



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, February 12, 2025
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 206H
47-051-02521-00-00

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.

James A. Martin
Chief

Operator's Well Number: MICHAEL SOUTHWORTH MSH 206H
Farm Name: BARRY A. & KIMBERLY S. LITMAN
U.S. WELL NUMBER: 47-051-02521-00-00
Horizontal 6A New Drill
Date Modification Issued: 2/12/2025

Promoting a healthy environment.

02/14/2025

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 206H 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 _____

CK #0001086251
CK \$ 7,500.00

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- 6501', Target Base TVD- 6553', Anticipated Thickness- 52', Associated Pressure- 4260

8) Proposed Total Vertical Depth: 6533'

9) Formation at Total Vertical Depth: Marcellus

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10) Proposed Total Measured Depth: 20772'

JAN 30 2025

11) Proposed Horizontal Leg Length: 10,406.85'

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Environmental Protection

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.

Strader Gower
12/06/2024

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#	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#	2013'	2013'	771 sx/CTS
Production	5 1/2"	New	P-110 HP	20#	20772'	20772'	Tail 3804sx/ 100' Inside Intermediate
Tubing							
Liners							

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"	0.330	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							

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PACKERS

Kind:				
Sizes:				
Depths Set:				

Strader Gower

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 ***

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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.

*Note: Attach additional sheets as needed.

Southwestern Energy Company

Proposed Drilling Program

Well: MICHAEL SOUTHWORTH MSH 206
Field: PANHANDLE FIELD - WET
County: MARSHALL
SHL (NAD83): 40.012681 Latitude -80.614836 Longitude
BHL (NAD83): 39.977052 Latitude -80.599068 Longitude
KB Elev: 1,296 ft MSL **KB Height:** 24.400000000C **GL Elev:** 1,272 ft MSL

Drilling Rig: SDC 41
Formation: Marcellus Shale
State: WV



NO COAL VOID EXPECTED

PROD TOC @ 2,013' 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'	2,013'
Production	5.5	20.0 #	P-110 HP	0'	20,772'

CEMENT DETAIL

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 Environmental Protection

	Sacks	Class	Density
Conductor	173	A	19.3
Surface	904	A	15.6
Intermediate	771	A	15.6
Production	3804	A	14.5-15.0

KOP at 5,905' MD

Freshwater Depth - 632' TVD
 Coal Depth - 734' TVD
 Saltwater Depth - 1,403' TVD
 TVD - 6,533'
 TMD - 20,772'

6,388' TVD Target Center

TD at 20,772' MD
 6,533' TVD

LP at 7,002' MD

SHL Onondaga 6,408' TVD

Onondaga 6,553' TVD

7,002' to 20,772'
 12.5-13.5 ppg

136' to 805'
 Air/Mist
 805' to 2,033'
 Air/Mist
 2,033' to 5,905'
 Air/Mist

TD at 5,905'
 5,905' to 7,002'
 12.0-12.5 ppg

Created by: Dicky Hall on 12/05/2024

Strader Power
 12/06/2024

02/14/2025

API	Operator	Status	Latitude	Longitude	Vertical TD	Producing Formation	Producing Zones Not Perforated
051-00836	Alliance Petroleum Co. LLC	Plugged	39.981795	-80.605738	2870'	Unknown	Unknown

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Environmental Protection



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

February 10, 2025

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 206H 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.

