



west virginia department of environmental protection

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

September 14, 2017  
PERMIT MODIFICATION APPROVAL  
Horizontal 6A / New Drill

SWN PRODUCTION COMPANY, LLC  
POST OFFICE BOX 12359

SPRING, TX 773914954

Re: Permit Modification Approval for EDWARD DREMAK OHI 1H  
47-069-00226-00-00

**Modified Casing Depths due to Water Depth Adjustment**

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.

James A. Martin  
Chief

Operator's Well Number: EDWARD DREMAK OHI 1H  
Farm Name: DREMAK, EDWARD W. & JOANNE V.  
U.S. WELL NUMBER: 47-069-00226-00-00  
Horizontal 6A / New Drill  
Date Issued: September 14, 2017

Promoting a healthy environment.

09/15/2017

09/15/2017

WW-68  
(04/15)

API NO. 47-089 - 002260-005  
OPERATOR WELL NO. Edward Dremak OHI Pad  
Well Pad Name: Edward Dremak OHI Pad

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 | 069-Ohio | 4-Richlag | 641-Tiltonsville | District Quadrangle

2) Operator's Well Number: Edward Dremak OHI 1H | Well Pad Name: Edward Dremak OHI Pad

3) Farm Name/Surface Owner: Edward Dremak & Joana Dremak | Public Road Access: Waddells Run Road

4) Elevation, current ground: 1087 | Elevation, proposed post-construction: 1087

5) Well Type (a) Gas  Oil  Underground Storage

Other

(b) If Gas

Shallow

Deep

Horizontal

6) Existing Pad: Yes or No  No  Yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
Target Formation-Marcellus, Target Top TVD-5781', Target Base TVD-5821', Anticipated Thickness- 40', Associated Pressure- 3480

8) Proposed Total Vertical Depth: 5800'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 14008'

11) Proposed Horizontal Leg Length: 7797'

12) Approximate Fresh Water Strata Depths: 259'

13) Method to Determine Fresh Water Depths: Nearby spring at 855SS used for livestock in the past.

14) Approximate Saltwater Depths: 750' estimate from nearby salinity profile analysis, logs on first well on pad

15) Approximate Coal Seam Depths: 274'

16) Approximate Depth to Possible Void (coal mine, karst, other): Possible Void 274'

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: \_\_\_\_\_

API NO. 47-069 -00224  
 OPERATOR WELL NO.                       
 Well Pad Name:                     

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         | H-40    | 94#                    | 100'                      | 100'                        | CTS                           |
| Fresh Water  | 13 3/8"   | New         | H-40    | 48#                    | 339'                      | 339'                        | 339 sw/CTS                    |
| Coal         | 9 5/8"    | New         | J-55    | 36#                    | 1747'                     | 1747'                       | 680 sw/CTS                    |
| Intermediate | 7"        | New         | J-55    | 20#                    | If Needed                 | If Needed                   | If Needed/As Needed           |
| Production   | 5 1/2"    | New         | HCP-110 | 20#                    | 14008'                    | 14008'                      |                               |
| Tubing       | 2 3/8"    | New         | HCP-110 | 4.7#                   | Approx 5800'              | Approx 5800'                |                               |
| Liners       |           |             |         |                        |                           |                             |                               |

*Handwritten signature and date: 9/11/17*

| TYPE         | Size (in) | Wellbore Diameter (in) | Wall Thickness (in) | Burst Pressure (psi) | Anticipated Max. Internal Pressure (psi) | Cement Type | Cement Yield (Cu. Ft.) |
|--------------|-----------|------------------------|---------------------|----------------------|--|-------------|------------------------|
| Conductor    | 20"       | 30"                    | 0.25                | 2120                 | 81                                       | Class A     | 1.19/50% Excess        |
| Fresh Water  | 13 3/8"   | 17.5"                  | 0.380               | 2740                 | 633                                      | Class A     | 1.19/50% Excess        |
| Coal         | 9 5/8"    | 12 1/4"                | 0.395               | 3950                 | 1768                                     | Class A     | 1.18/50% Excess        |
| Intermediate | 7"        | 8 3/4"                 | 0.317               | 4360                 | 3250                                     | Class A     | 1.20/50% Excess        |
| Production   | 5 1/2"    | 8 3/4"                 | 0.361               | 12360                | 9500                                     | Class A     | 1.20/50% Excess        |
| Tubing       | 2 3/8"    | 4.778"                 | 0.190               | Approx 8193'         | Approx 8193'                             |             |                        |
| Liners       |           |                        |                     |                      |  |             |                        |

