

11/09/2018



west virginia department of environmental protection

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

Austin Caperton, Cabinet Secretary
www.dep.wv.gov

Wednesday, November 7, 2018
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 205H
47-069-00227-00-00

Lateral Extension

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

A handwritten signature in blue ink, appearing to read 'James A. Martin', is written over the typed name and title.

Operator's Well Number: EDWARD DREMAK OHI 205H
Farm Name: DREMAK, EDWARD W. & JOANNE V.
U.S. WELL NUMBER: 47-069-00227-00-00
Horizontal 6A New Drill
Date Modification Issued: November 07, 2018

Promoting a healthy environment.

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-Richlar 641-Tiltonsville
Operator ID County District Quadrangle
- 2) Operator's Well Number: Edward Dremak OHI 205H Well Pad Name: Edward Dremak OHI Pad
- 3) Farm Name/Surface Owner: Andrew John Evick Public Road Access: North Fork Road
- 4) Elevation, current ground: 1080' Elevation, proposed post-construction: 1080'
- 5) Well Type (a) Gas Oil _____ Underground Storage _____
Other _____
(b) If Gas Shallow Deep _____
Horizontal
- 6) Existing Pad: Yes or No No *C. Drell 9.7.18*
- 7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Target Formation- Marcellus, Target Top TVD- 5774', Target Base TVD- 5807', Anticipated Thickness- 33', Associated Pressure- 3772
- 8) Proposed Total Vertical Depth: 5803'
- 9) Formation at Total Vertical Depth: Marcellus
- 10) Proposed Total Measured Depth: 22302'
- 11) Proposed Horizontal Leg Length: 15904.09'
- 12) Approximate Fresh Water Strata Depths: 259'
- 13) Method to Determine Fresh Water Depths: Edward & Joanne Dremak 1 Spring at 259' elevation, was previously used for livestock
- 14) Approximate Saltwater Depths: 377- Based on SWN salinity profile, corresponds with the Pottsville
- 15) Approximate Coal Seam Depths: 270'
- 16) Approximate Depth to Possible Void (coal mine, karst, other): Possible Void 270'
- 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: _____

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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 | H-40 | 94# | 100' | 100' | CTS |
| Fresh Water | 13 3/8" | New | H-40 | 48# | 351' | 351' | 350 sx/CTS |
| Coal | See | Surface | Casing | | | | |
| Intermediate | 9 5/8" | New | J-55 | 36# | 1640' | 1640' | 641 sx/CTS |
| Production | 5 1/2" | New | HCP-110 | 20# | 22302' | 22302' | 622 7/8" Tol 3122a max 100000 |
| Tubing | | | | | | | |
| Liners | | | | | | | |