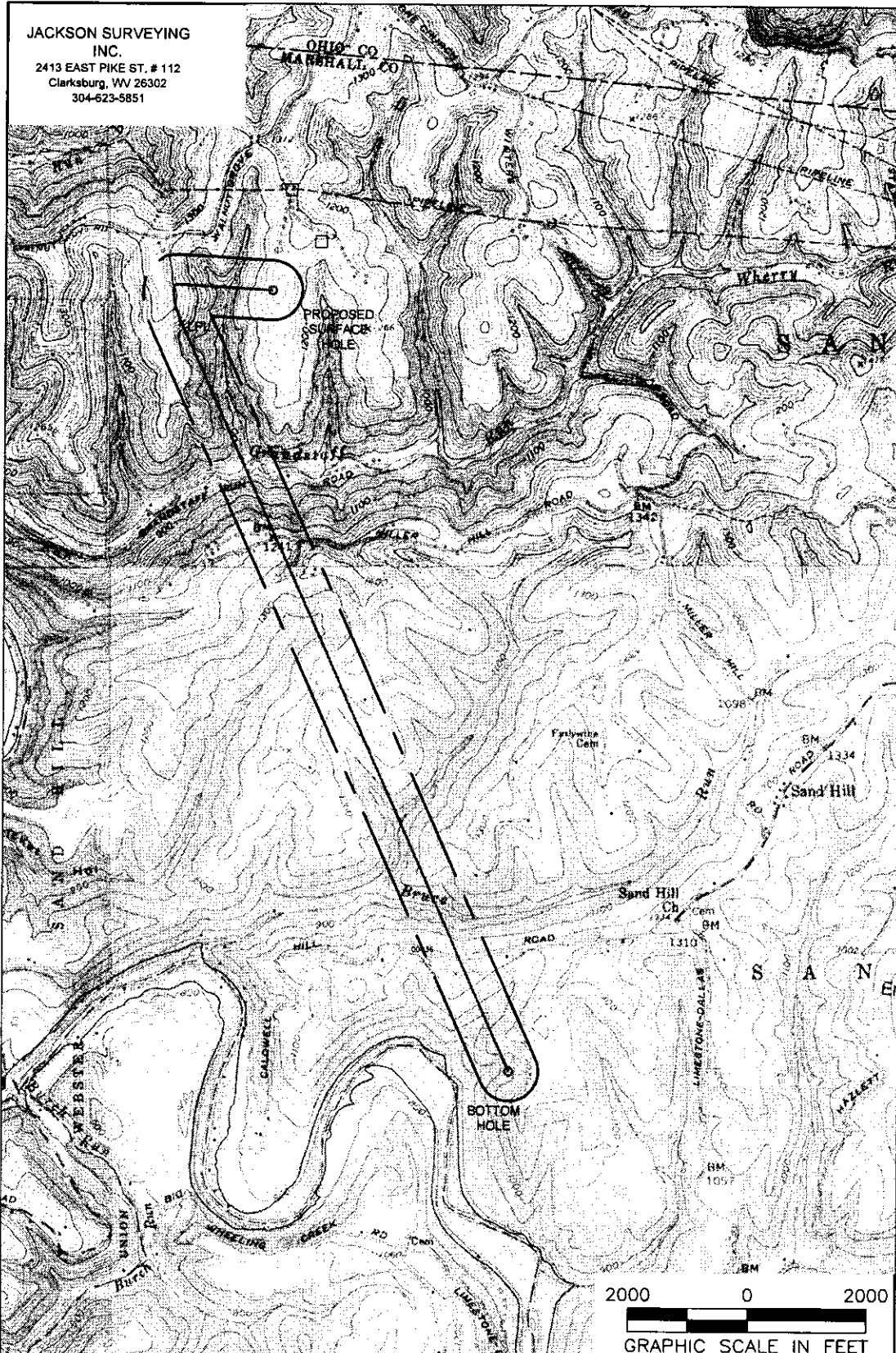
Sincerely,

Andrew M. Smith
Landman
SWN Production Company, LLC

The Right People doing the Right Things,
wisely investing the cash flow from our
underlying Assets. **Worleparatus®**