PACKERS

| Kind:       | 10K Arrowset AS-1X |  |  |  |
|-------------|--------------------|--|--|--|
| Sizes:      | 5 1/2"             |  |  |  |
| Depths Set: |                    |  |  |  |



WW-6AW  
(1-12)

API NO. 69-00226  
OPERATOR WELL NO. Dremak 1H  
Well Pad Name: Dremak

*MeB*

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
**VOLUNTARY STATEMENT OF NO OBJECTION**

**Instructions to Persons Named on Page WW-6A**

The well operator named on page WW-6A is applying for a permit from the State of West Virginia to conduct oil or gas well work. Well work permits are valid for twenty-four (24) months. Please contact the listed well operator and the Office of Oil and Gas if you do not own any interest in the listed surface tract.

**Comment and Waiver Provisions**

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

Pursuant to West Virginia Code § 22-6A-8(b) No permit may be issued less than thirty days after the filing date of the application for any well work except plugging or replugging; and no permit for plugging or replugging may be issued less than five days after the filing date of the application except a permit for plugging or replugging a dry hole: *Provided*, That if the applicant certifies that all persons entitled to notice of the application under the provisions of subsection (b), section ten of this article have been served in person or by certified mail, return receipt requested, with a copy of the well work application, including the erosion and sediment control plan, if required, and the well plat, and further files written statements of no objection by all such persons, the secretary may issue the well work permit at any time.

**VOLUNTARY STATEMENT OF NO OBJECTION**

I, Casey V. Saunders, hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through \_\_\_\_\_, including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows:

State: West Virginia WVSPN NAD 27 Easting: 1,678,070.495  
County: Ohio Northing: 606,214.383  
District: Richland Public Road Access: \_\_\_\_\_  
Quadrangle: TILTONSVILLE Generally used farm name: \_\_\_\_\_  
Watershed: \_\_\_\_\_

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials, **provided that Southwestern Energy Production Company, LLC drills the well on WV North NAD27 coordinates of North 606,214.383, East 1,678,070.495. This statement does not serve as notice that Consol Pennsylvania Coal Company has waived its rights to mine all the coal or accept any responsibility for any damage to the well or surface facilities associated with the well by mining activity. This Voluntary Statement of No Objection does not waive CPCC's Common Law Property Rights in the State of West Virginia.**

|  |  |
|--|--|
| *Please check the box that applies<br><input type="checkbox"/> SURFACE OWNER<br><input type="checkbox"/> SURFACE OWNER (Road and/or Other Disturbance)<br><input type="checkbox"/> SURFACE OWNER (Impoundments/Pits)<br><input checked="" type="checkbox"/> COAL OWNER OR LESSEE<br><input checked="" type="checkbox"/> COAL OPERATOR<br><input type="checkbox"/> WATER PURVEYOR<br><input type="checkbox"/> OPERATOR OF ANY NATURAL GAS STORAGE FIELD | <b>FOR EXECUTION BY A NATURAL PERSON</b><br><br>Signature: _____<br>Print Name: _____<br>Date: _____   |
|  | <b>FOR EXECUTION BY A CORPORATION, ETC.</b><br>Company: <u>Consol Pennsylvania Coal Company</u><br>By: <u>Casey Saunders</u><br>Its: <u>Manager Coal-Gas Coordination</u><br><br>Signature: <u>Casey V. Saunders</u><br>Date: <u>9/12/2017</u> |

**Oil and Gas Privacy Notice:**

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

09/15/2017