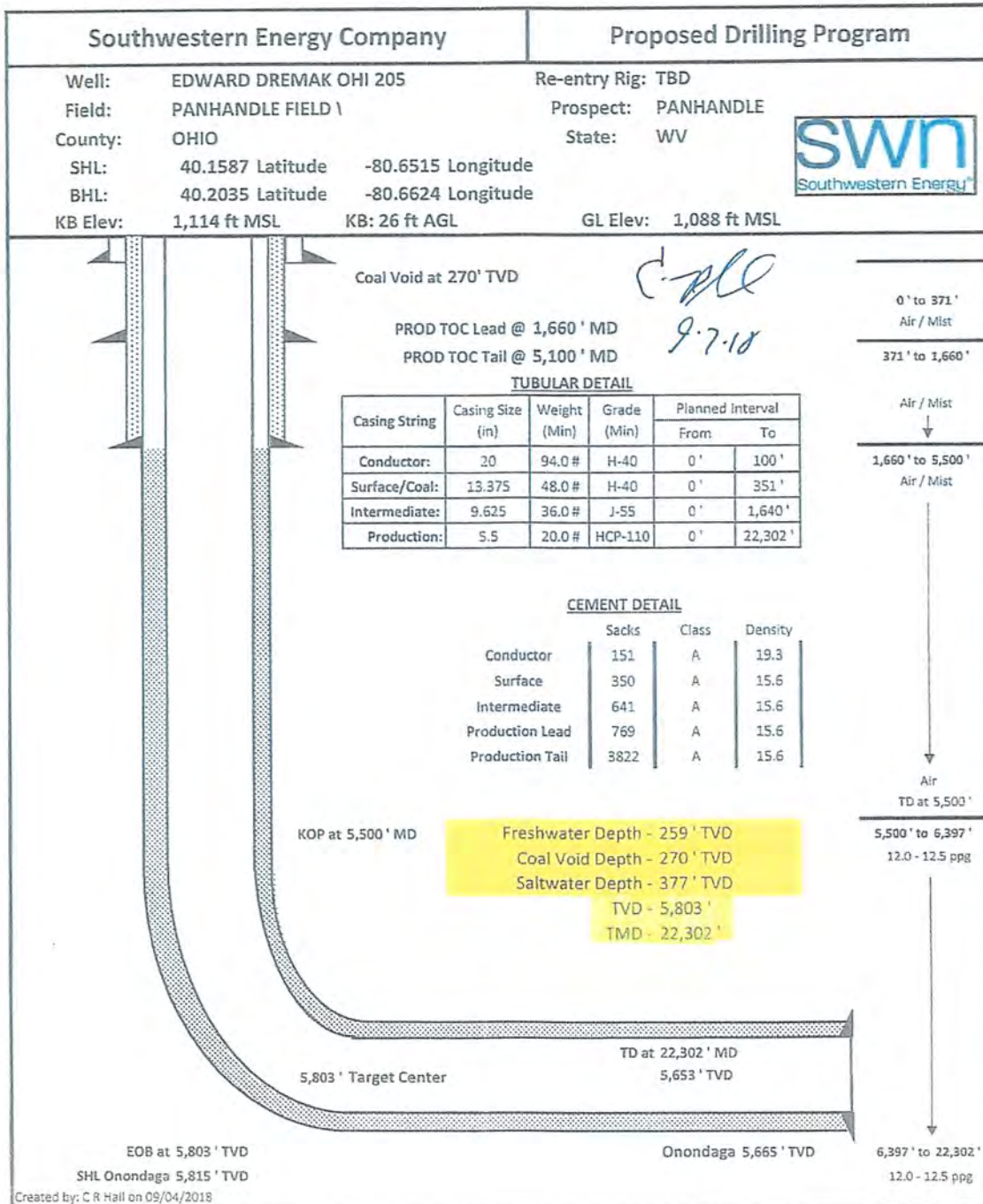
E-PLC 9-7-18

| 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 | 1.19/50% Excess |
| Fresh Water | 13 3/8" | 17.5" | 0.380 | 2740 | 633 | Class A | 1.19/50% Excess |
| Coal | See | Surface | Casing | | | | |
| Intermediate | 9 5/8" | 12 1/4" | 0.395 | 3950 | 1768 | Class A | 1.19/50% Excess |
| Production | 5 1/2" | 8 3/4" | 0.361 | 12360 | 9500 | Class A | 1.20/50% Excess |
| Tubing | | | | | | | |
| Liners | | | | | | | |

PACKERS

| | | | | |
|-------------|--|--|--|--|
| Kind: | | | | |
| Sizes: | | | | |
| Depths Set: | | | | |

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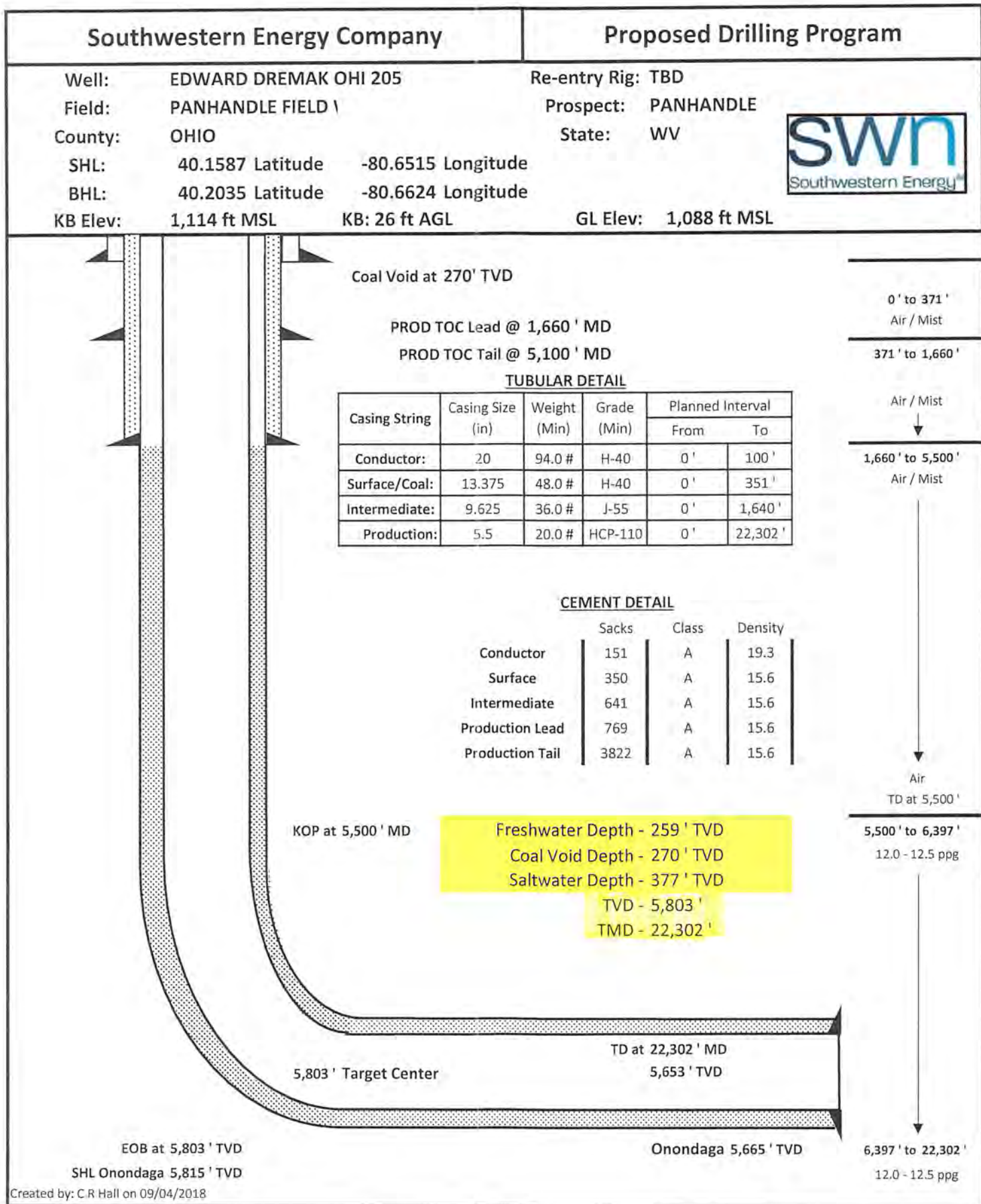