02/14/2025

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

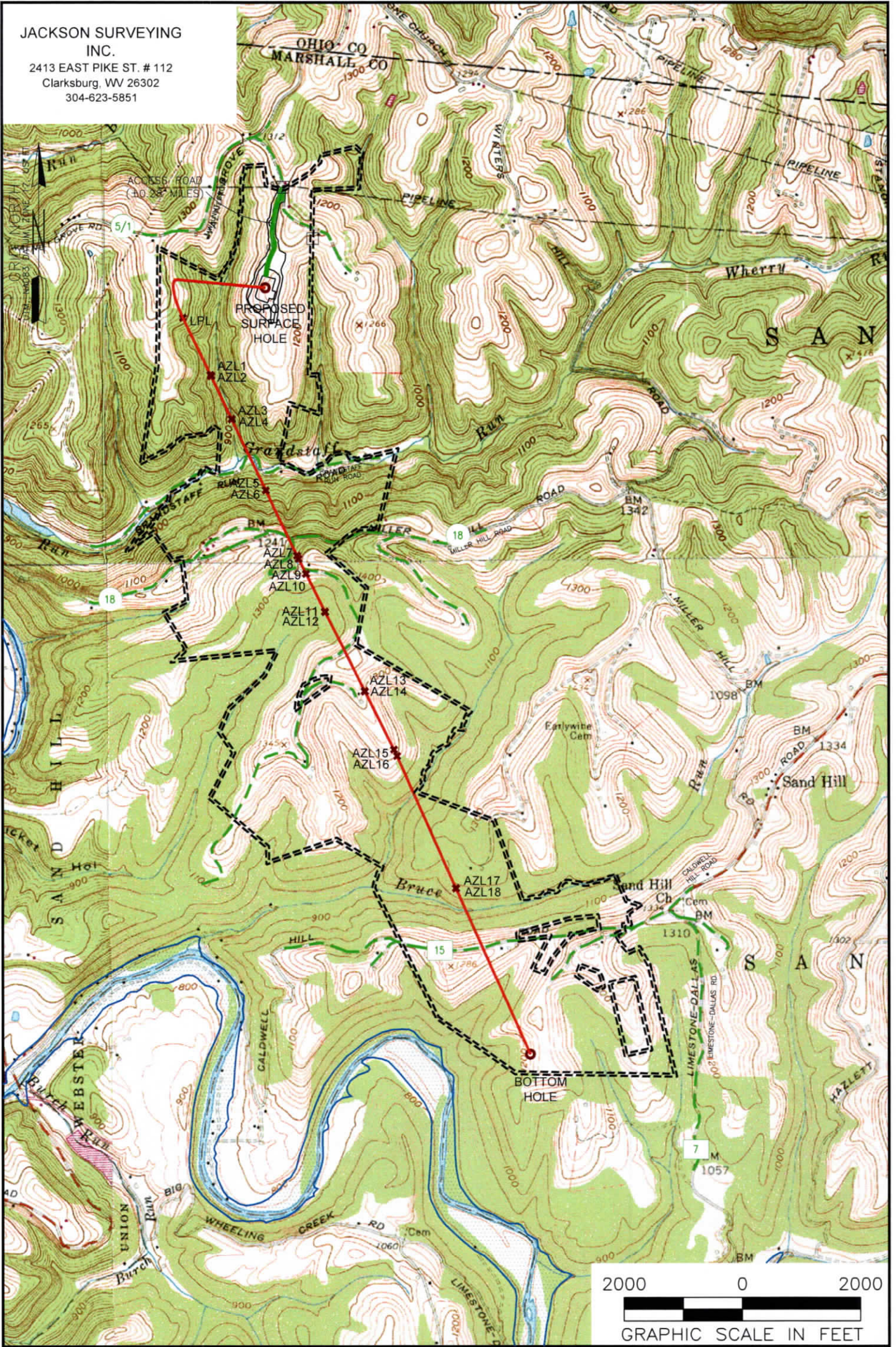


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NOTES ON SURVEY			
1. SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND/OR FIELD LOCATIONS.			
2. THIS PLAN DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.			
4. ALL INSETS ARE GRID NORTH UNLESS OTHERWISE DEPICTED.			
LEGEND:		ACCESS ROAD PUBLIC ROAD ACCESS ROAD TO PREV. SITE LEASE BOUNDARY PROPOSED PATH	
PROPOSED SURFACE HOLE / BOTTOM HOLE EXISTING / PRODUCING WELLHEAD LPLX LANDING POINT LOCATION FLOOD PLAN			

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC				
ADDRESS: 1300 FORT PIERPONT ROAD, SUITE 200 MORGANTOWN, WV 26508				
SURFACE OWNER: BARRY A. & KIMBERLY S. LITMAN		WELL (FARM) NAME: MICHAEL SOUTHWORTH MSH	WELL # 206H	SERIAL #
		COUNTY - CODE MARSHALL - 051	DISTRICT: SANDHILL	
		USGS 7 1/2 QUADRANGLE MAP NAME WILEYVILLE, WV		

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



NOTES ON SURVEY

1. 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.
2. THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
3. ALL INSETS ARE GRID NORTH UNLESS OTHERWISE DEPICTED.

LEGEND:

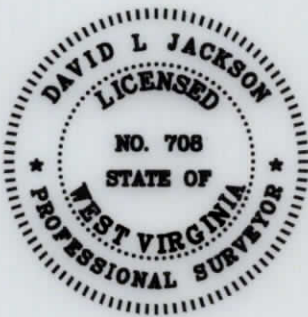
- PROPOSED SURFACE HOLE / BOTTOM HOLE
- ✱ EXISTING / PRODUCING WELLHEAD
- ✱ LPL
- ✱ LANDING POINT LOCATION
- FLOOD PLAIN
- PUBLIC ROAD
- ACCESS ROAD TO PREV. SITE
- = LEASE BOUNDARY
- PROPOSED PATH

02/14/2025

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC	WELL (FARM) NAME: MICHAEL SOUTHWORTH MSH	WELL # 206H	SERIAL #
ADDRESS: 1300 FORT PIERPONT ROAD, SUITE 200 MORGANTOWN, WV 26508	COUNTY - CODE MARSHALL - 051	DISTRICT; SANDHILL	
SURFACE OWNER: BARRY A. & KIMBERLY S. LITMAN	USGS 7 1/2 QUADRANGLE MAP NAME VALLEY GROVE, WV	API #: 47-051-02521	

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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

02/14/2025

REVISIONS:	COMPANY:			
	OPERATOR'S MICHAEL SOUTHWORTH MSH		API #:	DATE: 12-10-2024
	WELL #:		47-051-02521	DRAWN BY: N. MANO
	DISTRICT:	COUNTY:	STATE:	SCALE: N/A
	SANDHILL	MARSHALL	WV	DRAWING NO:
				WELL LOCATION PLAT 2

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NOTES ON SURVEY

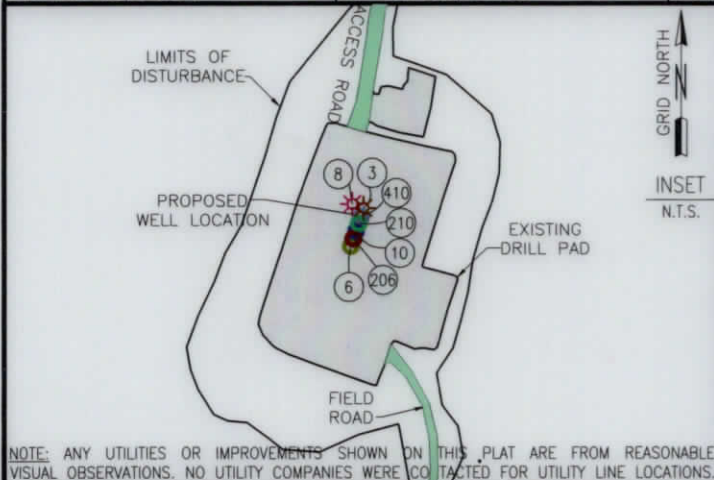
1. SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND/OR FIELD LOCATIONS.
2. THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
4. ALL INSETS ARE GRID NORTH UNLESS OTHERWISE DEPICTED.

