



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

Harold D. Ward, Cabinet Secretary
www.dep.wv.gov

Wednesday, December 18, 2024
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

SWN PRODUCTION COMPANY, LLC
POST OFFICE BOX 12359

SPRING, TX 773914954

Re: Permit Modification Approval for Michael Southworth MSH 10H
47-051-02518-00-00

Extended lateral length

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 handwritten signature in blue ink, appearing to read 'James A. Martin', is written over a light blue circular stamp.

James A. Martin
Chief

Operator's Well Number: Michael Southworth MSH 10H
Farm Name: Barry A & Kimberly S Litman
U.S. WELL NUMBER: 47-051-02518-00-00
Horizontal 6A New Drill
Date Modification Issued: 12/18/2024

Promoting a healthy environment.

12/20/2024

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 051-Marshall 6-Sandhi 648-Valley Grove
Operator ID County District Quadrangle

2) Operator's Well Number: Michael Southworth MSH 10H Well Pad Name: Michael Southworth MSH Pad

3) Farm Name/Surface Owner: Barry A. & Kimberly S. Litman Public Road Access: Walnut Grove Road

4) Elevation, current ground: 1271' Elevation, proposed post-construction: 1271'

5) Well Type (a) Gas Oil Underground Storage

Other

(b) If Gas Shallow Deep

Horizontal

6) Existing Pad: Yes or No Yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Target Formation- Marcellus, Down-Dip well to the South, Target Top TVD- 6521', Target Base TVD- 6573', Anticipated Thickness- 52', Associated Pressure- 4273

8) Proposed Total Vertical Depth: 6552'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 21430'

11) Proposed Horizontal Leg Length: 14288.19'

12) Approximate Fresh Water Strata Depths: 632'

13) Method to Determine Fresh Water Depths: Nearby water well (Edith Folmar)

14) Approximate Saltwater Depths: 1403' Salinity Profile on BW Edge pad

15) Approximate Coal Seam Depths: 734'

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: Ohio County Coal Mine

Depth: 743'

Seam: Pittsburgh

Owner: Ohio County Coal Resources/ACNR Inc.

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*OK # 1086250
7500*

Strader Gower
12/06/2024

18) **CASING AND TUBING PROGRAM**

TYPE	<u>Size (in)</u>	<u>New or Used</u>	<u>Grade</u>	<u>Weight per ft. (lb/ft)</u>	<u>FOOTAGE: For Drilling (ft)</u>	<u>INTERVALS: Left in Well (ft)</u>	<u>CEMENT: Fill-up (Cu. Ft.)/CTS</u>
Conductor	20"	New	J-55	94#	136'	136'	CTS
Fresh Water	13 3/8"	New	J-55	54.4#	785'	785'	904 sx/CTS
Coal	See	Surface	Casing				
Intermediate	9 5/8"	New	J-55	36#	2010'	2010'	770 sx/CTS
Production	5 1/2"	New	P-110 HP	20#	21430'	21430'	Tail 3940ex/ 100' Inside Intermediate
Tubing							
Liners							

TYPE	<u>Size (in)</u>	<u>Wellbore Diameter (in)</u>	<u>Wall Thickness (in)</u>	<u>Burst Pressure (psi)</u>	<u>Anticipated Max. Internal Pressure (psi)</u>	<u>Cement Type</u>	<u>Cement Yield (cu. ft./k)</u>
Conductor	20"	30"	0.25	2120	81	Class A	1.20/30% Excess
Fresh Water	13 3/8"	17.5"	0.330	1730	633	Class A	1.20/30% Excess
Coal	See	Surface	Casing				
Intermediate	9 5/8"	12 1/4"	0.352	3520	1768	Class A	1.19/40% Excess
Production	5 1/2"	8 3/4"-8 1/2"	0.361	14360	10500	Class A	1.19/10-15% Excess
Tubing							
Liners							

PACKERS

Kind:				
Sizes:				
Depths Set:				

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12/06/2024

19) Describe proposed well work, including the drilling and plugging back of any pilot hole:

Drill and stimulate any potential zones between and including the Benson to Marcellus. **If we should encounter a void place basket above and below void area- balance cement to bottom of void and grout from basket to surface or run external casing packer/cementing stage tool above void interval and perform 2 stage cementing operation dependent upon depth of void. Run casing not less than 20' below void nor more than 75' below void. (*If freshwater is encountered deeper than anticipated it must be protected, set casing 50' below and cts.)