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(2,000' SCALE) BOTTOM HOLE LATITUDE: 40°12'30" 10405'

(2,000' SCALE) SURFACE HOLE LATITUDE: 40°10'00" 7349'



SURVEYORS
ENGINEERS
ENVIRONMENTAL
GIS MAPPING

www.jhacompanies.com
68011 Vineyard Road
St. Clairsville, Ohio 43950
740-695-6100

NOTES ON SURVEY

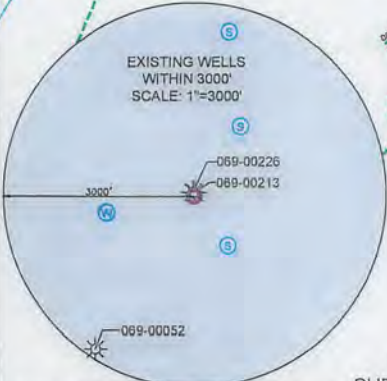
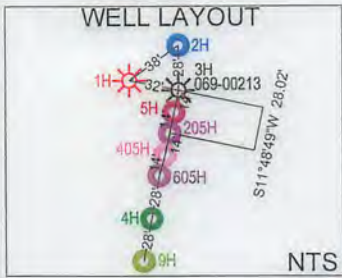
1. COORDINATE SYSTEM IS UTM NAD 83 DATUM, ZONE 17, U.S. FOOT AND WELL COORDINATES ESTABLISHED USING SURVEY GRADE GPS.
2. SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND/OR FIELD LOCATIONS.
3. THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
4. NO DWELLINGS OR BUILDINGS WITHIN 625 FEET OF PROPOSED CENTER OF PAD
5. NO PERENNIAL STREAMS, LAKES, PONDS, RESERVOIRS OR WETLANDS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
6. NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF THE LIMITS OF DISTURBANCE.
7. NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF PROPOSED WELL.

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GRID NORTH
UTM, NAD83 DATUM, ZONE 17, US

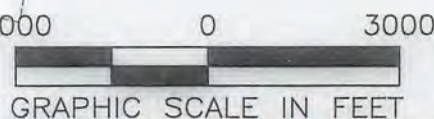
(2,000' SCALE) SURFACE HOLE LONGITUDE: -80°37'30"

(2,000' SCALE) BOTTOM HOLE LONGITUDE: -80°37'30"



| |
|---|
| SURFACE HOLE LOCATION (SHL): |
| UTM (NAD83, ZONE 17, METERS): NORTHING: 4445428.05 EASTING: 529679.85 |
| LANDING POINT LOCATION (LPL): |
| UTM (NAD83, ZONE 17, METERS): NORTHING: 4445743.30 EASTING: 530077.14 |
| BOTTOM HOLE LOCATION (BHL): |
| UTM (NAD83, ZONE 17, METERS): NORTHING: 4450397.99 EASTING: 528729.97 |

| LINE | BEARING | DISTANCE |
|------|-------------|----------|
| L1 | S86°39'14"W | 740.82' |
| L2 | N76°43'58"W | 762.29' |



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 REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

P.S. 2041



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
WVDEP
OFFICE OF OIL & GAS
601 57TH STREET
CHARLESTON, WV 25034

MINIMUM DEGREE OF ACCURACY: 1/200
PROVEN SOURCE OF ELEVATION: SURVEY GRADE GPS (NAVD 88, US FT)

COMPANY: SWN Production Company, LLC

EDWARD DREMAK OHI
OPERATOR'S WELL #: 205H
API WELL #: 47 STATE 069 COUNTY 00227 PERMIT

WELL TYPE: OIL WASTE DISPOSAL PRODUCTION DEEP GAS LIQUID INJECTION STORAGE SHALLOW

WATERSHED: UPPER OHIO SOUTH ELEVATION: 1,088.0'

DISTRICT: RICHLAND COUNTY: OHIO QUADRANGLE: TILTONSVILLE, OH

SURFACE OWNER: ANDREW JOHN EVICK ACREAGE: ±34.19

OIL & GAS ROYALTY OWNER: JOANNE V. DREMAK ACREAGE: ±34.19

DRILL DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION

CONVERT PLUG & ABANDON CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY)

