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west virginia department of environmental protection

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

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

Monday, November 16, 2020  
PERMIT MODIFICATION APPROVAL  
Horizontal 6A / New Drill

SWN PRODUCTION COMPANY, LLC  
POST OFFICE BOX 12359  
SPRING, TX 773914954

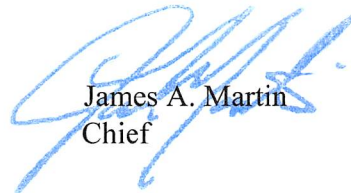
Re: Permit Modification Approval for CONSTANCE TAYLOR WTZ 201H  
47-103-03354-00-00

**Cement Yield Updated**

SWN PRODUCTION COMPANY, LLC

The Office of Oil and Gas has reviewed the attached permit modification for the above referenced permit. The attached modification has been approved and well work may begin. Please be reminded that the oil and gas inspector is to be notified twenty-four (24) hours before permitted well work is commenced.

If there are any questions, please feel free to contact me at (304) 926- 0450.

A blue ink signature of James A. Martin, Chief, is written over the text. The signature is stylized and cursive.

James A. Martin  
Chief

Operator's Well Number: CONSTANCE TAYLOR WTZ 201H  
Farm Name: CONSTANCE A TAYLOR  
U.S. WELL NUMBER: 47-103-03354-00-00  
Horizontal 6A New Drill  
Date Modification Issued: 11/16/2020

Promoting a healthy environment.

WW-6B  
(04/15)

47 10303354 mod

API NO. 47-103

OPERATOR WELL NO. Constance Taylor WTZ 201H

Well Pad Name: Constance Taylor WTZ

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

1) Well Operator: SWN Production Co., LLC 494512924 103-Wetzel 7-Proctor 681-Wileyville  
Operator ID County District Quadrangle

2) Operator's Well Number: Constance Taylor WTZ 201H Well Pad Name: Constance Taylor WTZ

3) Farm Name/Surface Owner: Constance A. Taylor Public Road Access: Brock Ridge Road

4) Elevation, current ground: 1430' Elevation, proposed post-construction: 1430' RECEIVED  
Office of Oil and Gas

5) Well Type (a) Gas  Oil \_\_\_\_\_ Underground Storage \_\_\_\_\_  
Other \_\_\_\_\_ NOV 04 2020

(b) If Gas Shallow  Deep \_\_\_\_\_  
Horizontal  \_\_\_\_\_  
WV Department of Environmental Protection

6) Existing Pad: Yes or No Yes *DMAH 10/27/20*

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
Target Formation- Marcellus, Up-Dip well to the North, Target Top TVD- 7397', Target Base TVD- 7441', Anticipated Thickness- 44', Associated Pressure- 4837

8) Proposed Total Vertical Depth: 7425'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 21545'

11) Proposed Horizontal Leg Length: 13479.92'

12) Approximate Fresh Water Strata Depths: 365'

13) Method to Determine Fresh Water Depths: Logs on Pad

14) Approximate Saltwater Depths: 1467' Salinity Profile Analysis

15) Approximate Coal Seam Depths: 1382'

16) Approximate Depth to Possible Void (coal mine, karst, other): None that we are aware of.

17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes \_\_\_\_\_ No

(a) If Yes, provide Mine Info: Name: \_\_\_\_\_  
Depth: \_\_\_\_\_  
Seam: \_\_\_\_\_  
Owner: \_\_\_\_\_

WW-6B  
(04/15)

471-0303354 mod  
API NO. 47-103

OPERATOR WELL NO. Constance Taylor WTZ 201H  
Well Pad Name: Constance Taylor WTZ

18)

**CASING AND TUBING PROGRAM**

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	20"	New	J-55	94#	126'	126'	CTS
Fresh Water	13 3/8"	New	J-55	54.4#	470"	470'	362 sx/CTS
Coal	See	Interm	Casing				
Intermediate	9 5/8"	New	J-55	36#	2900'	2900'	826 sx/CTS
Production	5 1/2"	New	P-110 HP	20#	21545'	21545'	
Tubing							
Liners							

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*DMAH 10/27/20*

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	20"	30"	0.25	2120	81	Class A	1.20/30% Excess
Fresh Water	13 3/8"	17.5"	0.380	2730	633	Class A	1.20/30% Excess
Coal	See	Interm	Casing				
Intermediate	9 5/8"	12 1/4"	0.352	3520	1768	Class A	1.19/50% Excess
Production	5 1/2"	8 3/4"-8 1/2"	0.361	14360	10500	Class A	1.19/5% Excess
Tubing							
Liners							

**PACKERS**

Kind:				
Sizes:				
Depths Set:				



Check# 1053301  
10/27/2020  
\$5,000.00

103-03354  
MOD

SWN Production Company, LLC  
1300 Fort Pierpont Dr, Ste 201  
Morgantown, WV 26508  
Tel: 304 884 1610  
Fax: 304 471 2497  
www.swn.com

November 2, 2020

Ms. Laura Adkins  
Office of Oil & Gas  
601 57<sup>th</sup> Street  
Charleston, WV 25304

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Office of Oil and Gas

NOV 04 2020

WV Department of  
Environmental Protection

RE: Proposed **Expedited Modification**: Constance Taylor WTZ 201H

Dear Ms. Adkins

Enclosed please find a modification for the above captioned well. We made changes to the cement yield on page two of the 6B per the DEP inspector's request. This well is situated on the Taylor's property, in Proctor District, Wetzel County, West Virginia. Enclosed documents:

-Updated 6B

If you have any questions or desire additional information, please me at 304-884-1613

Thank you.

Sincerely,

Brittany Woody  
Senior Regulatory Analyst  
Southwestern Energy Production Company, LLC

The Right People doing the Right Things,  
wisely investing the cash flow from our  
underlying Assets, will create Value+<sup>®</sup>