



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

Tuesday, December 1, 2020
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

SWN PRODUCTION COMPANY, LLC
POST OFFICE BOX 12359

SPRING, TX 773914954

Re: Permit Modification Approval for STATE OF WV DNR C BRK 5H
47-009-00257-00-00

Adding horizontal leg to vertical H6A.

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 faint, larger version of the signature.

James A. Martin
Chief

Operator's Well Number: STATE OF WV DNR C BRK 5H
Farm Name: STATE OF W.V. DNR
U.S. WELL NUMBER: 47-009-00257-00-00
Horizontal 6A New Drill
Date Modification Issued: 12/1/2020

Promoting a healthy environment.

4700900257

WW-6B
(04/15)

API NO. 47-009
OPERATOR WELL NO. State of WV DNR C BRK 5H
Well Pad Name: State of WV DNR C BRK

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 009-Brooke 4-Cross 620-Steubenville
Operator ID County District Quadrangle

2) Operator's Well Number: State of WV DNR C BRK 5H Well Pad Name: State of WV DNR C BRK

3) Farm Name/Surface Owner: State of WV DNR Public Road Access: Putney Ridge Road

4) Elevation, current ground: 993' Elevation, proposed post-construction: 990'

5) Well Type (a) Gas Oil _____ Underground Storage _____

Other _____

(b) If Gas Shallow Deep _____

Horizontal _____

6) Existing Pad: Yes or No No

C-Bl 5-1-20

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- 5588', Target Base TVD- 5650', Anticipated Thickness- 62', Associated Pressure- 3672

8) Proposed Total Vertical Depth: 5632'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 23,134'

11) Proposed Horizontal Leg Length: 16105.77'

12) Approximate Fresh Water Strata Depths: 371'

13) Method to Determine Fresh Water Depths: nearby water well

14) Approximate Saltwater Depths: 575' salinity profile analysis

15) Approximate Coal Seam Depths: 6'

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

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

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

RECEIVED
Office of Oil and Gas
MAY 14 2020
WV Department of
Environmental Protection

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#	100'	100'	CTS
Fresh Water	13 3/8"	New	H-40	48#	496'	496'	459 sx/CTS
Coal	See	Conductor	Casing				
Intermediate	9 5/8"	New	J-55	36#	1380'	1380'	460 sx/CTS
Production	5 1/2"	New	P-110 HP	20#	23134'	23134'	tot 4253cu'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	1.19/50% Excess
Fresh Water	13 3/8"	17.5"	0.380	2740	633	Class A	1.19/50% Excess
Coal	See	Conductor	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:				

RECEIVED
Office of Oil and Gas

MAY 27 2020

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. The well is produced through surface facilities consisting of high pressure production unites, vertical separation units, water and oil storage tanks. Max press and anticipated max rate- 9000 lbs @ 100 barrels a minute.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 15.72

22) Area to be disturbed for well pad only, less access road (acres): 12.13

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 ***

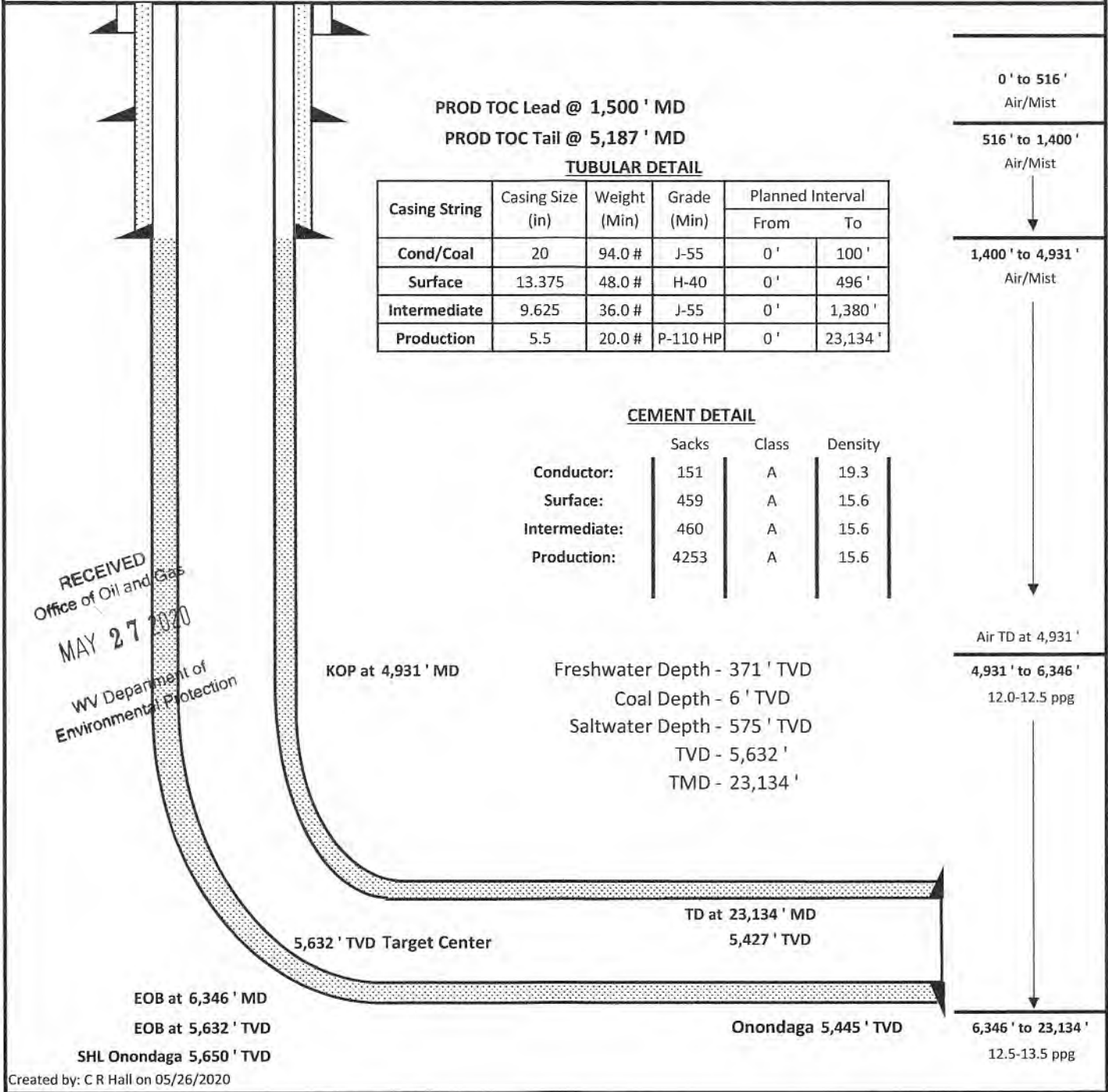
25) Proposed borehole conditioning procedures:

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.

RECEIVED
Office of Oil and Gas
MAY 14 2020
WV Department of
Environmental Protection

*Note: Attach additional sheets as needed.