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 5,803' TVD 22,302.4'TMD

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC ADDRESS: P.O. BOX 1300 CITY: JANE LEW STATE: WV ZIP CODE: 26378



DESIGNATED AGENT: BRITTANY WOODY ADDRESS: P.O. BOX 1300 CITY: JANE LEW STATE: WV ZIP CODE: 26378

| | | |
|---------------------------------------|----------------------|----------------------|
| LEGEND: | REVISIONS: | DATE: 09-05-2018 |
| ○ PROPOSED SURFACE HOLE / BOTTOM HOLE | | |
| ⊙ EXISTING / PRODUCING WELLHEAD | | |
| LPL* LANDING POINT LOCATION | — SURVEYED BOUNDARY | DRAWN BY: D. REED |
| ⊙ EXISTING WATER WELL | ===== LEASE BOUNDARY | SCALE: 1" = 3000' |
| ⊙ EXISTING SPRING | — PROPOSED PATH | DRAWING NO: 2018-284 |
| | | WELL LOCATION PLAT |

| WELL BORE TABLE FOR SURFACE / ROYALTY OWNERS | | |
|--|--|-------------------|
| TRACT | SURFACE OWNER (S) / ROYALTY OWNER (R) | TAX PARCEL |
| 1 | ANDREW JOHN EVICK (S) JOANNE V. DREMAK (R) | 04-R5-54 |
| TRACT | SURFACE OWNER | TAX PARCEL |
| 2 | ANDREW JOHN EVICK | 04-R5-49 |
| 3 | WINDSOR COAL COMPANY | 04-RB-8.1 |
| 4 | THE BOARD OF COMMISSIONERS OF THE COUNTY OF OHIO | 04-R5-55 |
| 5 | THE BOARD OF COMMISSIONERS OF THE COUNTY OF OHIO | 04-R5-10 |
| 6 | HENRY W. ZEDLER, JUDITH K. ZEDLER & MARGARET L. BURGGRAF | 03-B46-0015.0000 |
| 7 | WEST VIRGINIA DEPARTMENT OF TRANSPORTATION, DIVISION OF HIGHWAYS | GIRTYS POINT ROAD |
| 8 | BARRY L. & PATRICIA A. GREATHOUSE | 03-B46-0018.0000 |
| 9 | LAWRENCE R. & ROSEMARY KINDER | 03-B41-0021.0004 |
| 10 | LAWRENCE R. & ROSEMARY MOORE | 03-B41-0021.0001 |
| 11 | STANLEY RAE KRUPINSKI & MEREDITH KINDER MOORE | 03-B41-0021.0003 |
| 12 | ROSEMARY KINDER MOORE | 03-B41-0030.0000 |
| 13 | WINDSOR COAL COMPANY | 03-B41-0005.0000 |
| 14 | WINDSOR COAL COMPANY | 01-BB41-0003.0000 |