20) Describe fracturing/stimulating methods in detail, including anticipated max pressure and max rate:

Well will be perforated within the target formation and stimulated with a slurry of water, sand, and chemical additives at a high rate. This will be performed in stages with the plug and perf method along the wellbore until the entire lateral has been stimulated within the target formation. All stage plugs are then drilled out and the well is flowed back to surface. In some instances, additional toe prep may be performed by pumping additional water in the toe of the well prior to perforating and pumping Stage 1 to ensure that the toe guns/toe sleeves are fully open prior to pumping stage 1. The well is produced through surface facilities consisting of high pressure production units, horizontal separation units, water and oil storage tanks. Max press and anticipated max rate- 12,500 psi @ 100 barrels a minute.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 16.88

22) Area to be disturbed for well pad only, less access road (acres): 9.67

23) Describe centralizer placement for each casing string:

All casing strings will be ran with a centralizer at a minimum of 1 per every 3 joints of casing.

24) Describe all cement additives associated with each cement type:

See Attachment ***

25) Proposed borehole conditioning procedures:

All boreholes will be conditioned with circulation and rotation for a minimum of one bottoms up and continuing until operator is satisfied with borehole conditions.

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*Note: Attach additional sheets as needed.

Southwestern Energy Company

Proposed Drilling Program

Well: MICHAEL SOUTHWORTH MSH 10
 Field: PANHANDLE FIELD - WET
 County: MARSHALL
 SHL (NAD83): 40.012715 Latitude -80.614817 Longitude
 BHL (NAD83): 39.976388 Latitude -80.591542 Longitude
 KB Elev: 1,297 ft MSL KB Height: 26 ft AGL

Drilling Rig: SDC 41
 Formation: Marcellus Shale
 State: WV
 GL Elev: 1,271 ft MSL



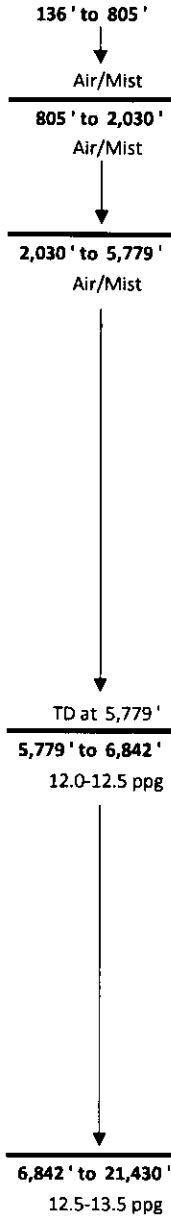
NO COAL VOID EXPECTED

PROD TOC @ 2,010' MD

TUBULAR DETAIL					
Casing String	Casing Size (in)	Weight (Min)	Grade (Min)	Planned Interval	
				From	To
Conductor	20	94.0 #	J-55	0'	136'
Surface/Coal	13.375	54.4 #	J-55	0'	785'
Intermediate	9.625	36.0 #	J-55	0'	2,010'
Production	5.5	20.0 #	P-110 HP	0'	21,430'

CEMENT DETAIL

	Sacks	Class	Density
Conductor	173	A	19.3
Surface	904	A	15.6
Intermediate	770	A	15.6
Production	3940	A	14.5-15.0



KOP at 5,779' MD

Freshwater Depth - 632' TVD
 Coal Depth - 734' TVD
 Saltwater Depth - 1,403' TVD
 TVD - 6,552'
 TMD - 21,430'

6,405' TVD Target Center

TD at 21,430' MD
 6,552' TVD

LP at 6,842' MD
 SHL Onondaga 6,425' TVD

Onondaga 6,572' TVD

6,842' to 21,430'
 12.5-13.5 ppg

Created by: Dicky Hall on 12/03/2024

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Strader Gower
 12/06/2024

12/20/2024

December 6, 2024

Mr. Charles Brewer
Office of Oil & Gas
601 57th Street
Charleston, WV 25304

RE: Proposed New Well: Michael Southworth MSH 10H

Dear Mr. Brewer:

SWN has reviewed the area of the above mentioned well and discovered no shallow wells within 500' of the lateral. This well is situated on the DNR C's property, in Cross Creek District, Brooke County, West Virginia.

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

Thank you.

Sincerely,



Brittany Woody
Staff Regulatory Specialist
Southwestern Energy Production Company, LLC

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Latitude: 40°02'30"

SURFACE HOLE 8,816'

Latitude: 40°00'00"

BOTTOM HOLE

2,300'

JACKSON SURVEYING

INC.