SURFACE HOLE LOCATION (SHL):	AZIMUTH POINT LOCATION-5 (AZL5):
GEOGRAPHIC (NAD83): LATITUDE: 40.012681° LONGITUDE: -80.614836°	GEOGRAPHIC (NAD83): LATITUDE: 40.003297° LONGITUDE: -80.614878°
UTM (NAD83, ZONE 17, FEET): NORTHING: 14,531,584.280 EASTING: 1,748,262.410	UTM (NAD83, ZONE 17, FEET): NORTHING: 14,528,167.110 EASTING: 1,748,265.270
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,429,235.747 EASTING: 532,871.448	UTM (NAD83, ZONE 17, METERS): NORTHING: 4,428,194.192 EASTING: 532,872.320
TURNING POINT LOCATION-1 (TPL1):	AZIMUTH POINT LOCATION-6 (AZL6):
GEOGRAPHIC (NAD83): LATITUDE: 40.013081° LONGITUDE: -80.620160°	GEOGRAPHIC (NAD83): LATITUDE: 40.003284° LONGITUDE: -80.614870°
UTM (NAD83, ZONE 17, FEET): NORTHING: 14,531,723.330 EASTING: 1,746,771.160	UTM (NAD83, ZONE 17, FEET): NORTHING: 14,528,162.150 EASTING: 1,748,267.640
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,429,278.130 EASTING: 532,416.914	UTM (NAD83, ZONE 17, METERS): NORTHING: 4,428,192.680 EASTING: 532,873.042

LANDING POINT LOCATION (LPL):	AZIMUTH POINT LOCATION-7 (AZL7):	AZIMUTH POINT LOCATION-12 (AZL12)
GEOGRAPHIC (NAD83): LATITUDE: 40.011307° LONGITUDE: -80.619826°	GEOGRAPHIC (NAD83): LATITUDE: 40.000240° LONGITUDE: -80.613009°	GEOGRAPHIC (NAD83): LATITUDE: 39.997624° LONGITUDE: -80.611323°
UTM (NAD83, ZONE 17, FEET): NORTHING: 14,531,078.050 EASTING: 1,746,867.420	UTM (NAD83, ZONE 17, FEET): NORTHING: 14,527,056.110 EASTING: 1,748,793.750	UTM (NAD83, ZONE 17, FEET): NORTHING: 14,526,105.430 EASTING: 1,749,269.940
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,429,081.448 EASTING: 532,446.255	UTM (NAD83, ZONE 17, METERS): NORTHING: 4,427,855.558 EASTING: 533,033.401	UTM (NAD83, ZONE 17, METERS): NORTHING: 4,427,565.790 EASTING: 533,178.544
AZIMUTH POINT LOCATION-1 (AZL1):	AZIMUTH POINT LOCATION-8 (AZL8):	AZIMUTH POINT LOCATION-13 (AZL13)
GEOGRAPHIC (NAD83): LATITUDE: 40.008643° LONGITUDE: -80.618161°	GEOGRAPHIC (NAD83): LATITUDE: 40.000089° LONGITUDE: -80.612914°	GEOGRAPHIC (NAD83): LATITUDE: 39.993953° LONGITUDE: -80.608957°
UTM (NAD83, ZONE 17, FEET): NORTHING: 14,530,109.690 EASTING: 1,747,337.740	UTM (NAD83, ZONE 17, FEET): NORTHING: 14,527,001.430 EASTING: 1,748,820.470	UTM (NAD83, ZONE 17, FEET): NORTHING: 14,524,771.700 EASTING: 1,749,938.350
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,428,786.291 EASTING: 532,589.608	UTM (NAD83, ZONE 17, METERS): NORTHING: 4,427,838.892 EASTING: 533,041.545	UTM (NAD83, ZONE 17, METERS): NORTHING: 4,427,159.268 EASTING: 533,382.276