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| ADJOINING OWNERS TABLE | | |
|------------------------|--|-------------------|
| TRACT | SURFACE OWNER | TAX PARCEL |
| A | ALLIANCE RESOURCE GP, LLC | 04-RB-6 |
| B | ALLIANCE RESOURCE GP, LLC | 04-R5-52 |
| C | ALLIANCE RESOURCE GP, LLC | 04-R5-53 |
| D | WINDSOR COAL COMPANY, LLC | 04-R5-50 |
| E | JOHN W. METZ | 04-R5-46 |
| F | BURNT MILL ACRES, LLC | 04-R5-13 |
| G | S.E.W. TRUST | 04-R5-9 |
| H | RODNEY K. & NEDRA C. MCCONNELL | 04-R2-20 |
| I | RODNEY K. & NEDRA C. MCCONNELL | 03-B46-0014.0000 |
| J | HENRY W. ZEDLER, JUDITH ZEDLER & MARGARET BURGGRAF | 03-B46-0013.0000 |
| K | KENNETH D. & BARBARA J. COVER | 03-B46-0012.0000 |
| L | JOAN GARRETT | 03-B46-0009.0000 |
| M | JOAN GARRETT | 03-B46-0017.0000 |
| N | SIDNEY W. MOZINGO, JR. & VICTORIA L. MOZINGO | 03-B46-0005.0000 |
| O | ALEX & DARLA ANN MUSHET | 03-B46-0004.000 |
| P | EVERT RUNYAN | 03-B41-0018.0000 |
| Q | WINDSOR COAL COMPANY | 03-B41-0020.0000 |
| R | WINDSOR HEIGHTS VILLAGE | 08-W41N-0139.0000 |
| S | NEIL A. & JANICE C. ABRAHAMSON | 03-B41-0024.0000 |
| T | NEIL A. & JANICE C. ABRAHAMSON | 03-B41-0025.0000 |
| U | WILLIAM J. KNIGHT, II & MEREDITH M. SERPICH | 08-W41N-0129.0000 |
| V | JAYCOB HAYDEN DOTY & HAYLEY A. DOTY | 08-W41N-0130.0000 |
| W | WILLIAM C. & PEGGY L. MCGILL | 08-W41N-0131.0000 |
| X | WINDSOR COAL COMPANY | 03-B41-0021.0000 |
| Y | THE VILLAGE OF WINDSOR HEIGHTS | 03-B41-0029.0000 |
| Z | MT OLIVE BAPTIST CHURCH | 01-B405-0001.0000 |
| AA | WINDSOR COAL COMPANY | 01-BB41-0005.0000 |
| AB | OHIO FRANKLIN REAL ESTATE COMPANY | 01-BB41-0004.0000 |
| AC | THE BROOKE COUNTY COMMISSION | 01-BB41-0008.0000 |
| AD | OHIO FRANKLIN REAL ESTATE COMPANY | 01-BB41-0002.0000 |
| AE | WEST PENN POWER COMPANY | 01-BB41-0017.0000 |
| AF | WEST PENN POWER COMPANY | 01-BB41-0016.0000 |
| AG | WEST PENN POWER COMPANY | 01-BB41-0007.0000 |
| AH | WINDSOR COAL COMPANY | 03-B41-0007.0000 |
| AI | WINDSOR COAL COMPANY | 03-B41-0039.0000 |
| AJ | SYLVESTER & MARY KELLER | 03-B41-0038.0000 |
| AK | DONNA MARIE PEREZ | 03-B41-0037.0000 |
| AL | ROSEMARY KINDER MOORE | 03-B41-0035.0000 |
| AM | MICHAEL A. & LINDA S. WOLEN | 03-B41-0036.0000 |
| AN | LAWRENCE & ROSEMARY MOORE | 03-B41-0034.0000 |
| AO | LAWRENCE R. & ROSEMARY K. MOORE | 03-B41-0033.0000 |
| AP | CHARLES BELL ESTATE | 03-B41-0031.0000 |
| AQ | BARRY L. & PATRICIA A. GREATHOUSE | 03-B41-0032.0000 |
| AR | BARRY L. & PATRICIA A. GREATHOUSE | 03-B41-0083.0000 |
| AS | BARRY L. & PATRICIA A. GREATHOUSE | 03-B46-0019.0000 |
| AT | STACY ANN GREATHOUSE & PATRICIA ANN GREATHOUSE | 03-B46-0041.0000 |
| AU | BARRY L. & PATRICIA A. GREATHOUSE | 03-B41-0082.0000 |
| AV | DANNY GENE BRITT & MARGARET VIRGINIA | 03-B46-0027.0000 |
| AW | TRACY GILBERT | 03-B46-0022.0001 |
| AX | BRUCE D. BONAR (I) & WILLIAM BONAR (I) | 03-B46-0020.0000 |
| AY | MARC SEAMON | 04-R6-2 |
| AZ | SHORT CREEK COAL COMPANY (C/O RAYLE COAL COMPANY) | 04-R6-17.3 |
| BA | SHORT CREEK COAL COMPANY (C/O RAYLE COAL COMPANY) | 04-R6-17 |
| BB | MARC SEAMON | 04-R6-37 |
| BC | SHORT CREEK CEMETERY ASSOCIATION, TRUSTEES | 04-R5-57 |
| BD | SHORT CREEK METHODIST CHURCH | 04-R5-60 |
| BE | ROBERT L. & GWENDOLYN NOWAK | 04-R5-59 |
| BF | ERIC W. & LISA N. GADD | 04-R5-55.1 |
| BC | ERIC W. & LISA N. GADD | 04-R5-55.3 |
| BH | DELBERT E. & CAROL L. HUFFMAN | 04-RB-16.2 |
| BI | LUTHER R., II & D.F. SMITH | 04-RB-16.1 |
| BJ | AMERICAN DISPOSAL SERVICES OF WEST VIRGINIA, INC | 04-RB-15 |
| BK | ALLIED WASTE, INC | 04-R5-56.1 |
| BL | ALLIED WASTE, INC | 04-R5-56 |
| BM | RODNEY & A.J. SNYDER | 04-RB-13 |
| BN | ARTHUR ENNIS, PEGGY CLARK & ALMA SINCEWICH | 04-RB-9 |
| BO | GORDON E. & DEBORAH P. DREMAK | 04-RB-8.15 |
| BP | OHIO COUNTY COMMISSION | 04-RB-8.16 |
| BQ | TUNNEL RIDGE, LLC | 04-RB-8.17 |
| BR | TUNNEL RIDGE, LLC | 04-RB-8.14 |
| BS | TUNNEL RIDGE, LLC | 04-RB-8.2 |
| BT | SUSAN L. CAIN | 04-RB-8.3 |
| BU | TUNNEL RIDGE, LLC | 04-RB-8.18 |
| BV | HAMMOND PUBLIC SERVICE DISTRICT | 03-B41-0021.0002 |
| BW | RICHARD L. & DEBORAH K. BLACK | 04-R5-58.1 |
| BX | RAY W. ARCHER | 04-R5-58 |
| BY | BRYAN K. & LAURA L. PETTIT | 04-R5-55.4 |
| BZ | EDWARD W. & JOANNE V. DREMAK | 04-R5-54.1 |

| | | | |
|------------|------------|---|----------------------|
| REVISIONS: | COMPANY: |   | |
| | OPERATOR'S | EDWARD DREMAK OHI | |
| | WELL #: | 205H | |
| | DISTRICT: | COUNTY: | STATE: |
| | RICHLAND | OHIO | WV |
| | | | DATE: 09-05-2018 |
| | | | DRAWN BY: D. REED |
| | | | SCALE: N/A |
| | | | DRAWING NO: 2018-284 |
| | | | WELL LOCATION PLAT |