2413 EAST PIKE ST. # 112

Clarksburg, WV 26302

304-623-5851

GRID NORTH
UTM, NAD83 DATUM, ZONE 17, US FT

LINE	BEARING	DISTANCE	DESCRIPTION	MONUMENT
L1	N 10°14'53" E	1705.97'	SHL TO LANDMARK	5/8" REBAR FOUND
L2	N 44°48'11" E	1141.22'	SHL TO LANDMARK	5/8" REBAR FOUND
L5	S 20°36'23" E	21.28'	AZL3 TO AZL4	

LINE	BEARING	DISTANCE	CURVE LENGTH	DESCRIPTION
L3	N 78°21'06" E	795.28'	1472.24'	SHL TO LPL
L4	S 23°17'44" E	271.32'	271.41'	AZL1 TO AZL2

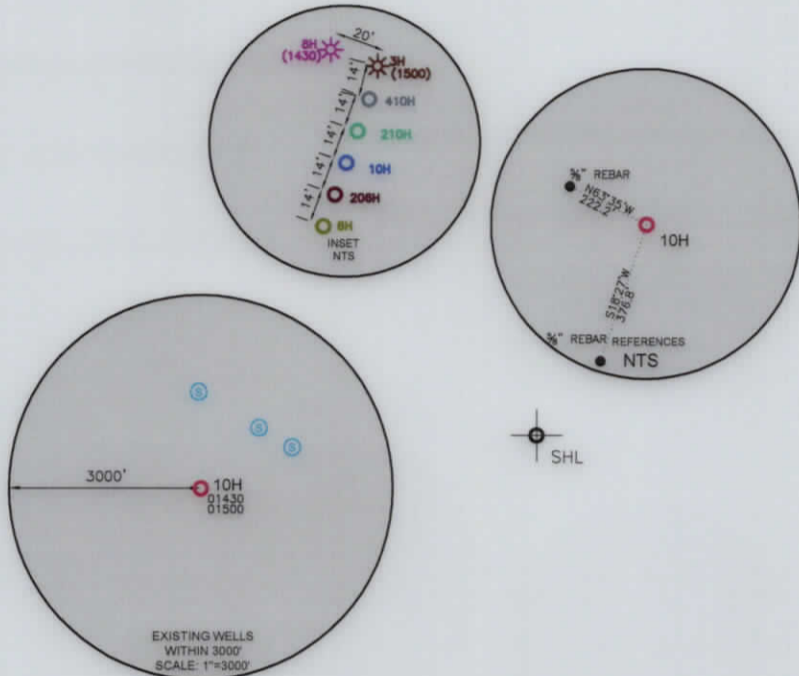
SURFACE HOLE LOCATION (SHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,429,239.758 EASTING: 532,872.896
LANDING POINT (LPL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,429,288.700 EASTING: 533,110.305
BOTTOM HOLE LOCATION (BHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,425,216.396 EASTING: 534,877.929

BOTTOM HOLE 8,602'

SURFACE HOLE 10,546'

Longitude: 80°35'00"

Longitude: 80°35'00"



WELL RESTRICTIONS

- NO OCCUPIED DWELLINGS > 2500 SQ FT. WITHIN 625 FEET OF CENTER OF PAD.
- NO AGRICULTURE BUILDINGS > 2500 SQ FT. WITHIN 625 FEET OF CENTER OF PAD.
- NO WATER WELLS OR DEVELOPED SPRINGS ARE WITHIN 250 FEET OF PROPOSED WELL.
- NO PERENNIAL STREAMS, LAKES, PONDS, OR RESERVOIRS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
- NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF LIMITS OF DISTURBANCE.
- NO GROUND INTAKE OR PUBLIC WATER SUPPLY WITHIN 1000 FEET OF WELL PAD, LIMITS OF DISTURBANCE, E & S CONTROLS OR PUBLIC WATER SUPPLY.

NOTES ON SURVEY

- 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.
- THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
- ALL INSETS ARE GRID NORTH UNLESS OTHERWISE DEPICTED.