AZIMUTH POINT LOCATION-2 (AZL2):	AZIMUTH POINT LOCATION-9 (AZL9):	AZIMUTH POINT LOCATION-14 (AZL14)	AZIMUTH POINT LOCATION-17 (AZL17)
GEOGRAPHIC (NAD83): LATITUDE: 40.008588° LONGITUDE: -80.618127°	GEOGRAPHIC (NAD83): LATITUDE: 39.999400° LONGITUDE: -80.612469°	GEOGRAPHIC (NAD83): LATITUDE: 39.993929° LONGITUDE: -80.608942°	GEOGRAPHIC (NAD83): LATITUDE: 39.984779° LONGITUDE: -80.603512°
UTM (NAD83, ZONE 17, FEET): NORTHING: 14,530,089.690 EASTING: 1,747,347.360	UTM (NAD83, ZONE 17, FEET): NORTHING: 14,526,750.770 EASTING: 1,748,946.270	UTM (NAD83, ZONE 17, FEET): NORTHING: 14,524,763.000 EASTING: 1,749,942.690	UTM (NAD83, ZONE 17, FEET): NORTHING: 14,521,437.700 EASTING: 1,751,478.180
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,428,780.195 EASTING: 532,592.541	UTM (NAD83, ZONE 17, METERS): NORTHING: 4,427,762.490 EASTING: 533,079.889	UTM (NAD83, ZONE 17, METERS): NORTHING: 4,427,156.617 EASTING: 533,383.599	UTM (NAD83, ZONE 17, METERS): NORTHING: 4,426,143.063 EASTING: 533,851.617
AZIMUTH POINT LOCATION-3 (AZL3):	AZIMUTH POINT LOCATION-10 (AZL10)	AZIMUTH POINT LOCATION-15 (AZL15)	AZIMUTH POINT LOCATION-18 (AZL18)
GEOGRAPHIC (NAD83): LATITUDE: 40.006593° LONGITUDE: -80.616903°	GEOGRAPHIC (NAD83): LATITUDE: 39.999385° LONGITUDE: -80.612459°	GEOGRAPHIC (NAD83): LATITUDE: 39.991217° LONGITUDE: -80.607209°	GEOGRAPHIC (NAD83): LATITUDE: 39.984761° LONGITUDE: -80.603502°
UTM (NAD83, ZONE 17, FEET): NORTHING: 14,529,364.740 EASTING: 1,747,693.030	UTM (NAD83, ZONE 17, FEET): NORTHING: 14,526,745.390 EASTING: 1,748,948.970	UTM (NAD83, ZONE 17, FEET): NORTHING: 14,523,777.700 EASTING: 1,750,432.400	UTM (NAD83, ZONE 17, FEET): NORTHING: 14,521,431.170 EASTING: 1,751,481.100
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,428,559.230 EASTING: 532,697.901	UTM (NAD83, ZONE 17, METERS): NORTHING: 4,427,760.850 EASTING: 533,080.712	UTM (NAD83, ZONE 17, METERS): NORTHING: 4,426,856.297 EASTING: 533,532.863	UTM (NAD83, ZONE 17, METERS): NORTHING: 4,426,141.073 EASTING: 533,852.507

AZIMUTH POINT LOCATION-4 (AZL4):	AZIMUTH POINT LOCATION-11 (AZL11)	AZIMUTH POINT LOCATION-16 (AZL16)	BOTTOM HOLE LOCATION (BHL):
GEOGRAPHIC (NAD83): LATITUDE: 40.006580° LONGITUDE: -80.616896°	GEOGRAPHIC (NAD83): LATITUDE: 39.997648° LONGITUDE: -80.611339°	GEOGRAPHIC (NAD83): LATITUDE: 39.990918° LONGITUDE: -80.607028°	GEOGRAPHIC (NAD83): LATITUDE: 39.977052° LONGITUDE: -80.599068°
UTM (NAD83, ZONE 17, FEET): NORTHING: 14,529,360.080 EASTING: 1,747,695.260	UTM (NAD83, ZONE 17, FEET): NORTHING: 14,526,114.430 EASTING: 1,749,265.430	UTM (NAD83, ZONE 17, FEET): NORTHING: 14,523,668.890 EASTING: 1,750,483.660	UTM (NAD83, ZONE 17, FEET): NORTHING: 14,518,629.730 EASTING: 1,752,735.910
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,428,557.809 EASTING: 532,698.581	UTM (NAD83, ZONE 17, METERS): NORTHING: 4,427,568.533 EASTING: 533,177.169	UTM (NAD83, ZONE 17, METERS): NORTHING: 4,426,823.131 EASTING: 533,548.487	UTM (NAD83, ZONE 17, METERS): NORTHING: 4,425,287.192 EASTING: 534,234.974



LEGEND:

PROPOSED SURFACE HOLE / BOTTOM HOLE	DRILLING UNIT
EXISTING / PRODUCING WELLHEAD	LEASE BOUNDARY
ABANDONED WELL	HARDLINE BOUNDARY
PLUGGED & ABANDONED WELL	- UPP 2 > - UPPER POINT PLEASANT PATH
LPL LANDING POINT LOCATION	- MAR 2 > - MARCELLUS PATH

COMPANY:			
OPERATOR'S		MICHAEL SOUTHWORTH MSH	
WELL #:		206H	
DISTRICT:	COUNTY:	STATE:	
SANDHILL	MARSHALL	WV	
SWN PRODUCTION COMPANY, LLC SURFACE HOLES			
		02/14/2025	
3. "MICHAEL SOUTHWORTH MSH 3H" 6. "MICHAEL SOUTHWORTH MSH 6H" 8. "MICHAEL SOUTHWORTH MSH 8H" 10. "MICHAEL SOUTHWORTH MSH 10H" 206. "MICHAEL SOUTHWORTH MSH 206H" 210. "MICHAEL SOUTHWORTH MSH 210H" 410. "MICHAEL SOUTHWORTH MSH 410H"			
REVISIONS:		DATE: 12-10-2024	
		DRAWN BY: N. MANO	
		SCALE: 1" = 2000'	
		DRAWING NO:	
		INTERNAL WELL PLAT	





JACKSON SURVEYING
INC.

