A/K/A COMMONWEALTH ENERGY	P/O 1-16/19
6	DIANA L. BOGER	EDNA DILLON SAMUEL DAVID DILLON AND DONNA L. DILLON, H/W HOWARD D. SPURLOCK AND MARIAN E. SPURLOCK, H/W EDITH M. DOAK PEARL G. MCINTYRE PAUL MCINTYRE KERMIT MCINTYRE AND RUTH MCINTYRE, H/W SHEILA L. GUY EDITH W. MCINTYRE	P/O 1-16/18
7	WILLIAM D. & MARY C. DANIELS	GARY W. AND DEBRA J. DAVIS RUBY N. SPENCER AND FRED A. NICHOLS AND LAURA L. NICHOLS, H/W IRO NICHOLS MONA WRIGHT RALPH SHERWOOD WANDA SCHAUER CONRAD COSTILOV	1-16/2.1
8	WILLIAM D. & MARY C. DANIELS	WILLIAM N. DANIELS AND MARY C. DANIELS, H/W	P/O 1-16/2
10	ERIC A. SNYDER	BOUNTY MINERALS, LLC	1-16/3
12	KENNETH G. WRIGHT KENNETH G. WRIGHT, TRUSTEE	FRANKLIN L. MERCER AND RUTH L. MERCER, H/W AND FRANKLIN L. MERCER, ATTORNEY-IN-FACT FOR ROGER N. MERCER AND GLORIA MERCER, H/W DELORES ROSSI LUTHER ROGERS AND ANITA ROGERS, H/W MARIE MERCER HARLEY EDWIN SPENCER AND ALICE RUTH SPENCER, H/W THE KENNETH G. WRIGHT TRUST, DATED 12/21/2010, BY KENNETH G. WRIGHT, TRUSTEE	1-16/1
14	KENNETH G. WRIGHT TRUST C/O KENNETH G. WRIGHT	FRANKLIN L. MERCER AND RUTH L. MERCER, H/W AND FRANKLIN L. MERCER, ATTORNEY-IN-FACT FOR ROGER N. MERCER AND GLORIA MERCER, H/W DELORES ROSSI LUTHER ROGERS AND ANITA ROGERS, H/W MARIE MERCER HARLEY EDWIN SPENCER AND ALICE RUTH SPENCER, H/W FORREST JENKINS AND EVA JENKINS, H/W, FOREST JENKINS, ATTORNEY-IN-FACT FOR THE FOLLOWING: CARL JENKINS, BETTY JENKINS, STELLA DEAN JENKINS, ZETTA ASH, ALICE HAUGHT AND THOMAS HAUGHT ZETTA F. ASH CARL JENKINS AND BETTY JENKINS, H/W STELLA DEAN JENKINS ALICE HAUGHT ALFRED COTTRILL, INDIVIDUALLY AND AS ATTORNEY-IN- FACT FOR RENNA FOX BARBARA BALLOU BAKER KAYVONNE PASULKA CHARLES H. BALLOU AND LOIS M. BALLOU, H/W STEVEN E. BALLOU AND LINDA M. BALLOU, H/W	1-13/13.5

PERMITTED
SURFACE HOLE LOCATION (SHL)
UTM 17-NAD83
N:4358030.75
E:514187.40
NAD83, WV NORTH
N:320274.010
E:1591026.502
LAT/LON DATUM-NAD83
LAT:39°22'17.840"
LON:80°50'07.053"

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PERMITTED
APPROX. LANDING POINT
UTM 17-NAD83
N:4358185.59
E:514404.28
NAD83, WV NORTH
N:320772.204
E:1591746.696
LAT/LON DATUM-NAD83
LAT:39°22'22.869"
LON:80°49'57.977"

AS-DRILLED
APPROX. LANDING POINT
UTM 17-NAD83
N:4358213.39
E:514406.59
NAD83, WV NORTH
N:320863.31
E:1591755.81
LAT/LON DATUM-NAD83
LAT:39°22'23.771"
LON:80°49'57.878"

PERMITTED
BOTTOM HOLE LOCATION (BHL)
UTM 17-NAD83
N:4359950.68
E:513763.38
NAD83, WV NORTH
N:326599.492
E:1589740.195
LAT/LON DATUM-NAD83
LAT:39°23'20.164"
LON:80°50'24.633"