WW-6A1
(5/13)

Operator's Well No. Edward Dremak OHI 205H

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE
Chapter 22, Article 6A, Section 5(a)(5)
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)**

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

| Lease Name or Number | Grantor, Lessor, etc. | Grantee, Lessee, etc. | Royalty | Book/Page |
|----------------------|-----------------------|-----------------------|---------|-----------|
|----------------------|-----------------------|-----------------------|---------|-----------|

SEE EXHIBIT "A"

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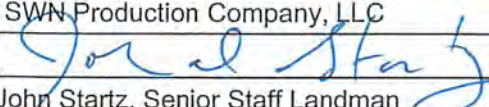
WV Department of
Environmental Protection

**Acknowledgement of Possible Permitting/Approval
In Addition to the Office of Oil and Gas**

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

Well Operator: SWN Production Company, LLC
 By: 
 Its: John Startz, Senior Staff Landman

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EXHIBIT "A"

Attached to and made a part of the State of West Virginia Oil and Gas Permit Form, WW-6A1, by SWN Production Company, L.L.C., Operator
Edward Dremak OHI 205H
Ohio County and Brooke Counties, West Virginia

| # | TMP | LEASE # | LESSOR | LESSEE | ROYALTY | BK/PG | Interest Not Leased by Southwestern Production Company, LLC |
|----|----------|------------|--|--|---------|--------------------|---|
| 1) | 4-R5-54 | 729403-000 | Edward W Dremak and Joanne V Dremak | Chesapeake Appalachia, L.L.C. SWN Production Company, LLC | 16.75% | 810/722 884/121 | 0.000000% |
| 2) | 4-R5-49 | 729328-000 | Edward W Dremak and Joanne V Dremak | Chesapeake Appalachia, L.L.C. SWN Production Company, LLC | 16.75% | 810/673 884/109 | 0.000000% |
| 3) | 4-R8-8-1 | 17-13568 | Noble Energy, Inc, a Delaware Corporation | SWN Production Company, LLC | 18.00% | 920/01 | 0.000000% |
| 4) | 4-R5-55 | 727321-000 | Board of Commissioners of the County of Ohio | Chesapeake Appalachia, L.L.C. SWN Production Company, LLC | 18.00% | 802/742 893/13 | 0.000000% |
| 5) | 4-R5-10 | n/a | Royalty Owners | n/a | n/a | n/a | 0.347222% |
| | | 738070-002 | Martha Lorentz a/k/a Marcie Lorentz, a single woman | Chesapeake Appalachia, L.L.C. SWN Production Company, LLC | 14.00% | 844/460 885/53 | |
| | | 738070-003 | Marie R. Lorentz, a widow, by and through her Attorney-in-Fact, Nancy Marie Keely | Chesapeake Appalachia, L.L.C. SWN Production Company, LLC | 18.00% | 844/452 885/53 | |
| | | 738070-001 | Benjamin C. Barlow | Chesapeake Appalachia, L.L.C. SWN Production Company, LLC | 14.00% | 844/456 885/53 | |
| | | 745907-041 | Rebecca Barlow, a single woman | SWN Production Company, LLC | 18.00% | 915/792 | |
| | | 738295-002 | Jack L. Herrmann and Nancy V. Herrmann, husband and wife | Chesapeake Appalachia, L.L.C. SWN Production Company, LLC | 18.00% | 845/427 885/65 | |
| | | 738295-001 | Jo Ann Wade f/k/a Jo Ann Herrmann, a married woman dealing in her sole and separate property | Chesapeake Appalachia, L.L.C. SWN Production Company, LLC | 18.00% | 845/431 885/65 | |
| | | 745907-046 | Betty E Herrmann | SWN Production Company, LLC | 14.00% | 912/006 | |
| | | 745907-004 | Grace Jean Griffin King, a widow | SWN Production Company, LLC | 16.00% | 911/464 | |
| | | 745907-003 | Jayne E. Brogan & Joseph P. Davis, her husband | SWN Production Company, LLC | 16.00% | 911/528 | |
| | | 745907-020 | Lindsey Ryan Frohnapfel, a single woman | SWN Production Company, LLC | 14.00% | 911/675 | |

SEP 10 2018

WV Department of
Environmental Protection

EXHIBIT "A"