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. 708

David L Jackson



2000 0 2000

GRAPHIC SCALE IN FEET

COMPANY: **SWN** *Production Company, LLC* **SWN** *Production Company™*

(+) 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 SURVEY GRADE GPS ELEVATION: (NAVD 88, US FT)

MICHAEL SOUTHWORTH MSH

OPERATOR'S WELL #: 10H

API WELL #: 47 051

STATE COUNTY PERMIT

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

WATERSHED: GRANDSTAFF RUN OF WHEELING CREEK (HUC-10) ELEVATION: 1271.0'

DISTRICT: SANDHILL COUNTY: MARSHALL QUADRANGLE: VALLEY GROVE, WV

SURFACE OWNER: BARRY A. & KIMBERLY S. LITMAN ACREAGE: ±159.776

OIL & GAS ROYALTY OWNER: BARRY A. & KIMBERLY S. LITMAN ACREAGE: ±159.776

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: 6,552 TVD 21,430 TMD

12/20/2024

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC DESIGNATED AGENT: BRITTANY WOODY

ADDRESS: 1300 FORT PIERPONT ROAD, SUITE 200 ADDRESS: 1300 FORT PIERPONT ROAD, SUITE 200

CITY: MORGANTOWN STATE: WV ZIP CODE: 26508 CITY: MORGANTOWN STATE: WV ZIP CODE: 26508

LEGEND:	REVISIONS:	DATE: 11-26-2024
● PROPOSED SURFACE HOLE / BOTTOM HOLE	— SURVEYED BOUNDARY	
⊙ EXISTING / PRODUCING WELLHEAD	— DRILLING UNIT	
LPL ⊙ LANDING POINT LOCATION	== LEASE BOUNDARY	DRAWN BY: N. MANO
⊙ EXISTING WATER WELL	— PROPOSED PATH	SCALE: 1" = 2000'
⊙ EXISTING SPRING		DRAWING NO.:
		WELL LOCATION PLAT

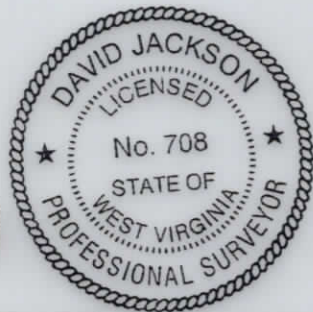
JACKSON SURVEYING

INC.

2413 EAST PIKE ST. # 112

Clarksburg, WV 26302

304-623-5851



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. 708 *David L Jackson*

12/20/2024

REVISIONS:	COMPANY:		
	OPERATOR'S	MICHAEL SOUTHWORTH MSH	
	WELL #:	10H	
	DISTRICT:	COUNTY:	STATE:
	SANDHILL	MARSHALL	WV
			DATE: 11-26-2024
			DRAWN BY: N. MANO
			SCALE: N/A
			DRAWING NO:
			WELL LOCATION PLAT 2