AS-DRILLED
BOTTOM HOLE LOCATION (BHL)
UTM 17-NAD83
N:4359954.81
E:513763.80
NAD83, WV NORTH
N:326599.877
E:1589741.635
LAT/LON DATUM-NAD83
LAT:39°23'20.166"
LON:80°50'24.615"

08/27/2021



FEBRUARY 14, 2020

API WELL #: 47 95 02652
STATE COUNTY PERMIT

SHR 38 QHSM

PAGE 3 OF 3

AS DRILLED PLAT

	SURFACE OWNER	LESSOR	DIST-TM/PAR
15	KENNETH G. WRIGHT KENNETH G. WRIGHT, TRUSTEE	FRANKLIN L. MERCER AND RUTH L. MERCER, H/W AND FRANKLIN L. MERCER, ATTORNEY-IN-FACT FOR ROGER N. MERCER AND GLORIA MERCER, H/W DELORES ROSSI LUTHER ROGERS AND ANITA ROGERS, H/W MARIE MERCER HARLEY EDWIN SPENCER AND ALICE RUTH SPENCER, H/W FORREST JENKINS AND EVA JENKINS, H/W, FORREST JENKINS, ATTORNEY-IN-FACT FOR THE FOLLOWING: CARL JENKINS, BETTY JENKINS, STELLA DEAN JENKINS, ZETTA ASH, ALICE HAUGHT AND THOMAS HAUGHT ZETTA F. ASH CARL JENKINS AND BETTY JENKINS, H/W STELLA DEAN JENKINS ALICE HAUGHT ALFRED COTTRILL, INDIVIDUALLY AND AS ATTORNEY-IN-FACT FOR RENNA FOX BARBARA BALLOU BAKER KAYYONNE PASULKA CHARLES H. BALLOU AND LOIS M. BALLOU, H/W STEVEN E. BALLOU AND LINDA M. BALLOU, H/W	1-13/13.4
19	PATRICK D. & DONNA S. LIPSCOMB	ROBERT L. UNDERWOOD AND VICTORIA M. UNDERWOOD, H/W	1-13/12.3
20	MATTHEW ASH	FRANKLIN L. MERCER & RUTH L. MERCER, H/W AND FRANKLIN L. MERCER, ATTORNEY-IN-FACT FOR ROGER N. MERCER AND GLORIA MERCER, H/W DELORES ROSSI LUTHER ROGERS AND ANITA ROGERS, H/W MARIE MERCER HARLEY EDWIN SPENCER AND ALICE RUTH SPENCE, H/W FORREST JENKINS AND EVA JENKINS, H/W, FORREST JENKINS, ATTORNEY-IN-FACT FOR THE FOLLOWING: CARL JENKINS, BETTY JENKINS, STELLA DEAN JENKINS, ZETTA ASH, ALICE HAUGHT AND THOMAS HAUGHT ZETTA F. ASH CARL JENKINS AND BETTY JENKINS, H/W STELLA DEAN JENKINS ALICE HAUGHT ALFRED COTTRILL, INDIVIDUALLY AND AS ATTORNEY-IN-FACT FOR RENNA FOX BARBARA BALLOU BAKER KAYYONNE PASULKA CHARLES H. BALLOU AND LOIS M. BALLOU, H/W STEVEN E. BALLOU AND LINDA M. BALLOU, H/W	1-13/13
26	WILLIAM B. AND JULIE A. MARKLE	ROBERT L. UNDERWOOD AND VICTORIA M. UNDERWOOD, H/W	1-13/12.2
29	ONA M. QUELLHORST	ROBERT L. UNDERWOOD AND VICTORIA M. UNDERWOOD, H/W	P/O 1-13/12
	THOMAS VAN DE BUNT		P/O 1-13/12.2
30	THOMAS VAN DE BUNT	JUDY S. WETZEL, FKA JUDY THACKER MARY FRANCES CARPENTER JANICE J. WAGENER, FKA, JANICE L. MAY ROY DEAN ASH LARRY J. MCCAW AND JOETTE B. MCCAW, H/W JAMES F. BRAMHALL KITTY MIESIAK, F/K/A KITTY BOND BETTY E. MORRISON COLLEEN J. PATRICK EVELYN J. LINVILLE MARYLYN M. SMITH, F/K/A, MARYLYN J. SMITH MARC P. WISE MICHAEL D. WISE	P/O 1-13/12.1

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