Southwestern Energy Company		Proposed Drilling Program	
Well:	STATE OF WV DNR C BRK 5	Re-entry Rig:	TBD
Field:	PANHANDLE FIELD WET	Prospect:	Marcellus Shale
County:	BROOKE	State:	WV
SHL:	40.3024 Latitude -80.5378 Longitude		
BHL:	40.3460 Latitude -80.5545 Longitude		
KB Elev:	1,016 ft MSL	KB:	26 ft AGL
		GL Elev:	990 ft MSL



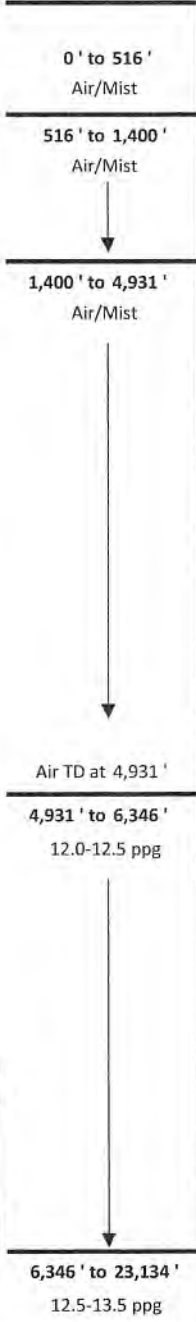
PROD TOC Lead @ 1,500' MD
 PROD TOC Tail @ 5,187' MD

TUBULAR DETAIL

Casing String	Casing Size (in)	Weight (Min)	Grade (Min)	Planned Interval	
				From	To
Cond/Coal	20	94.0 #	J-55	0'	100'
Surface	13.375	48.0 #	H-40	0'	496'
Intermediate	9.625	36.0 #	J-55	0'	1,380'
Production	5.5	20.0 #	P-110 HP	0'	23,134'

CEMENT DETAIL

	Sacks	Class	Density
Conductor:	151	A	19.3
Surface:	459	A	15.6
Intermediate:	460	A	15.6
Production:	4253	A	15.6



RECEIVED
 Office of Oil and Gas
MAY 27 2020
 WV Department of
 Environmental Protection

JACKSON SURVEYING

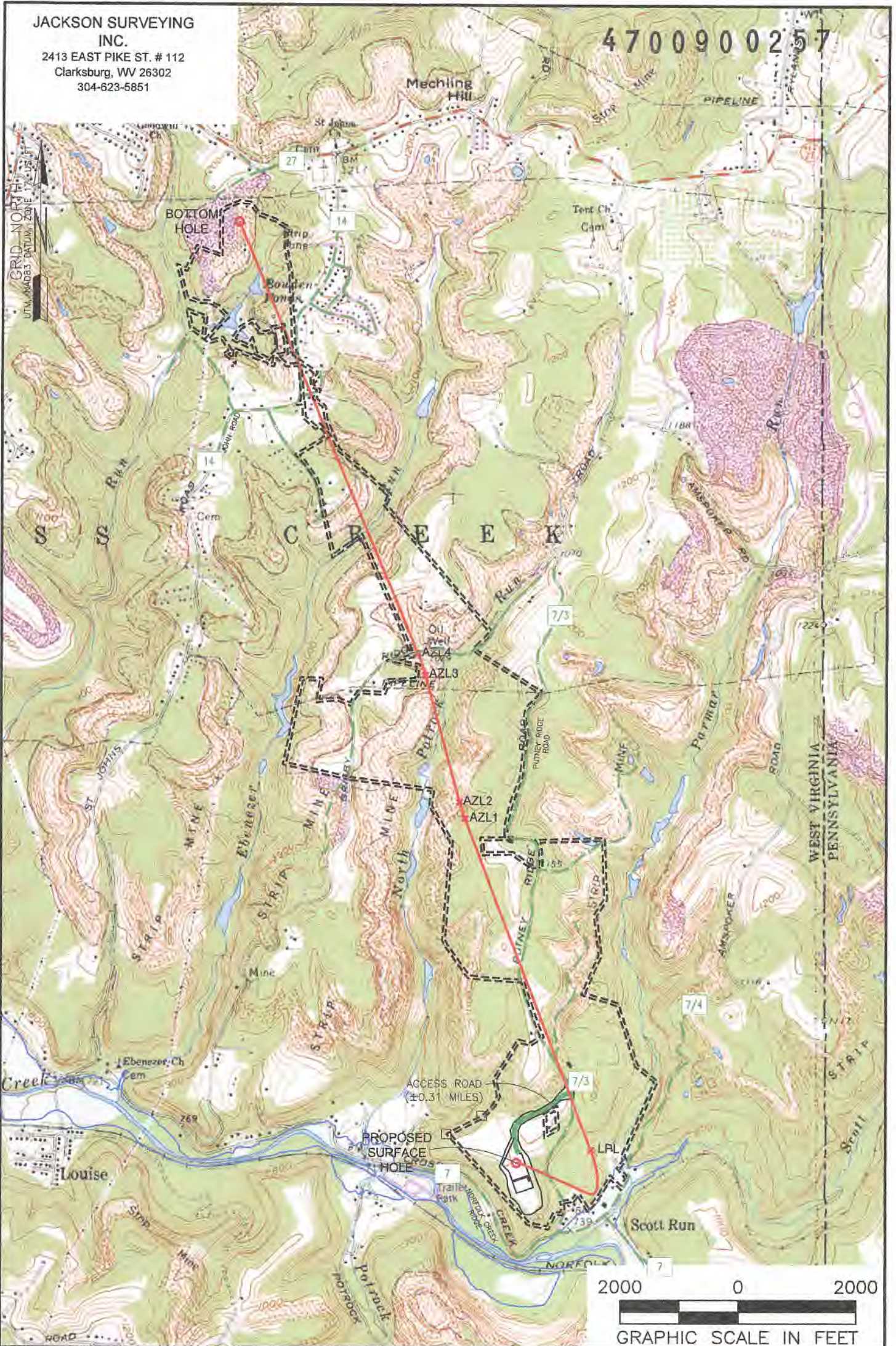
INC.

2413 EAST PIKE ST. # 112

Clarksburg, WV 26302

304-623-5851

4700900257



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.

LEGEND:

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

WELL OPERATOR:
SWN PRODUCTION COMPANY, LLC

ADDRESS:
1300 FORT PIERPONT ROAD, SUITE 200 MORGANTOWN, WV 26508

SURFACE OWNER: STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DIVISION OF NATURAL RESOURCES, PUBLIC LAND CORPORATION

WELL (FARM) NAME:
STATE OF WV DNR C BRK

COUNTY - CODE
BROOKE - 009

USGS 7 1/2 QUADRANGLE MAP NAME
STUEBENVILLE EAST, WV

WELL # SERIAL #

5H CROSS CREEK

API #:
047-009-00257

Latitude: 40°20'00"

SURFACE HOLE 10527

Latitude: 40°22'30" BOTTOM HOLE

3574'

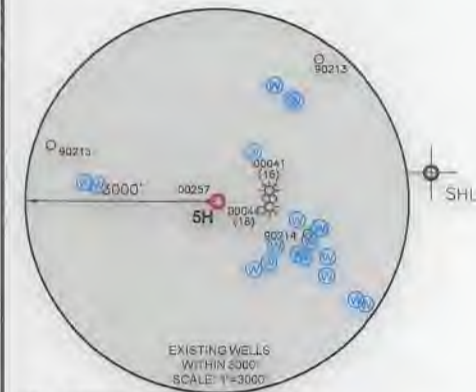
JACKSON SURVEYING INC.