Attached to and made a part of the State of West Virginia Oil and Gas Permit Form, WW-6A1, by SWN Production Company, L.L.C., Operator
Edward Dremak OHI 205H
Ohio County and Brooke Counties, West Virginia

| | | | | |
|------------|---|--------------------------------|--------|---------|
| 745907-001 | Makinly Baird, an unmarried woman | SWN Production Company, LLC | 14.00% | 911/642 |
| 745907-017 | Mary Catherine Grimes and John Grimes, Jr., her husband | SWN Production Company, LLC | 14.00% | 911/592 |
| 745907-018 | Michael Joseph Walton, a single person | SWN Production Company, LLC | 14.00% | 911/597 |
| 745907-006 | Michael Sean Frohnapfel and Jennifer Susan Legg Frohnapfel, his wife | SWN Production Company, LLC | 14.00% | 911/575 |
| 745907-012 | Ronald J. Grant and Christine Grant, his wife | SWN Production Company, LLC | 14.00% | 911/617 |
| 745907-019 | Rose Mary Hermann Watson and Donald C. Watson, her husband | SWN Production Company, LLC | 14.00% | 911/660 |
| 745907-010 | Sandra F. Rodolf, Trustee of the Patricia M. Frohnapfel Revocable Living Trust dated 01/14/2015 | SWN Production Company, LLC | 14.00% | 911/637 |
| 18-02965 | Charles Donald McKenzie, a widower | SWN Production Company, L.L.C. | 14.00% | 947/397 |
| 18-02965 | Patricia F. McMahon, a married woman, dealing in her sole and separate property | SWN Production Company, L.L.C. | 14.00% | 947/397 |
| 18-02965 | Richard Lawrence McKenzie | SWN Production Company, L.L.C. | 14.00% | 947/397 |
| 18-02965 | Robert Russell McKenzie, a married man, dealing in his sole and separate property | SWN Production Company, L.L.C. | 14.00% | 947/397 |
| 18-02965 | Sandra Rodolf, a married woman, dealing in her sole and separate property | SWN Production Company, L.L.C. | 14.00% | 947/397 |
| 18-02965 | Terrance A. Frohnapfel, a single man | SWN Production Company, L.L.C. | 14.00% | 947/397 |
| 18-02965 | Virginia Adele Wisdom, a single woman | SWN Production Company, L.L.C. | 14.00% | 947/397 |
| 745907-016 | Thomas R. Sharp and Sue Ellen Sharp, his wife | SWN Production Company, LLC | 16.00% | 911/602 |
| 745907-013 | William P. Brogan, a single man | SWN Production Company, LLC | 16.00% | 911/534 |
| 745907-047 | Boland Brogan 1997 Trust | SWN Production Company, LLC | 16.00% | 915/473 |
| 745907-043 | Jerome Bernard Herrmann, a single person | SWN Production Company, LLC | 14.00% | 915/458 |
| 745907-059 | Thomas Neenan and Robin Guyette-Neenan, his wife | SWN Production Company, LLC | 14.00% | 915/427 |
| 745907-044 | David Lee Heinzman, Jr., a single man | SWN Production Company, LLC | 14.00% | 915/409 |
| 745907-054 | James C. Murphy, III, a single person | SWN Production Company, LLC | 14.00% | 915/415 |
| 745907-060 | Stephen Wenz, a single man | SWN Production Company, LLC | 14.00% | 915/421 |
| 745907-053 | Paul G. Seelman and Ana Seelman, his wife | SWN Production Company, LLC | 14.00% | 915/397 |

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WV Department of
Environmental Protection

EXHIBIT "A"

Attached to and made a part of the State of West Virginia Oil and Gas Permit Form, WW-6A1, by SWN Production Company, L.L.C., Operator
Edward Dremak OHI 205H
Ohio County and Brooke Counties, West Virginia

| | | | | |
|------------|---|-----------------------------|--------|---------|
| 745907-069 | Catherine Seelman Goetz and Andrew Joseph Goetz, her husband | SWN Production Company, LLC | 14.00% | 915/403 |
| 745907-065 | Rita Kathryn Griffin, a single person | SWN Production Company, LLC | 14.00% | 916/375 |
| 745907-067 | Robert and Kathryn Leach Revocable Trust dated September 12, 2014 by John Leach, Trustee | SWN Production Company, LLC | 14.00% | 916/370 |
| 745907-040 | Robert C. Seelman, III, a single man | SWN Production Company, LLC | 14.00% | 916/7 |
| 16-01067 | Pauline Baird, a widow | SWN Production Company, LLC | 18.00% | 916/422 |
| 745907-055 | Taylor Cofield and Joshua Cofield, her husband | SWN Production Company, LLC | 14.00% | 916/360 |
| 745907-064 | Edward Downey as Trustee of the Doris Downey Trust | SWN Production Company, LLC | 16.00% | 916/410 |
| 745907-061 | Thomas Patrick Griffin, a married man dealing in his sole and separate property | SWN Production Company, LLC | 14.00% | 916/355 |
| 745907-063 | The Jack A. Herrmann and Jean Herrmann Revocable Living Trust Agreement dated December 6, 1999, as amended by Darryl W. Millet, Trustee | SWN Production Company, LLC | 16.00% | 916/386 |
| 745907-042 | Beverly A. Baird, a widow | SWN Production Company, LLC | 18.00% | 915/231 |
| 745907-052 | Gail Seelman Falasco and Ronald Falasco, her husband | SWN Production Company, LLC | 14.00% | 916/404 |
| 745907-049 | Joanne Grace Baird, a widow | SWN Production Company, LLC | 14.00% | 916/398 |
| 745907-048 | The Tom Frohnapfel Revocable Living Trust dated January 20, 2015 by Ann Dee Callison, Trustee | SWN Production Company, LLC | 14.00% | 916/1 |
| 745907-066 | Jo Ann Herrmann Rogowski, a widow | SWN Production Company, LLC | 18.00% | 916/429 |
| 745907-056 | Larry C. Baird, a single man | SWN Production Company, LLC | 14.00% | 916/380 |
| 745907-051 | Leada Seelman, a married woman dealing in her sole and separate property | SWN Production Company, LLC | 14.00% | 916/416 |
| 745907-062 | Mary Anne Marano, a married woman dealing in her sole and separate property | SWN Production Company, LLC | 14.00% | 916/365 |
| | Ted W. Freeman by Rita Johnson, his Attorney-In-Fact | SWN Production Company, LLC | 14.00% | 916/392 |
| 745907-050 | Gail Pennington, a married woman dealing in her own and separate property | SWN Production Company, LLC | 18.00% | 917/465 |