**JACKSON SURVEYING
INC.**

2413 EAST PIKE ST. # 112
Clarksburg, WV 26302
304-623-5851

ADJOINING OWNERS TABLE

TRACT	SURFACE OWNER	TAX PARCEL
A	LITMAN JAMES M & LUCY A	12-2-16.1
B	RADCLIFFE JOHN D & ANNA M	12-2-10.1
C	LITMAN BARRY A	12-2-10.2
D	VELLENOWETH SCOTT U ET UX	12-2-1.1
E	BLATT THERESA L	12-2-23
F	BAIRD FAMILY TRUST	12-2-2
G	GREGORY JOHN W ET UX	12-2-9.1
H	REINEKE RICHARD S	12-2-9.2
I	TUBAUGH NORMA HUNTER ET AL	12-2-5
J	TOTH JOHN J SR & ALICE J REVOCABLE TRUST	12-8-1
K	GODDARD THERESA M	12-8-8
L	CORNELL SALLY SEIBERT & ROBERT	12-8-5
M	SCHULTZ CHARLES E & CLAUDIA M - TOD	12-8-6
N	TOLAND CARRIE M	12-8-33.1
O	JOHNSON LONI M & JAMES A	12-8-31.1
P	WINTERS BEVERLY DIANE	12-8-31.2
Q	TOLAND DAVID ET UX	12-8-33.2
R	ALAMINSKI LUCINDA RUTH	12-8-31.3
S	GRAY ZANDE C	12-8-30
T	STORCH JOSEPH WILLIAM ET UX	12-11-7
U	STORCH JOSEPH WILLIAM ET UX	12-11-12
V	GRAY WYATT MATTHEW	12-11-8.6
W	GRAY DONALD G ET UX - TOD	12-11-8.2
X	RUNKLE MICHELLE LEE	12-11-8.1
Y	RUNKLE MICHELL LEE	12-11-8.7
Z	KLAGES MARY ANN	12-11-10
A2	HILLBERRY GARRY L	12-11-9
B2	HILLBERRY PAUL E JR	12-11-9.3
C2	THOMAS RICHARD LEE BARTON	12-11-16
D2	TEMPLE TERRY L & BEVERLY J -TOD	12-11-4
E2	TEMPLE TERRY L & BEVERLY J -TOD	12-11-8.4
F2	RAYMOND JOHN	12-11-8.9
G2	TEMPLE TERRY L & BEVERLY J -TOD	12-11-8.3
H2	GRAY WYATT MATTHEW	12-11-8.5
I2	TEMPLE DONALD LEE	12-11-4.1
J2	TOLAND SONDR A J & WILLIAM E	12-9-17
K2	MERINAR CALVIN C - LIFE	12-9-18
L2	MERINAR CALVIN C - LIFE	12-9-16
M2	MERINAR CALVIN C - LIFE	12-8-34
N2	RICHEY DUSTIN & FELICIA FRANCIS	12-8-35.1
O2	MERINAR JAMES MARTIN ET UX	12-9-15.1
P2	MERINAR CALVIN C - LIFE	12-9-15
Q2	TOTH JOHN J SR & ALICE - TRUST	12-8-4.1
R2	PORTER CARLA S	12-9-13
S2	GIBSON WILLIAM E	12-9-12
T2	G F P CORP	12-2-12
U2	WV BRIGHTMONT LLC	12-2-14
V2	EDGE WILLIAM F JR - TOD ET AL	12-2-15
W2	EDGE WILLIAM F JR - TOD ET AL	12-2-16

*Highlighted Parcels may be impacted during drilling.

WELL BORE TRACTS

TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL
1	LITMAN BARRY A & KIMBERLY S (S/R)	12-2-10
2	REINEKE RICHARD S (S)	12-2-9
3	TDL&G LLC (S)	12-2-8
4	G F P CORP (S)	12-2-7
5	TOTH JOHN J SR & ALICE - TRUST (S)	12-8-4
6	W VA OF DEPT OF HIGHWAYS (S)	Miller Hill Rd
7	RICHEY RANDY ET UX (S)	12-8-35
8	TOLAND WILLIAM EUGENE ET AL (S)	12-8-33
9	TOLAND MARGARET (S)	12-8-32
10	WINTERS BEVERLY DIANE (S)	12-11-6
11	GRAY DONALD G - TOD & GRAY WYATT MATTHEW (S)	12-11-8
12	W VA OF DEPT OF HIGHWAYS (S)	Caldwell Hill Rd
13	OHIO COUNTY COAL RESOURCES INC (S)	12-11-8.8

12/20/2024

REVISIONS:	COMPANY:	 	
	OPERATOR'S	MICHAEL SOUTHWORTH MSH	DATE: 11-26-2024
	WELL #:	10H	DRAWN BY: N. MANO
	DISTRICT:	SANDHILL	SCALE: N/A
	COUNTY:	MARSHALL	DRAWING NO:
	STATE:	WV	WELL LOCATION PLAT 3

**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"				

***Potentially Impacted Parcels - Parcels that may be impacted during drilling.**

**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.

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Office Of Oil and Gas

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Well Operator: SWN Production Company, LLC
 By: Andrew M. Smith *Andrew M. Smith*
 Its: Landman

EXHIBIT "A"
 Michael Southworth MSH 10H
 Marshall County, West Virginia

Attached to and made a part of the State of West Virginia Oil and Gas Permit Form, WW-6A1, by SWN Production Company, LLC, Operator

Tract #	Tax Parcel	Lease Number	Lessor	Lessee	Royalty	Book/Page	% Interest Not Leased by SWN	
1	12-2-10	728963/005	Salvation Army	Chesapeake Appalachia, L.L.C.	18.00%	723/10	0.00%	
			Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		27/166		
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110		
			Statoil USA Onshore Properties Inc.	SWN Production Company, LLC		33/424		
	725102/001			Robert B. Elliott, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	12.50%	676/179	0.00%
				Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	728963/001			Mable L. Riggle, a widow	Chesapeake Appalachia, L.L.C.	18.00%	722/602	0.00%
				Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		25/582	
				Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
				Statoil USA Onshore Properties Inc.	SWN Production Company, LLC		33/424	
	728963/003			Gregory Williams, single man	Chesapeake Appalachia, L.L.C.	18.00%	723/376	0.00%
				Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		27/166	
Chesapeake Appalachia, L.L.C.				SWN Production Company, LLC	33/110			
Statoil USA Onshore Properties Inc.				SWN Production Company, LLC	33/424			
728963/002			Elm Grove United Methodist Church	Chesapeake Appalachia, L.L.C.	18.00%	722/606	0.00%	
			Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		27/166		
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110		