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

LINE	BEARING	DISTANCE	DESCRIPTION	MONUMENT
L1	N 67°38'24" W	1288.14'	SHL TO LANDMARK	2" IRON PIPE FOUND
L2	N 36°20'10" W	997.64'	SHL TO LANDMARK	STONE FOUND
LINE	BEARING	DISTANCE	CURVE LENGTH	DESCRIPTION
L3	N 80°04'19" E	1280.50'	2191.66'	SHL TO LP
L4	N 18°06'31" W	293.19'	293.31'	AZL1 TO AZL2
L5	N 18°59'35" W	381.40'	381.67'	AZL3 TO AZL4

SURFACE HOLE LOCATION (SHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,461,420.366 EASTING: 539,282.414
LANDING POINT LOCATION (LPL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,461,487.657 EASTING: 539,666.865
AZIMUTH POINT LOCATION-1 (AZL1):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,463,190.495 EASTING: 539,011.708
AZIMUTH POINT LOCATION-2 (AZL2):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,463,275.434 EASTING: 538,983.932
AZIMUTH POINT LOCATION-3 (AZL3):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,463,930.652 EASTING: 538,806.227
AZIMUTH POINT LOCATION-4 (AZL4):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,464,040.575 EASTING: 538,768.392
BOTTOM HOLE LOCATION (BHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,466,258.042 EASTING: 537,835.699

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



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.

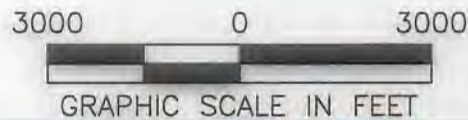
NOTES ON SURVEY

- 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



COMPANY: **SWN** **swn** *R-V*
Production Company, LLC Production Company™

<p>(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS</p> <p>WVDEP OFFICE OF OIL & GAS 601 57TH STREET CHARLESTON, WV 25034</p>	MINIMUM DEGREE OF ACCURACY: 1/200 PROVEN SURVEY SOURCE OF GRADE GPS ELEVATION: (NAVD 88, US FT)	STATE OF WV DNR C BRK OPERATOR'S WELL #: 5H API WELL #: 47 009 00257 STATE COUNTY PERMIT
---	--	---

WELL TYPE: OIL <input type="checkbox"/> WASTE DISPOSAL <input type="checkbox"/> PRODUCTION <input checked="" type="checkbox"/> DEEP <input type="checkbox"/> GAS <input checked="" type="checkbox"/> LIQUID INJECTION <input type="checkbox"/> STORAGE <input type="checkbox"/> SHALLOW <input checked="" type="checkbox"/>	WATERSHED: NORTH FORK CROSS CREEK - CROSS CREEK (HUC-10) ELEVATION: 990.0'
DISTRICT: CROSS CREEK COUNTY: BROOKE	QUADRANGLE: STEUBENVILLE EAST, WV
SURFACE OWNER: STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DIVISION OF NATURAL RESOURCES, PUBLIC LAND CORPORATION	ACREAGE: ±83.858
OIL & GAS ROYALTY OWNER: STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DIVISION OF NATURAL RESOURCES, PUBLIC LAND CORPORATION	ACREAGE: ±83.858
DRILL <input checked="" type="checkbox"/> DRILL DEEPER <input type="checkbox"/> REDRILL <input type="checkbox"/> FRACTURE OR STIMULATE <input checked="" type="checkbox"/> PLUG OFF OLD FORMATION <input type="checkbox"/> PERFORATE NEW FORMATION <input type="checkbox"/>	
CONVERT <input type="checkbox"/> PLUG & ABANDON <input type="checkbox"/> CLEAN OUT & REPLUG <input type="checkbox"/> OTHER CHANGE <input checked="" type="checkbox"/> (SPECIFY) MODIFICATION	
TARGET FORMATION: MARCELLUS	ESTIMATED DEPTH: 5,632 TVD 23,134 TMD

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC ADDRESS: 1300 FORT PIERPONT ROAD, SUITE 200 CITY: MORGANTOWN STATE: WV ZIP CODE: 26508	DESIGNATED AGENT: BRITTANY WOODY ADDRESS: 1300 FORT PIERPONT ROAD, SUITE 200 CITY: MORGANTOWN STATE: WV ZIP CODE: 26508
---	---

LEGEND: PROPOSED SURFACE HOLE / BOTTOM HOLE EXISTING / PRODUCING WELLHEAD LPL LANDING POINT LOCATION EXISTING WATER WELL EXISTING SPRING SURVEYED BOUNDARY DRILLING UNIT LEASE BOUNDARY PROPOSED PATH AZL* AZMUTH POINT LOCATION	REVISIONS: DATE: 05-07-2020 DRAWN BY: N. MANO SCALE: 1" = 3000' DRAWING NO: WELL LOCATION PLAT
--	--

JACKSON SURVEYING

INC.



2413 EAST PIKE ST. # 112

Clarksburg, WV 26302

304-623-5851



47-009-00257 MAD



REVISIONS:	COMPANY:		 	
	OPERATOR'S STATE OF WV DNR C BRK		API #:	DATE: 05-07-2020
	WELL #:		047-009-00257	DRAWN BY: N. MANO
	DISTRICT:	COUNTY:	STATE:	SCALE: N/A
CROSS CREEK	BROOKE	WV	DRAWING NO:	
			WELL LOCATION PLAT 2	

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	STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DIVISION OF NATURAL RESOURCES, PUBLIC LAND CORPORATION (S/R)	4-CC20-06
SURFACE OWNER (S)		
2	EDWARD L. CARTER & DEBORAH C. CARTER (S)	4-CC20-18
3	EDWARD L. CARTER & DEBORAH C. CARTER (S)	4-CC20-17
4	ERIC T. GALIANO (S)	4-CC20-16
5	ERIC T. GALIANO (S)	4-CC20-14
6	ERIC T. GALIANO (S)	4-CC20-15
7	LINDY L. GALIANO & SANTY GALIANO (S)	4-CC20-19.1
8	WILLIAM MORGAN ROUSE & DORIS J. ROUSE (S)	4-CC20-20
9	COLLIER'S SPORTSMAN CLUB (S)	4-CC20-21
10	SUSAN D. BREEN & DENNIS M. BREEN (S)	4-CC20-22
11	SUSAN D. BREEN & DENNIS BREEN (S)	4-CC20-23.1
12	SUSAN BREEN & KELLY HANNAOUI, TRUSTEES OF THE WILLIAM C. SAUNDERS 2019 IRREVOCABLE TRUST DATED NOVEMBER 21, 2019 (S)	4-CC20-23
13	COLLIER'S SPORTSMAN CLUB (S)	4-CC20-24
14	STACI BREEN & PATRICIA BREEN (S)	4-CC20-03
15	SUSAN BREEN & KELLY HANNAOUI, TRUSTEES OF THE WILLIAM C. SAUNDERS 2019 IRREVOCABLE TRUST DATED NOVEMBER 21, 2019 (S)	4-CC20-02
16	STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DIVISION OF NATURAL RESOURCES, PUBLIC LAND CORPORATION (S)	4-CC16-06
17	PETER D. BLASKOVICH & RUTH M. BLASKOVICH (S)	4-CC15-71
18	LENORA J. RINEHART (S)	4-CC15-74
19	RONALD A. REED (S)	4-CC15-68.3
20	LARRY E. REED (S)	4-CC15-68.1
21	ROSE VAN HEMERT (S)	4-C15H-12
22	GORDON KIGER (S)	4-C15H-13
23	FRANK PAESANO & CYNTHIA PASEANO (S)	4-C15H-14
24	MIKE E. BAILEY & MARY E. BLAKE (S)	4-C15H-15
25	DALE W. GAYNOR JR. (S)	4-C15H-16
26	VAL JEAN DELONG, TRUSTEE OF THE DELONG FAMILY KEYSTONE TRUST DATED DECEMBER 30, 2016 (S)	4-C15D-40
27	WILLIAM C. BLACK (S)	4-C15D-39
28	GLENN THOMPSON (S)	4-C15D-36
29	BURL DELEE WARRICK & JAMES KENNETH WARRICK (S)	4-C15D-35
30	JOSHUA A. ROBERTS (S)	4-C15D-34
31	DESIRRAE W. WELLS, ET AL (LE-LAURA RIGGS) (S)	4-C15D-04
32	DESIRRAE W. WELLS, ET AL (LE-HOBERT & LAURA RIGGS) (S)	4-C15D-06
33	MADELINE C. BROZSTEK (S)	4-C15D-07
34	MADELINE C. BROZSTEK (S)	4-C15D-8.1
35	CLIFFORD MILLER (S)	4-C15D-08
36	CLIFFORD LEE MILLER (S)	4-C15D-10
37	TROY A. LUCAS (S)	4-C11S-23
38	RAMON L. BOWEN, TRUSTEE OF THE RAMON L. BOWEN IRREVOCABLE TRUST DATED FEBRUARY 3, 2020 (S)	4-CC11-91
39	RAMON L. BOWEN & YVONNE BOWEN (S)	4-CC11-90
40	RAMON L. BOWEN & YVONNE BOWEN (S)	4-CC11-89
41	RAMON L. BOWEN & YVONNE BOWEN (S)	4-CC11-88