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EXHIBIT "A"

Attached to and made a part of the State of West Virginia Oil and Gas Permit Form, WW-6A1, by SWN Production Company, L.L.C., Operator
Edward Dremak OHI 205H
Ohio County and Brooke Counties, West Virginia

| | | | | | | |
|-----|-------------------|--|-------------------------------|--------|---------|-----------|
| | 745907-068 | James S. Rogers, Jr., a married man dealing in his own and separate property | SWN Production Company, LLC | 18.00% | 917/455 | |
| | 745907-058 | Karen R. Goree, a married woman dealing in her own and separate property | SWN Production Company, LLC | 18.00% | 917/470 | |
| | 745907-057 | Lynn Stroud, a married woman dealing in her own and separate property | SWN Production Company, LLC | 18.00% | 917/460 | |
| | 727321-001 | The Board of Commissioners of Ohio County a/k/a The County Commission of Ohio County | Chesapeake Appalachia, L.L.C. | 18.00% | 802/742 | |
| 6) | 3-B46-15 | 729490-003 Henry W Zeidler | Chesapeake Appalachia, L.L.C. | 18.00% | 13/339 | 0.000000% |
| | | 729490-002 Judith K Zeidler | SWN Production Company, LLC | | 30/480 | |
| | | | Chesapeake Appalachia, L.L.C. | 18.00% | 14/72 | |
| | | 729490-001 Margaret Zeidler Burggraf | SWN Production Company, LLC | | 30/480 | |
| | | | Chesapeake Appalachia, L.L.C. | 18.00% | 14/510 | |
| | | | SWN Production Company, LLC | | 30/480 | |
| 7) | Girtys Point Road | 17-99999 West Virginia Department of Transportation, Division of Highways | SWN Production Company, LLC | 20.00% | 38/217 | 0.000000% |
| 8) | 3-B46-18 | 18-00301 Barry L. Greathouse and Patricia A. Greathouse | SWN Production Company, LLC | 15.50% | 35/373 | 0.000000% |
| 9) | 3-B41-21-4 | HG Energy II Appalachia, LLC | SWN Production Company, LLC | 18.00% | 42/260 | 0.000000% |
| 10) | 3-B41-21-1 | HG Energy II Appalachia, LLC | SWN Production Company, LLC | 18.00% | 42/260 | 0.000000% |
| 11) | 3-B41-21-3 | HG Energy II Appalachia, LLC | SWN Production Company, LLC | 18.00% | 42/260 | 0.000000% |
| 12) | 3-B41-30 | 747782-000 Lawrence R. Moore and Rosemary Kinder Moore, husband and wife | SWN Production Company, LLC | 18.00% | 40/611 | 0.000000% |
| 13) | 3-B41-5 | CNX Gas Company, LLC | SWN Production Company, LLC | 18.00% | 48/118 | 0.000000% |
| 14) | 1-BB41-3 | HG Energy II Appalachia, LLC | SWN Production Company, LLC | 18.00% | 47/677 | 0.000000% |

August 28, 2018

Ms. Laura Adkins
WV DEP Office of Oil & Gas
601 57th St., SE
Charleston, WV 25304

RE: SWN's proposed New Well: Edward Dremak OHI 205H
Ohio and Brooke County, West Virginia
Drilling under Waddells Run Road & Girtys Point Road, Ohio
County and Windy Hill Rd. Brooke County, West Virginia

Dear Ms. Adkins:

SWN Production Company, LLC ("SWN") is applying for a drilling permit for the above referenced well. The State of West Virginia has raised some concern as to SWN's right to drill under Waddells Run Road, Girtys Point Road and Windy Hill Road. Please be advised that SWN has leased all mineral owners under said route as it relates to the above-referenced well and unit.

Thank you.

Sincerely,



John D. Startz, CPL
Technical Expert Landman

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Environmental Protection