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Office Of Oil and Gas

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EXHIBIT "A"
Michael Southworth MSH 10H
Marshall County, West Virginia

Attached to and made a part of the State of West Virginia Oil and Gas Permit Form, WW-6A1, by SWN Production Company, LLC, Operator

			Statoil USA Onshore Properties Inc.	SWN Production Company, LLC		33/424	
	728963/004		Dolores E. Williams, divorced and not remarried	Chesapeake Appalachia, L.L.C.	18.00%	723/382	0.00%
			Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		27/166	
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
			Statoil USA Onshore Properties Inc.	SWN Production Company, LLC		33/424	
2	12-2-9	724960/000	Richard S. Reineke and Charlene R. Reineke, his wife	Chesapeake Appalachia, L.L.C.	18.00%	676/341	0.00%
			Chesapeake Appalachia, L.L.C.	Statoilhydro USA Onshore Properties Inc.		21/565	
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
			Statoil USA Onshore Properties Inc.	SWN Production Company, LLC		33/424	
3	12-2-8	730186/000	John W. Gregory and Donna R. Gregory, his wife	Great Lakes Energy Partners, L.L.C.	12.50%	653/367	0.00%
			Great Lakes Energy Partners, L.L.C.	Range Resources - Appalachia, LLC		19/443	
			Range Resources - Appalachia, LLC	Chesapeake Appalachia, L.L.C.		23/368	
			Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		24/363	
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
			Statoil USA Onshore Properties Inc.	SWN Production Company, LLC		33/424	
4	12-2-7	726892/000	GFP Corporation, a West Virginia Corporation	Chesapeake Appalachia, L.L.C.	18.75%	700/209	0.00%
			Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		23/512	
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
			Statoil USA Onshore Properties Inc.	SWN Production Company, LLC		33/424	

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EXHIBIT "A"
Michael Southworth MSH 10H
Marshall County, West Virginia

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5	12-8-4	727778/000	John Joseph Toth, Sr., a/k/a John J. Toth Sr. and Alice Joann Toth, husband and wife Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.75%	710/390 33/110	0.00%
6	Miller Hill Road	747371/000	West Virginia Department of Transportation, Division of Highways	SWN Production Company, LLC	20.00%	955/69	0.00%
7	12-8-35	732585/000	Larry R. Richey, also known as Randy Richey, and Helen E. Richey, his wife TriEnergy Holdings, LLC NPAR, LLC Chesapeake Appalachia, L.L.C.	TriEnergy Holdings, LLC NPAR, LLC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	14.00%	691/90 23/74 25/637 33/110	0.00%
8	12-8-33	748871/009	Linda K. Canann, a widow TH Exploration, LLC	TH Exploration, LLC SWN Production Company, LLC	15.00%	1129/413 51/595	0.00%
		748871/010	David E. Toland, Jr., a single man TH Exploration, LLC	TH Exploration, LLC SWN Production Company, LLC	15.00%	1137/653 51/595	0.00%
		748871/004	Bonnie Dougherty, a single woman	SWN Production Company, LLC	18.00%	1025/187	0.00%
		748871/007	Brenda Midcap F/K/A Brenda Cain, a married woman dealing in her sole and separate property	SWN Production Company, LLC	18.00%	1035/497	0.00%
		748871/006	Carrie Margaret Toland, a widow	SWN Production Company, LLC	18.00%	1029/97	0.00%
		748871/005	Charles Seamon, a married man dealing in his sole and separate property	SWN Production Company, LLC	18.00%	1025/641	0.00%
		748871/013	Darla Kroes, married, dealing in her separate property	SWN Production Company, LLC	18.00%	1165/590	0.00%
		748871/008	Donald J. Toland, a married man dealing in his sole and separate property	SWN Production Company, LLC	18.00%	1073/38	0.00%
		748871/003	Edith Debolt, a married woman dealing in her sole and separate property	SWN Production Company, LLC	18.00%	1024/506	0.00%