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

WELL BORE TRACTS		
TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL
1	LITMAN BARRY A & KIMBERLY S(S)	12-2-10
TRACT	SURFACE OWNER (S)	TAX PARCEL
2	EDGE WILLIAM F JR - TOD ET AL (S)	12-2-15
3	WV BRIGHTMONT LLC (S)	12-2-14
4	G F P CORP (S)	12-2-12
5	GIBSON WILLIAM E(S)	12-9-12
6	GFP CORP (S)	12-2-7
7	PORTER CARLA S (S)	12-9-13
8	W VA DEPT OF HIGHWAYS (S)	MILLER HILL RD
9	MERINAR JAMES MARTIN ET UX (S)	12-9-15.1
10	MERINAR CALVIN C - LIFE (S)	12-9-16
11	MERINAR CALVIN C - LIFE (S)	12-9-18
12	TOLAND SONDR A J & WILLIAME (S)	12-9-17
13	TEMPLE TERRY L & BEVERLY J - (S)	12-11-4
14	W VA DEPT OF HIGHWAYS (S)	CALDWELL HILL RD
15	GRAY DONALD G - TOD & GRAY WYATT MATTHEW (S)	12-11-8

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
A	GIZA ALEXANDER C & CHRISTOPHER C	12-1-16.1
B	EDGE WILLIAM F JR - TOD ET AL	12-2-16
C	LITMAN JAMES M & LUCY A	12-2-16.1
D	RADCLIFFE JOHN D & ANNA M	12-2-10.1
E	LITMAN BARRY A	12-2-10.2
F	VELLENOWETH SCOTT U ET UX	12-2-1.1
G	BLATT THERESA L	12-2-23
H	BAIRD FAMILY TRUST	12-2-2
I	REINEKE RICHARD S	12-2-9
J	GREGORY DONNA R	12-2-9.1
K	TDL&G LLC	12-2-8
L	TOTH JOHN J SR & ALICE - TRUST	12-8-4.1
M	RICHEY RANDY ET UX	12-8-35
N	MERINAR CALVIN C - LIFE	12-9-15
O	MERINAR CALVIN C - LIFE	12-8-34
P	MERINAR CALVIN C - LIFE	12-9-16.1
Q	TOLAND WILLIAM EUGENE ET AL	12-8-33
R	WINTERS BEVERLY DIANE - TOD	12-11-6
S	STORCH JOSEPH WILLIAM ET UX	12-11-7
T	STORCH JOSEPH WILLIAM ET UX	12-11-12
U	GRAY WYATT MATTHEW	12-11-8.6
V	GRAY DONALD G ET UX - TOD	12-11-8.2
W	RUNKLE MICHELLE LEE	12-11-8.1
X	RUNKLE MICHELL LEE	12-11-8.7
Y	GRAY WYATT MATTHEW	12-11-8.5
Z	TEMPLE DONALD LEE	12-11-4.1
A2	TEMPLE TERRY L & BEVERLY J - TOD	12-11-8.3
B2	TEMPLE TERRY L & BEVERLY J - TOD	12-11-8.4
C2	RAYMOND JOHN	12-11-8.9
D2	OHIO COUNTY COAL RESOURCES INC	12-11-8.8
E2	KLAGES MARY ANN	12-11-10
F2	HILLBERRY GARRY L	12-11-9
G2	HILLBERRY PAUL E JR	12-11-9.3
H2	THOMAS RICHARD LEE BARTON	12-11-16
I2	TH EXPLORATION LLC	12-11-3
J2	CLAYTON CHARLES W ET AL	12-11-2
K2	MERINAR CALVIN C	12-11-1
L2	MERINAR CALVIN C - LIFE	12-9-19
M2	FISHER CHARLES B & CARLA S	12-9-20
N2	GRAY JOHN ALVIN EST	12-9-11
O2	ISALY ROBERT A SR EST	12-9-9
P2	EDGE WILLIAM JR & BARBARA ANN - TOD & DAVID WAYNE EDGE	12-9-8
Q2	ISALY ROBERT A SR EST	12-2-13
R2	WHEELING POWER COMPANY	12-9-8.1
S2	WV BRIGHTMONT LLC	12-1-16
T2	GIZA ALEXANDER C & CHRISTOPHER C	12-1-16.2