47-009-00257 MOD

REVISIONS:	COMPANY:		
			
	OPERATOR'S STATE OF WV DNR C BRK	API #:	DATE: 05-07-2020
	WELL #:	047-009-00257	DRAWN BY: N. MANO
	DISTRICT:	COUNTY:	SCALE: N/A
	CROSS CREEK	BROOKE	DRAWING NO:
		STATE:	WELL LOCATION PLAT 3
		WV	



**JACKSON SURVEYING
INC.**

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

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNERS	TAX PARCEL
A	JOHN ERNEST MILLER & JESSE ANDREW MILLER	4-CC20-04
B	GRETCHEN MOORE LANGEVIN, TRUSTEE & WESTBANCO BANK, INC.	4-CC20-05
C	STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DIVISION OF NATURAL RESOURCES, PUBLIC LAND CORPORATION	4-CC19-168
D	JASON P. NUZUM	4-CC19-113
E	JASON P. NUZUM	4-CC15-70
F	GARY LEE LOAR & SANDRA L. LOAR	4-CC15-52
G	RUTH M. BLASKOVICH	4-CC15-69
H	PETER D. BLAKOVICH & HELEN S. BLASKOVICH	4-CC15-72
I	RYAN POWELL, & KELLY POWELL	4-CC15-73
J	FRANK REED LARKEY	4-CC15-68.2
K	LARRY REED	4-CC15-67
L	LARRY REED	4-C15H-09
M	BETTY S. LANCASTER & LINDA K. LANCASTER	4-C15H-11
N	LARRY E. REED	4-C15H-20
O	CHARLIE I. DULANEY & ANGELA J. DULANEY	4-C15H-08
P	CHARLIE I. DULANEY & ANGELA J. DULANEY	4-C15H-07
Q	REVA AMANDA ALLMAN YOST	4-C15H-06
R	LARRY ALLEN HOOD	4-C15H-03
S	JOHN MESTER	4-C15H-02
T	LARRY D. PRATT & JOYCE E. PRATT	4-C15H-01
U	ROBERT L. DODSON III	4-C15H-17
V	HAROLD WAYNE BEATTY JR. & NATALIE ROSE BEATTY	4-C15D-49
W	GERALD L. ARACICH	4-C15D-43
X	JAMES A. RAHR & GERALDINE A. RAHR	4-C15D-41
Y	DONNA DELONG	4-C15D-01
Z	DONNA DELONG	4-C15D-02
A2	JIM HEIDENREICH	4-C15D-03
B2	THOMAS G. MOORE & KATHY J MOORE	4-C15C-04
C2	GARY A. DENNIS & LORI ANN DENNIS	4-C15C-05
D2	GARY E. DENNIS & LORI ANN DENNIS	4-C15C-06
E2	TYRA CLARK	4-C15D-05

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNERS	TAX PARCEL
F2	MICHAEL J. CLARK SR. & TYRA S. CLARK	4-C15D-09
G2	MICHAEL J. CLARK SR. & TYRA S. CLARK	4-C15D-50
H2	JAMES E. HEIDENREICH & DEBRA R. ARTHUR	4-C15C-03
I2	RAMON MARSHALL BOWEN	4-C15C-02
J2	CHARLES DAVID JOHNSON & SANDRA K. JOHNSON	4-C15C-22
K2	CHAD A. RICCELLI	4-C15C-22.1
L2	RAYMOND MARSHALL BOWEN	4-C15C-01
M2	FRED WELSHANS JR. & CHRIS E. WELSHANS	4-CC11-95
N2	DONALD E. SIPPEL & DOREEN E. SIPPEL	4-CC11-94
O2	JACK KAROL BOWEN	4-CC11-97
P2	DONALD E. SIPPEL & DOREEN E. SIPPEL	4-CC11-93
Q2	DONALD G. CONAWAY	4-CC11-92
R2	DWIGHT & MARY DICKEY	4-C11L-14
S2	ST. JOHN'S CEMETERY CO.	4-C11S-01
T2	WILLIAM A. HERCULES & VICKY L. HERCULES	4-C11S-9.1
U2	WVMP LLC	4-C11S-10
V2	ROGER BENNETT & LAURA BENNETT	4-C11S-12
W2	ANDREA N. DOMICK	4-C11S-13
X2	GERALD GOURLEY (L/E: GLORIA F KIGER)	4-C11S-14
Y2	TRAVIS CORBIN	4-C11S-15
Z2	STEVEN D. MORAN & BETHANY A. MORAN	4-C11S-20
A3	WILLIAM H. MORAN JR. & JOSIE L. MORAN	4-C11S-20.1
B3	KODY GREEN	4-C11S-21
C3	VALERIE A. WELLS, ET AL (LE- LAURA RIGGS)	4-C11S-22
D3	CHRISTOPHER E. SMITH	4-C15D-20
E3	EMURI HOME AND GARDEN, LLC.(L/C: SHERRY TACKETT)	4-C15D-21
F3	TROY A. LUCAS	4-C15D-23
G3	CHARLES D. BEATTY JR.	4-C15D-26
H3	SHAFFER FAMILY IRREVOCABLE INCOME ONLY TRUST	4-C15D-27
I3	KEITH R. SHAFFER	p/o 4-C15D-27
J3	KEITH RICHARD SHAFFER & MARY JO SHAFFER	4-C15D-29
K3	DOUGLAS SWAIN	4-C15D-30.3
L3	WILLIAM THOMAS LAW & JANE LAW	4-C15D-33



47-009-00257 Mod

REVISIONS:	COMPANY:	 						
	OPERATOR'S	STATE OF WV DNR C BRK	API #:	DATE: 05-07-2020				
	WELL #:	5H	047-009-00257	DRAWN BY: N. MANO				
	DISTRICT:	CROSS CREEK	COUNTY:	BROOKE	STATE:	WV	SCALE:	N/A
					DRAWING NO:		WELL LOCATION PLAT 4	