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Pending	Family Tree Corporation, a Wyoming Corporation, represented herein by J. Christopher Dykes, Co-President, and Michael L. Dykes, Co-President	SWN Production Company, LLC	18.00%	1177/87	0.00%
Pending	Master Mineral Holdings I, LP, a Texas Limited Partnership	SWN Production Company, LLC	18.00%	1188/166	0.00%
748871/002	Paul Dougherty, a single man	SWN Production Company, LLC	18.00%	1024/501	0.00%
733623/001	Ronald Toland, a single man	AB Resources LLC	16.00%	764/621	0.00%
	AB Resources LLC	Chevron U.S.A., Inc.		29/277	
	Chevron U.S.A., Inc.	Statoil USA Onshore Properties Inc.		30/494	
	Chevron U.S.A., Inc.	Chesapeake Appalachia, L.L.C.		30/532	
	Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	Statoil USA Onshore Properties Inc.	SWN Production Company, LLC		33/424	
748871/011	Sandra Ferry	SWN Production Company, LLC	18.00%	1165/595	0.00%
748871/012	Sandy Diane Maddox and Randall Maddox, wife and husband	SWN Production Company, LLC	18.00%	1165/585	0.00%
748871/001	Shirley Dougherty, a single woman	SWN Production Company, LLC	18.00%	1024/511	0.00%
748871/014	The Jeff Toland Trust, U/A dated November 21, 2022	SWN Production Company, LLC	18.00%	1166/280	0.00%
733624/001	Linda Jako and John Jako, her husband	AB Resources LLC	16.00%	764/625	0.00%
	AB Resources LLC	Chevron U.S.A., Inc.		29/277	
	Chevron U.S.A., Inc.	Statoil USA Onshore Properties Inc.		30/494	
	Chevron U.S.A., Inc.	Chesapeake Appalachia, L.L.C.		30/532	
	Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	Statoil USA Onshore Properties Inc.	SWN Production Company, LLC		33/424	
733612/001	Joseph C. Pierce, Jr., and Marie A. Pierce, his wife	Chevron U.S.A., Inc.	16.00%	780/262	0.00%
	Chevron U.S.A., Inc.	Statoil USA Onshore Properties Inc.		30/494	
	Chevron U.S.A., Inc.	Chesapeake Appalachia, L.L.C.		30/532	
	Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	Statoil USA Onshore Properties Inc.	SWN Production Company, LLC		33/424	
733608/001	Carrie Margaret Toland, a widow	Chevron U.S.A., Inc.	16.00%	781/490	0.00%

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		Chevron U.S.A., Inc.	Statoil USA Onshore Properties Inc.	30/494	
		Chevron U.S.A., Inc.	Chesapeake Appalachia, L.L.C.	30/532	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC	33/110	
		Statoil USA Onshore Properties Inc.	SWN Production Company, LLC	33/424	
733618/001		William E. Toland and Sondra J. Toland, his wife	Chevron U.S.A., Inc.	16.00%	787/237 0.00%
		Chevron U.S.A., Inc.	Statoil USA Onshore Properties Inc.	30/494	
		Chevron U.S.A., Inc.	Chesapeake Appalachia, L.L.C.	30/532	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC	33/110	
		Statoil USA Onshore Properties Inc.	SWN Production Company, LLC	33/424	
9	12-8-32	751318/004 Todd Taylor, Single	American Petroleum Partners Operating, LLC	1053/504	0.00%
		American Petroleum Partners Operating, LLC	SWN Production Company, LLC	48/263	
		751318/009 Tammi Adams	SWN Production Company, LLC	1168/282	0.00%
		785902/001 Lori Taylor Slane, f/k/a, Lori Albers, married, dealing in her separate property	SWN Production Company, LLC	1168/276	0.00%
		785902/002 Edward Taylor	SWN Production Company, LLC	1168/613	0.00%
		751318/005 Master Mineral Holding I, L.P., a Texas Limited Partnership	American Petroleum Partners Operating, LLC	912/109	0.00%
		American Petroleum Partners Operating, LLC	SWN Production Company, LLC	48/263	
		751318/001 Darrell D. Taylor and Beverly Sue Taylor, husband and wife	American Petroleum Partners Operating, LLC	926/121	0.00%
		American Petroleum Partners Operating, LLC	SWN Production Company, LLC	48/263	
		751318/002 George Daniel Taylor and Suzette L. Taylor, husband and wife	American Petroleum Partners Operating, LLC	927/327	0.00%
		American Petroleum Partners Operating, LLC	SWN Production Company, LLC	48/263	
		751318/003 Georganne L. Taylor, a widow	American Petroleum Partners Operating, LLC	927/343	0.00%
		American Petroleum Partners Operating, LLC	SWN Production Company, LLC	48/263	
		751318/007 James Randall Taylor, Jr., a married man dealing in his sole and separate property	American Petroleum Partners Operating, LLC	976/495	0.00%
		American Petroleum Partners Operating, LLC	SWN Production Company, LLC	48/263	
		751318/008 Milissa Taylor, single	American Petroleum Partners Operating, LLC	978/612	0.00%
		American Petroleum Partners Operating, LLC	SWN Production Company, LLC	48/263	