02/14/2025

REVISIONS:	COMPANY:	 	
	OPERATOR'S MICHAEL SOUTHWORTH MSH	API #:	DATE: 12-10-2024
	WELL #:	47-051-02521	DRAWN BY: N. MANO
	DISTRICT:	STATE:	SCALE: N/A
	SANDHILL	WV	DRAWING NO:
	COUNTY:		WELL LOCATION PLAT 3
	MARSHALL		

**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
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See Exhibit "A"

RECEIVED
Office of Oil and Gas
JAN 30 2025
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: Andrew M. Smith *Andrew M. Smith*
 Its: Landman

EXHIBIT "A"
 Michael Southworth MSH 206H
 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.	at least 1/8th per WV Code §22-6-8	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.	at least 1/8th per WV Code §22-6-8	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.	at least 1/8th per WV Code §22-6-8	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.	at least 1/8th per WV Code §22-6-8	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.	at least 1/8th per WV Code §22-6-8	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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 State of West Virginia
 Department of
 Energy, Mineral
 Industries and
 Natural Gas
 JAN 8 2015
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EXHIBIT "A"

Michael Southworth MSH 206H

Marshall County, West Virginia

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			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.	at least 1/8th per WV Code §22-6-8	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	12-2-15	725595/001	William F. Edge, Jr. and Barbara Ann Edge, husband and wife	Chesapeake Appalachia, L.L.C.	at least 1/8th per WV Code §22-6-8	684/583	0.00%
			Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		22/361	
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
			Statoil USA Onshore Properties Inc.	SWN Production Company, LLC		33/424	
		725595/002	David Wayne Edge and Theresa T. Edge, Husband and Wife	Chesapeake Appalachia, L.L.C.	at least 1/8th per WV Code §22-6-8	684/584	0.00%
			Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		22/361	
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
			Statoil USA Onshore Properties Inc.	SWN Production Company, LLC		33/424	
3	12-2-14	732583/000	Chester A. Giza, a widower	TriEnergy Holdings, LLC	at least 1/8th per WV Code §22-6-8	697/483	0.00%
			TriEnergy Holdings, LLC	NPAR, LLC		24/180	
			AB Resources, LLC and NPAR, LLC	Chief Exploration & Development LLC and Radler 2000 Limited Partnership		24/490	
			NPAR, LLC, Chief Exploration and Development, LLC, Radler 2000 Limited Partnership, and Enerplus Resources (USA) Corporation	Chesapeake Appalachia, L.L.C. and Statoil USA Onshore Properties, Inc.		756/332	
			Chevron U.S.A. Inc.	Statoil USA Onshore Properties Inc.		30/494	
			Chevron U.S.A. Inc.	Chesapeake Appalachia, L.L.C.		30/532	

EXHIBIT "A"

Michael Southworth MSH 206H

Marshall County, West Virginia

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Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC	33/110
Statoil USA Onshore Properties Inc.	SWN Production Company, LLC	33/424

4	12-2-12	731805/001	Paula Jean Walton, Married and dealing in her sole and separate property Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	at least 1/8th per WV Code §22-6-8	736/646	0.00%
		731805/002	Martha L. Greaves, married and dealing in her sole and separate property Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	at least 1/8th per WV Code §22-6-8	739/134	0.00%
		731805/003	Nancy Marie Norman and Arch Norman, Wife and Husband Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	at least 1/8th per WV Code §22-6-8	739/139	0.00%
		731805/004	Harold Joseph Brock and Joanna Brock, Husband and Wife Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	at least 1/8th per WV Code §22-6-8	739/147	0.00%
		731805/005	Robert A. Brock and Wilma Brock, husband and wife Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	at least 1/8th per WV Code §22-6-8	739/152	0.00%
		731805/006	Janice E. Stift and Ralph Strift, Jr., Wife and Husband Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	at least 1/8th per WV Code §22-6-8	740/167	0.00%
		731805/007	James Elwood Leasure, Divorced and unremarried Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	at least 1/8th per WV Code §22-6-8	740/172	0.00%
		731805/008	Bernice Virginia Brock, Widow and unremarried Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	at least 1/8th per WV Code §22-6-8	741/178	0.00%
		731805/009	Mary P. Leasure Daniels, Widow and unremarried	Chesapeake Appalachia, L.L.C.	at least 1/8th per WV Code §22-6-8	742/470	0.00%

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 Office of Oil and Gas
 DIVISION
 IAN 30 2025
 West Virginia Department of Environmental Protection

EXHIBIT "A"
 Michael Southworth MSH 206H
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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