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

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNERS	TAX PARCEL
M3	VAUGHN R. DAVIS & MARY L. DAVIS	4-C15D-32
N3	GLENN THOMPSON	4-C15D-37
O3	LAURA J. STEUDEBAKER & STUART STEUDEBAKER	4-C15D-30
P3	REED-GEHRLING FAMILY TRUST DATED 10/17/08	4-CC16-32
Q3	THE DENNIS PALFALVY III IRREVOCABLE TRUST	4-CC16-5
R3	STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DIVISION OF NATURAL RESOURCES, PUBLIC LAND CORPORATION	4-CC16-8.1
S3	STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DIVISION OF NATURAL RESOURCES, PUBLIC LAND CORPORATION	4-CC16-7.1
T3	DAVID C. DAMI	4-CC20-1.1
U3	DAVID C. DAMI	4-CC20-2.1
V3	FREDA M. DUNN - (LIFE) SAUNDRA L. DUNN & ROBERT W. DUNN	4-CC20-01
W3	COLLIERS SPORTSMAN CLUB	4-CC20-45
X3	STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DIVISION OF NATURAL RESOURCES, PUBLIC LAND CORPORATION	4-CC20-25.1
Y3	STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DIVISION OF NATURAL RESOURCES, PUBLIC LAND CORPORATION	4-CC20-25
Z3	DEBORAH K. SLIDAY	4-CC20-32
A4	NICKOLES 3, LLC.	4-CC20-33
B4	ROBERT CLINE & DELORIS CLINE	4-CC20-34
C4	WILLIAM MARINO & MILDRED T. MARINO	4-CC20-35
D4	MILDRED T. MARINO & WILLIAM MARINO	4-CC20-36
E4	WAYNE L. HENDERSON & BETHANY A. HENDERSON	4-CC20-37
F4	SANTY GALIANO & LINDY GALIANO	4-CC20-38
G4	ERIC T. GALIANO	4-CC20-13
H4	BARBARA A. SMITH	4-CC20-12
I4	ERIC T. GALIANO	4-CC20-19
J4	KEVIN MCCONNELL	4-CC20-11
K4	BARBARA J. MCCONNELL	4-CC20-10
L4	SUSAN K. PRONCHIK	4-CC20-08
M4	STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DIVISION OF NATURAL RESOURCES, PUBLIC LAND CORPORATION	4-CC19-169
N4	STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DIVISION OF NATURAL RESOURCES, PUBLIC LAND CORPORATION	4-CC19-168
O4	LINDY L. BLACK	4-CC20-07

47-009-00257 MOD

REVISIONS:	COMPANY:		
			
	OPERATOR'S	STATE OF WV DNR C BRK	API #:
	WELL #:	5H	047-009-00257
	DISTRICT:	CROSS CREEK	COUNTY:
		STATE:	WV
		DATE:	05-07-2020
		DRAWN BY:	N. MANO
		SCALE:	N/A
		DRAWING NO:	
		WELL LOCATION	PLAT 5

**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"				

*Co-tenancy utilization - At least 7 mineral owners in tract and at least 75% of those owners are leased

**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

RECEIVED
Office of Oil and Gas
MAY 14 2020
WV Department of
Environmental Protection

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: Bailey Brayer
 Its: Landman - SW Appalachia

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, Operator
 State of WV DNR C BRK 5H
 Brooke County, West Virginia

RECEIVED
 Office of Oil and Gas
 MAY 14 2020
 WV Department of Environmental Protection

700900257

#	TMP	LESSOR	LESSEE	ROYALTY	BK/PG	Interest Not Leased by SWN Production Company, LLC
1)	04-CC20-0006-0000	Starvaggi Industries, Incorporated	Fortuna Energy, Inc. Range Resources - Appalachia, LLC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.50%	9/532 10/226 10/541 30/480	0.00%
2)	04-CC20-0018-0000	Edward L. Carter and Deborah C. Carter, his wife	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	14.00%	11/33 30/480	0.00%
3)	04-CC20-0017-0000	Edward L. Carter and Deborah C. Carter, his wife	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	14.00%	11/29 30/480	0.00%
4)	04-CC20-0016-0000	Eric T. Galiano and Wylsie Lynn Galiano, husband and wife, and Lindy L. Galiano, a widow	SWN Production Company, LLC	18.00%	51/548	0.00%
5)	04-CC20-0014-0000	Eric T. Galiano and Wylsie Lynn Galiano, husband and wife, and Lindy L. Galiano, a widow	SWN Production Company, LLC	18.00%	51/548	0.00%
6)	04-CC20-0015-0000	Eric T. Galiano and Wylsie Lynn Galiano, husband and wife, and Lindy L. Galiano, a widow	SWN Production Company, LLC	18.00%	51/548	0.00%
7)	04-CC20-0019-0001	Santy Galiano and Lindy L. Galiano, husband and wife	SWN Production Company, L.L.C.	18.00%	35/501	0.00%
8)	04-CC20-0020-0000	William Morgan Rouse and Doris Jean Rouse, husband and wife	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	14.00%	20/680 30/480	0.00%
9)	04-CC20-0021-0000	Starvaggi Industries, Incorporated	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	22/514 30/480	0.00%
10)	04-CC20-0022-0000	Starvaggi Industries, Incorporated	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	22/514 30/480	0.00%
11)	04-CC20-0023-0001	Starvaggi Industries, Incorporated, a Corporation organized and existing by virtue of the laws of the State of West Virginia	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	21/534 30/480	0.00%
12)	04-CC20-0023-0000	Starvaggi Industries, Incorporated, a Corporation organized and existing by virtue of the laws of the State of West Virginia	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	21/534 30/480	0.00%
13)	04-CC20-0024-0000	Starvaggi Industries, Incorporated	Fortuna Energy, Inc. Range Resources - Appalachia, LLC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.50%	9/532 10/226 10/541 30/480	0.00%
14)	04-CC20-0003-0000	William C. Saunders, single	Great Lakes Energy Partners, L.L.C. Range Resources-Appalachia, LLC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	14.00%	10/133 20/733 10/552 30/480	0.00%
15)	04-CC20-0002-0000	William C. Saunders, single	Great Lakes Energy Partners, L.L.C. Range Resources - Appalachia, LLC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	14.00%	10/133 20/733 10/552 30/480	0.00%