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10	12-11-6	750019/000	Beverly Diane Winters American Petroleum Partners Operating, LLC	American Petroleum Partners Operating, LLC SWN Production Company, LLC	18.00%	910/27 45/381	0.00%
11	12-11-8	785763/001	Wyatt Matthew Gray, single	SWN Production Company, LLC	18.00%	1160/646	0.00%
		750012/000	Donald G. Gray, a married man dealing in his sole and separate property American Petroleum Partners Operating, LLC	American Petroleum Partners Operating, LLC SWN Production Company, LLC	19.00%	910/636 45/381	0.00%
12	Caldwell Hill Road	786407/000	West Virginia Department of Transportation, Division of Highways	SWN Production Company, LLC	20.00%	1187/287	0.00%
13	12-11-8.8	Pending	CNX Gas Company LLC	SWN Production Company, LLC	18.00%	1193/668	0.00%
H2	12-11-8.5	750124/001	Donald G. Gray, a married man dealing in his sole and separate property American Petroleum Partners Operating, LLC	American Petroleum Partners Operating, LLC SWN Production Company, LLC	18.00%	1033/541 45/381	0.00%
		749004/012	Teri Lynn Utt, as Trustee under the Testamentary Trust Howard S. McWhorter	SWN Production Company, LLC	15.00%	1174/87	0.00%
		749004/006	Teri Lynn Utt, a married woman dealing in her sole and separate property	SWN Production Company, LLC	15.00%	1035/492	0.00%
		749004/005	Sharon K. Vargo, a married woman dealing in her sole and separate property	SWN Production Company, LLC	18.00%	1034/449	0.00%
		749004/004	Russell W. Gray, a married man dealing in his sole and separate property	SWN Production Company, LLC	15.00%	1037/363	0.00%
		749004/008	Judith K. Savich, f/k/a Judith K. Hillberry, a married woman dealing in her sole and separate property	SWN Production Company, LLC	15.00%	1035/492	0.00%
		749004/003	Joyce LeAnn Jacobs, widow	SWN Production Company, LLC	18.00%	1034/455	0.00%
		749004/007	John S. Gray, widower	SWN Production Company, LLC	18.00%	1037/363	0.00%
		749004/010	Linda South, divorced	SWN Production Company, LLC	18.00%	1174/99	0.00%
		Pending	Russell Bennett, married, dealing in his separate property	SWN Production Company, LLC	18.00%	1174/741	0.00%
		749004/011	Kenneth Beckner, married, dealing in his separate property	SWN Production Company, LLC	18.00%	1174/718	0.00%
		Pending	David Beckner, married, dealing in his separate property	SWN Production Company, LLC	18.00%	1174/724	0.00%
		Pending	Emily Kenny, married, dealing in her separate property	SWN Production Company, LLC	18.00%	1186/185	0.00%
		749004/002	Donna Mae Icard, widow	SWN Production Company, LLC	18.00%	1034/455	0.00%
		749004/001	Allan P. Gray, single	SWN Production Company, LLC	18.00%	1033/337	0.00%

*Potentially Impacted Parcels - Parcels that may be impacted during drilling.

December 4, 2024

Mr. Charles Brewer
WV DEP Office of Oil & Gas
601 57th St., SE
Charleston, WV 25304

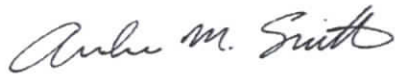
RE: SWN's proposed New Well: Michael Southworth MSH 10H in Marshall County, West Virginia, Drilling under Miller Hill Road and Caldwell Hill Road.

Dear Mr. Brewer:

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 Miller Hill Road and Caldwell 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,



Andrew M. Smith, RPL
Landman
SWN Production Company, LLC

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