			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	731805/010		Ronald Walton, Jr., Divorced and unremarried	Chesapeake Appalachia, L.L.C.	at least 1/8th per WV Code §22-6-8	745/16	0.00%
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	731805/011		Linda Michelle Sturm and Earl F. Sturm, III, Wife and Husband	Chesapeake Appalachia, L.L.C.	at least 1/8th per WV Code §22-6-8	745/21	0.00%
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	731805/012		Patricia Eileen Ritchea, Divorced and unremarried	Chesapeake Appalachia, L.L.C.	at least 1/8th per WV Code §22-6-8	749/465	0.00%
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	731805/013		Illuminada A. Leasure, Widow and unremarried	Chesapeake Appalachia, L.L.C.	at least 1/8th per WV Code §22-6-8	754/277	0.00%
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	731805/014		Carole Ann Smith, in her own right and as Trustee for Ernie Leasure under the Last Will and Testament of Ruth Marie Leasure	Chesapeake Appalachia, L.L.C.	at least 1/8th per WV Code §22-6-8	763/373	0.00%
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
5	12-9-12	751244/001	William E. Gibson, married, dealing in her separate property	SWN Production Company, LLC	at least 1/8th per WV Code §22-6-8	1080/511	0.00%
		751244/002	Eric M. Gordon, Esq., as Special Commissioner on behalf of Leota Campbell Ferrell and her Unknown or Missing Heirs and Beneficiaries, pursuant to Order of the Marshall County Circuit Court in Civil Action No. 20-C-78	SWN Production Company, LLC	at least 1/8th per WV Code §22-6-8	1106/576	0.00%
6	12-2-7	726892/000	GFP Corporation, a West Virginia Corporation	Chesapeake Appalachia, L.L.C.	at least 1/8th per WV Code §22-6-8	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	

RECEIVED
 MAR 10 2013
 STATE OF WEST VIRGINIA
 DEPARTMENT OF REVENUE
 DIVISION OF OIL AND GAS

EXHIBIT "A"

Michael Southworth MSH 206H

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

7	12-9-13	Pending	Greenbrier Royalty Fund II, LLC	SWN Production Company, LLC	at least 1/8th per WV Code §22-6-8	1210/658	0.00%
8	Miller Hill Road	Pending	West Virginia Department of Transportation, Division of Highways	SWN Production Company, LLC	at least 1/8th per WV Code §22-6-8	1187/287	0.00%
9	12-9-15.1	730193/000	James M. Merinar and Belinda J. Merinar, his wife	Great Lakes Energy Partners, L.L.C.	at least 1/8th per WV Code §22-6-8	655/81	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	
10	12-9-16	730187/000	Melvin W. Khale, Jr. (50% Interest), representing himself individually and as Attorney-In-Fact of his sister, Rosemary Comstock (50% Interest), a widow	Great Lakes Energy Partners, L.L.C.	at least 1/8th per WV Code §22-6-8	654/270	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	
11	12-9-18	Pending	Calvin C. Merinar, single	TH Exploration, LLC	at least 1/8th per WV Code §22-6-8	1136/207	0.00%
			EQT TGH Exploration, LLC f/k/a TH Exploration, LLC	SWN Production Company, LLC		1202/119	
12	12-9-17	Pending	Resource Minerals Headwater I, LP	SWN Production Company, LLC	at least 1/8th per WV Code §22-6-8	1190/312	0.00%
		750386/000	Randy Ray Brunner and Mary June Brunner, his wife	American Petroleum Partners Operating, LLC	at least 1/8th per WV Code §22-6-8	866/590	0.00%
			American Petroleum Partners Operating, LLC	SWN Production Company, LLC		45/381	
13	12-11-4	Pending	Golden Eagle Resources II, LLC	SWN Production Company, LLC	at least 1/8th per WV Code §22-6-8	1183/166	0.00%

EXHIBIT "A"

Michael Southworth MSH 206H

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

14	Caldwell Hill Road	Pending	West Virginia Department of Transportation, Division of Highways	SWN Production Company, LLC	at least 1/8th per WV Code §22-6-8	1187/287	0.00%
15	12-11-8	Pending	Wyatt Matthew Gray, single	SWN Production Company, LLC	at least 1/8th per WV Code §22-6-8	1160/646	0.00%
	750012/000		Donald G. Gray, a married man dealing in his sole and separate property	American Petroleum Partners Operating, LLC	at least 1/8th per WV Code §22-6-8	984/376	0.00%
			American Petroleum Partners Operating, LLC	SWN Production Company, LLC		45/381	

End of Exhibit "A"

RECEIVED
 DIVISION OF OIL AND GAS
 JAN 30 2025
 DEPARTMENT OF
 ENVIRONMENTAL PROTECTION

January 29, 2025

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

RE: Proposed Expedited Mod: Michael Southworth MSH 206H

Dear Mr. Brewer:

Enclosed please find the required documents to modify this well. We would like to modify this well by extending the lateral. This well is situated on the Southworth's property, in Sand Hill District, Marshall County, West Virginia.

Enclosed you will find:

-6B
-WBD
-Mylar
-6A1

RECEIVED
Office of Oil and Gas

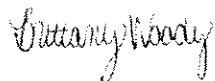
JAN 30 2025

WV Department of
Environmental Protection

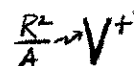
If you have any questions or desire additional information, please me at 304-884-1613

Thank you.

Sincerely,



Brittany Woody
Staff Regulatory Specialist
Southwestern Energy Production Company, LLC



MICHAEL SOUTHWORTH MSH PAD Coal Map