RECEIVED
Office of Oil and Gas

MAY 14 2020

WV Department of
Environmental Protection

4700900257

16)	04-CC16-0006-0000	Starvaggi Industries, Incorporated	Fortuna Energy, Inc. Range Resources - Appalachia, LLC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.50%	9/532 10/226 10/541 30/480	0.00%
17)	04-CC15-0071-0000	Peter D. Blaskovich and Helen S. Blaskovich, husband and wife Ruth M. Blaskovich, a widow	SWN Production Company, L.L.C. SWN Production Company, L.L.C.	18.00%	37/354 37/357	0.00%
18)	04-CC15-0074-0000	Gerald P. Smith and Deborah S. Smith, husband and wife	SWN Production Company, L.L.C.	18.00%	36/218	0.00%
19)	04-CC15-0068-0003	Ronald A. Reed, single	Great Lakes Energy Partners, L.L.C. Range Resources-Appalachia, LLC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.50%	9/718 20/733 10/552 30/480	0.00%
20)	04-CC15-0068-0001	Larry E. Reed, single	Great Lakes Energy Partners, L.L.C. Range Resources-Appalachia, LLC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.50%	9/693 20/733 10/552 30/480	0.00%
21)	04-C15H-0012-0000	Rose vanHemert aka Rose van Hemert, a single woman Betty White and Stuart White, wife and husband Bonnie Lou Gruber, a widow Charles Douglas Lane, a widower Larry Green and Cindy Green, husband and wife Crystal M. Hooker and James M. Hooker, wife and husband Debbie Lyseski and Gerald Lyseski, wife and husband Dolores J. Bobovnik and Donald S. Bobovnik, wife and husband Dorothy Duke and Edward Duke, wife and husband Frank E. Cominotti and Marilyn Cominotti, husband and wife Gary F. Obloy and Denise I. Obloy, husband and wife James Neal Emery and Renee R. Emery, husband and wife Joann Hagerty, a widow John W. Obloy, Jr. and Janet Obloy, husband and wife Karen Rich and Richard Rich, wife and husband Keith Jay Fischer and Dawn Marie Fischer, husband and wife Kenda Learn and Todd Learn, husband and wife Kimberly Cox, a single woman Loretta J. Barker, a widow Marion David Ott and Janice L. Ott, husband and wife Marquita Clyburn, a single woman Mary Catherine Thoms-Ott, a widow	SWN Production Company, L.L.C. SWN Production Company, L.L.C. SWN Production Company, L.L.C. SWN Production Company, L.L.C. SWN Production Company, L.L.C. SWN Production Company, L.L.C. SWN Production Company, L.L.C. SWN Production Company, L.L.C. SWN Production Company, L.L.C.	18.00%	45/132	0.92%
				16.00%	44/317	
				16.00%	43/517	
				16.00%	40/697	
				16.00%	40/705	
				16.00%	50/787	
				16.00%	47/557	
				18.00%	46/624	
				16.00%	40/540	
				16.00%	47/686	
				16.00%	45/117	
				16.00%	43/509	
				16.00%	51/167	
				16.00%	46/666	
				16.00%	42/528	
				16.00%	47/541	
				16.00%	47/756	
				16.00%	51/59	
				16.00%	42/504	
				16.00%	40/475	
				16.00%	45/17	
				16.00%	40/713	

*

4700900257
 RECEIVED
 Office of Oil and Gas
 MAY 14 2020
 WV Department of
 Environmental Protection

Richard G. Hlinka and Mary Lou Hagerty Hlinka, husband and wife	SWN Production Company, L.L.C.	16.00%	41/113
Orie N. Young and Bernie A. Young, wife and husband	SWN Production Company, L.L.C.	16.00%	51/9
Patricia A. Garcar, a single woman	SWN Production Company, L.L.C.	16.00%	46/525
Patricia L. Fish, a widow	SWN Production Company, L.L.C.	16.00%	42/364
Patrick Hagerty and Dalene Hagerty, husband and wife	SWN Production Company, L.L.C.	16.00%	52/307
Rebecca Hagerty, a single woman	SWN Production Company, L.L.C.	16.00%	50/74
Renee Kellar, a single woman	SWN Production Company, L.L.C.	16.00%	45/9
Robert D. Barnes and Rhonda L. Barnes, husband and wife	SWN Production Company, L.L.C.	16.00%	39/654
Rita K. Wineman, a widow	SWN Production Company, L.L.C.	16.00%	42/520
Connie Lou Gilmore, a widow	SWN Production Company, L.L.C.	16.00%	45/109
Robert Lee Marciano, a/k/a Robert Lee Mayer, an incarcerated person located in the Texas Department of Criminal Justice's Gib Lewis Unit, Woodville, Texas 75990, and his court appointed Guardian ad litem, Tyler L. Cline, Esq., of Weirton, West Virginia, 76067-4500	SWN Production Company, LLC	18.00%	56/110
Robert R. Darrow	SWN Production Company, L.L.C.	16.00%	42/372
Robyn Hagerty, a single woman	SWN Production Company, L.L.C.	16.00%	51/658
Ronald Mayer and Debra Mayer, husband and wife	SWN Production Company, L.L.C.	16.00%	46/1
Sandra Salkovich and Ronald J. Salkovich II, wife and husband	SWN Production Company, LLC	16.00%	50/536
Sara A. Fulton, a single woman	SWN Production Company, L.L.C.	16.00%	40/564
Shelli Wheeler and Anthony R. Wheeler, wife and husband	SWN Production Company, L.L.C.	16.00%	50/411
Stephen C. Emery and Cathy J. Emery, husband and wife	SWN Production Company, L.L.C.	16.00%	47/549
Terri J. Brock and Steve E. Brock, wife and husband	SWN Production Company, L.L.C.	16.00%	42/512
Robert A. Tessean, Richard I. Tessean and Patricia A. Harnar, acting as Trustees of the Tessean Family Revocable Living Trust, dated December 29th, 1993	SWN Production Company, L.L.C.	16.00%	52/639
Lisa R. Emery, a single woman	SWN Production Company, LLC	18.00%	56/577
David Drake and Vicki Drake, husband and wife	SWN Production Company, LLC	18.00%	56/472
Dennis A. Strauss and Vicky M. Strauss, husband and wife	SWN Production Company, LLC	18.00%	56/561
Kathleen L. Robertson, a widow	SWN Production Company, LLC	18.00%	56/569
Michelle Campbell, a single woman	SWN Production Company, LLC	18.00%	56/735
Sharron Larrison and Thomas Larrison, wife and husband	SWN Production Company, LLC	18.00%	56/751
Anita Williams, divorced and not remarried	SWN Production Company, LLC	18.00%	56/743
SWN Production Company, LLC (Company Owned Minerals)		12.50%	395/400
			(Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)		12.50%	389/696
			(Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)		12.50%	391/405
			(Mineral Deed)

4700900257

RECEIVED
Office of Oil and Gas

MAY 14 2020

WV Department of
Environmental Protection

SWN Production Company, LLC (Company Owned Minerals)	12.50%	382/105 (Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)	12.50%	389/567 (Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)	12.50%	388/629 (Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)	12.50%	383/47 (Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)	12.50%	381/226 (Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)	12.50%	383/138 (Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)	12.50%	383/51 (Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)	12.50%	388/564 (Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)	12.50%	383/143 (Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)	12.50%	381/218 (Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)	12.50%	381/222 (Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)	12.50%	400/464 (Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)	12.50%	399/307 (Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)	12.50%	399/304 (Mineral Deed)
Royalty Owners	N/A	N/A

22) 04-C15H-0013-0000

David W. Null (Life Estate), a single man, Gordon Kiger (Remainderman), a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	21/49 30/480	1.15%
Betty White and Stuart White, wife and husband	SWN Production Company, L.L.C.	16.00%	44/317	
Bonnie Lou Gruber, a widow	SWN Production Company, L.L.C.	16.00%	43/517	
Charles Douglas Lane, a widower	SWN Production Company, L.L.C.	16.00%	40/697	
Larry Green and Cindy Green, husband and wife	SWN Production Company, L.L.C.	16.00%	40/705	
Crystal M. Hooker and James M. Hooker, wife and husband	SWN Production Company, L.L.C.	16.00%	50/787	
Debbie Lyseski and Gerald Lyseski, wife and husband	SWN Production Company, L.L.C.	16.00%	47/557	
Dolores J. Bobovnik and Donald S. Bobovnik, wife and husband	SWN Production Company, L.L.C.	18.00%	46/624	
Dorothy Duke and Edward Duke, wife and husband	SWN Production Company, L.L.C.	16.00%	40/540	
Frank E. Cominotti and Marilyn Cominotti, husband and wife	SWN Production Company, L.L.C.	16.00%	47/686	

*

RECEIVED
Office of Oil and Gas

MAY 14 2020

WV Department of
Environmental Protection

Gary F. Obloy and Denise I. Obloy, husband and wife	SWN Production Company, L.L.C.	16.00%	45/117
James Neal Emery and Renee R. Emery, husband and wife	SWN Production Company, L.L.C.	16.00%	43/509
Joann Hagerty, a widow	SWN Production Company, L.L.C.	16.00%	51/167
John W. Obloy, Jr. and Janet Obloy, husband and wife	SWN Production Company, L.L.C.	16.00%	46/666
Karen Rich and Richard Rich, wife and husband	SWN Production Company, L.L.C.	16.00%	42/528
Keith Jay Fischer and Dawn Marie Fischer, husband and wife	SWN Production Company, L.L.C.	16.00%	47/541
Kenda Learn and Todd Learn, husband and wife	SWN Production Company, L.L.C.	16.00%	47/756
Kimberly Cox, a single woman	SWN Production Company, L.L.C.	16.00%	51/59
Loretta J. Barker, a widow	SWN Production Company, L.L.C.	16.00%	42/504
Marion David Ott and Janice L. Ott, husband and wife	SWN Production Company, L.L.C.	16.00%	40/475
Marquita Clyburn, a single woman	SWN Production Company, L.L.C.	16.00%	45/17
Mary Catherine Thoms-Ott, a widow	SWN Production Company, L.L.C.	16.00%	40/713
Richard G. Hlinka and Mary Lou Hagerty Hlinka, husband and wife	SWN Production Company, L.L.C.	16.00%	41/113
Orie N. Young and Bernie A. Young, wife and husband	SWN Production Company, L.L.C.	16.00%	51/9
Patricia A. Garcar, a single woman	SWN Production Company, L.L.C.	16.00%	46/525
Patricia L. Fish, a widow	SWN Production Company, L.L.C.	16.00%	42/364
Patrick Hagerty and Dalene Hagerty, husband and wife	SWN Production Company, L.L.C.	16.00%	52/307
Rebecca Hagerty, a single woman	SWN Production Company, L.L.C.	16.00%	50/74
Renee Kellar, a single woman	SWN Production Company, L.L.C.	16.00%	45/9
Robert D. Barnes and Rhonda L. Barnes, husband and wife	SWN Production Company, L.L.C.	16.00%	39/654
Rita K. Wineman, a widow	SWN Production Company, L.L.C.	16.00%	42/520
Connie Lou Gilmore, a widow	SWN Production Company, L.L.C.	16.00%	45/109
Robert Lee Marciano, a/k/a Robert Lee Mayer, an incarcerated person located in the Texas Department of Criminal Justice's Gib Lewis Unit, Woodville, Texas 75990, and his court appointed Guardian ad litem, Tyler L. Cline, Esq., of Weirton, West Virginia, 76062-4500	SWN Production Company, LLC	18.00%	56/110
Robert R. Darrow	SWN Production Company, L.L.C.	16.00%	42/372
Robyn Hagerty, a single woman	SWN Production Company, L.L.C.	16.00%	51/658
Ronald Mayer and Debra Mayer, husband and wife	SWN Production Company, L.L.C.	16.00%	46/1
Sandra Salkovich and Ronald J. Salkovick II, wife and husband	SWN Production Company, LLC	16.00%	50/536
Sara A. Fulton, a single woman	SWN Production Company, L.L.C.	16.00%	40/564
Shelli Wheeler and Anthony R. Wheeler, wife and husband	SWN Production Company, L.L.C.	16.00%	50/411
Stephen C. Emery and Cathy J. Emery, husband and wife	SWN Production Company, L.L.C.	16.00%	47/549
Terri J. Brock and Steve E. Brock, wife and husband	SWN Production Company, L.L.C.	16.00%	42/512
Robert A. Tessean, Richard I. Tessean and Patricia A. Harnar, acting as Trustees of the Tessean Family Revocable Living Trust, dated December 29th, 1993	SWN Production Company, L.L.C.	16.00%	52/639

RECEIVED
Office of Oil and Gas
MAY 14 2020
WV Department of
Environmental Protection

Lisa R. Emery, a single woman	SWN Production Company, LLC	18.00%	56/577
David Drake and Vicki Drake, husband and wife	SWN Production Company, LLC	18.00%	56/472
Dennis A. Strauss and Vicky M. Strauss, husband and wife	SWN Production Company, LLC	18.00%	56/561
Kathleen L. Robertson, a widow	SWN Production Company, LLC	18.00%	56/569
Michelle Campbell, a single woman	SWN Production Company, LLC	18.00%	56/735
Sharron Larrison and Thomas Larrison, wife and husband	SWN Production Company, LLC	18.00%	56/751
Anita Williams, divorced and not remarried	SWN Production Company, LLC	18.00%	56/743
SWN Production Company, LLC (Company Owned Minerals)		12.50%	395/400 (Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)		12.50%	389/696 (Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)		12.50%	391/405 (Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)		12.50%	382/105 (Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)		12.50%	389/567 (Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)		12.50%	388/629 (Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)		12.50%	383/47 (Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)		12.50%	381/226 (Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)		12.50%	383/138 (Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)		12.50%	383/51 (Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)		12.50%	388/564 (Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)		12.50%	383/143 (Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)		12.50%	381/218 (Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)		12.50%	381/222 (Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)		12.50%	400/464 (Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)		12.50%	399/307 (Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)		12.50%	399/304 (Mineral Deed)
Royalty Owners	N/A	N/A	N/A



RECEIVED
Office of Oil and Gas

MAY 14 2020

WV Department of
Environmental Protection

Betty White and Stuart White, wife and husband	SWN Production Company, L.L.C.	16.00%	44/317
Bonnie Lou Gruber, a widow	SWN Production Company, L.L.C.	16.00%	43/517
Charles Douglas Lane, a widower	SWN Production Company, L.L.C.	16.00%	40/697
Larry Green and Cindy Green, husband and wife	SWN Production Company, L.L.C.	16.00%	40/705
Crystal M. Hooker and James M. Hooker, wife and husband	SWN Production Company, L.L.C.	16.00%	50/787
Debbie Lyseski and Gerald Lyseski, wife and husband	SWN Production Company, L.L.C.	16.00%	47/557
Dolores J. Bobovnik and Donald S. Bobovnik, wife and husband	SWN Production Company, L.L.C.	18.00%	46/624
Dorothy Duke and Edward Duke, wife and husband	SWN Production Company, L.L.C.	16.00%	40/540
Frank E. Cominotti and Marilyn Cominotti, husband and wife	SWN Production Company, L.L.C.	16.00%	47/686
Gary F. Obloy and Denise I. Obloy, husband and wife	SWN Production Company, L.L.C.	16.00%	45/117
James Neal Emery and Renee R. Emery, husband and wife	SWN Production Company, L.L.C.	16.00%	43/509
Joann Hagerty, a widow	SWN Production Company, L.L.C.	16.00%	51/167
John W. Obloy, Jr. and Janet Obloy, husband and wife	SWN Production Company, L.L.C.	16.00%	46/666
Karen Rich and Richard Rich, wife and husband	SWN Production Company, L.L.C.	16.00%	42/528
Keith Jay Fischer and Dawn Marie Fischer, husband and wife	SWN Production Company, L.L.C.	16.00%	47/541
Kenda Learn and Todd Learn, husband and wife	SWN Production Company, L.L.C.	16.00%	47/756
Kimberly Cox, a single woman	SWN Production Company, L.L.C.	16.00%	51/59
Loretta J. Barker, a widow	SWN Production Company, L.L.C.	16.00%	42/504
Marion David Ott and Janice L. Ott, husband and wife	SWN Production Company, L.L.C.	16.00%	40/475
Marquita Clyburn, a single woman	SWN Production Company, L.L.C.	16.00%	45/17
Mary Catherine Thoms-Ott, a widow	SWN Production Company, L.L.C.	16.00%	40/713
Richard G. Hlinka and Mary Lou Hagerty Hlinka, husband and wife	SWN Production Company, L.L.C.	16.00%	41/113
Orie N. Young and Bernie A. Young, wife and husband	SWN Production Company, L.L.C.	16.00%	51/9
Patricia A. Garcar, a single woman	SWN Production Company, L.L.C.	16.00%	46/525
Patricia L. Fish, a widow	SWN Production Company, L.L.C.	16.00%	42/364
Patrick Hagerty and Dalene Hagerty, husband and wife	SWN Production Company, L.L.C.	16.00%	52/307
Rebecca Hagerty, a single woman	SWN Production Company, L.L.C.	16.00%	50/74
Renee Kellar, a single woman	SWN Production Company, L.L.C.	16.00%	45/9
Robert D. Barnes and Rhonda L. Barnes, husband and wife	SWN Production Company, L.L.C.	16.00%	39/654
Rita K. Wineman, a widow	SWN Production Company, L.L.C.	16.00%	42/520
Connie Lou Gilmore, a widow	SWN Production Company, L.L.C.	16.00%	45/109
Robert Lee Marciano, a/k/a Robert Lee Mayer, an incarcerated person located in the Texas Department of Criminal Justice's Gib Lewis Unit, Woodville, Texas 75990, and his court appointed Guardian ad litem, Tyler L. Cline, Esq., of Weirton, West Virginia, 26062-4500	SWN Production Company, LLC	18.00%	56/110
Robert R. Darrow	SWN Production Company, L.L.C.	16.00%	42/372

4700900257

RECEIVED
Office of Oil and Gas
MAY 14 2020
WV Department of
Environmental Protection

Robyn Hagerty, a single woman	SWN Production Company, L.L.C.	16.00%	51/658
Ronald Mayer and Debra Mayer, husband and wife	SWN Production Company, L.L.C.	16.00%	46/1
Sandra Salkovich and Ronald J. Salkovick II, wife and husband	SWN Production Company, LLC	16.00%	50/536
Sara A. Fulton, a single woman	SWN Production Company, L.L.C.	16.00%	40/564
Shelli Wheeler and Anthony R. Wheeler, wife and husband	SWN Production Company, L.L.C.	16.00%	50/411
Stephen C. Emery and Cathy J. Emery, husband and wife	SWN Production Company, L.L.C.	16.00%	47/549
Terri J. Brock and Steve E. Brock, wife and husband	SWN Production Company, L.L.C.	16.00%	42/512
Robert A. Tessean, Richard I. Tessean and Patricia A. Harnar, acting as Trustees of the Tessean Family Revocable Living Trust, dated December 29th, 1993	SWN Production Company, L.L.C.	16.00%	52/639
Lisa R. Emery, a single woman	SWN Production Company, LLC	18.00%	56/577
David Drake and Vicki Drake, husband and wife	SWN Production Company, LLC	18.00%	56/472
Dennis A. Strauss and Vicky M. Strauss, husband and wife	SWN Production Company, LLC	18.00%	56/561
Kathleen L. Robertson, a widow	SWN Production Company, LLC	18.00%	56/569
Michelle Campbell, a single woman	SWN Production Company, LLC	18.00%	56/735
Sharron Larrison and Thomas Larrison, wife and husband	SWN Production Company, LLC	18.00%	56/751
Anita Williams, divorced and not remarried	SWN Production Company, LLC	18.00%	56/743
SWN Production Company, LLC (Company Owned Minerals)		12.50%	395/400
			(Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)		12.50%	389/696
			(Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)		12.50%	391/405
			(Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)		12.50%	382/105
			(Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)		12.50%	389/567
			(Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)		12.50%	388/629
			(Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)		12.50%	383/47
			(Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)		12.50%	381/226
			(Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)		12.50%	383/138
			(Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)		12.50%	383/51
			(Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)		12.50%	388/564
			(Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)		12.50%	383/143
			(Mineral Deed)

RECEIVED
Office of Oil and Gas
MAY 14 2020
WV Department of
Environmental Protection

4700900257

	SWN Production Company, LLC (Company Owned Minerals)		12.50%	381/218 (Mineral Deed)	
	SWN Production Company, LLC (Company Owned Minerals)		12.50%	381/222 (Mineral Deed)	
	SWN Production Company, LLC (Company Owned Minerals)		12.50%	400/464 (Mineral Deed)	
	SWN Production Company, LLC (Company Owned Minerals)		12.50%	399/307 (Mineral Deed)	
	SWN Production Company, LLC (Company Owned Minerals)		12.50%	399/304 (Mineral Deed)	
	Royalty Owners	N/A	N/A	N/A	
24) 04-C15H-0015-0000	Mike E. Bailey and Mary E. Bailey, husband and wife	SWN Production Company, L.L.C.	17.00%	35/535	1.15% *
	Betty White and Stuart White, wife and husband	SWN Production Company, L.L.C.	16.00%	44/317	
	Bonnie Lou Gruber, a widow	SWN Production Company, L.L.C.	16.00%	43/517	
	Charles Douglas Lane, a widower	SWN Production Company, L.L.C.	16.00%	40/697	
	Larry Green and Cindy Green, husband and wife	SWN Production Company, L.L.C.	16.00%	40/705	
	Crystal M. Hooker and James M. Hooker, wife and husband	SWN Production Company, L.L.C.	16.00%	50/787	
	Debbie Lyseski and Gerald Lyseski, wife and husband	SWN Production Company, L.L.C.	16.00%	47/557	
	Dolores J. Bobovnik and Donald S. Bobovnik, wife and husband	SWN Production Company, L.L.C.	18.00%	46/624	
	Dorothy Duke and Edward Duke, wife and husband	SWN Production Company, L.L.C.	16.00%	40/540	
	Frank E. Cominotti and Marilyn Cominotti, husband and wife	SWN Production Company, L.L.C.	16.00%	47/686	
	Gary F. Obloy and Denise I. Obloy, husband and wife	SWN Production Company, L.L.C.	16.00%	45/117	
	James Neal Emery and Renee R. Emery, husband and wife	SWN Production Company, L.L.C.	16.00%	43/509	
	Joann Hagerty, a widow	SWN Production Company, L.L.C.	16.00%	51/167	
	John W. Obloy, Jr. and Janet Obloy, husband and wife	SWN Production Company, L.L.C.	16.00%	46/666	
	Karen Rich and Richard Rich, wife and husband	SWN Production Company, L.L.C.	16.00%	42/528	
	Keith Jay Fischer and Dawn Marie Fischer, husband and wife	SWN Production Company, L.L.C.	16.00%	47/541	
	Kenda Learn and Todd Learn, husband and wife	SWN Production Company, L.L.C.	16.00%	47/756	
	Kimberly Cox, a single woman	SWN Production Company, L.L.C.	16.00%	51/59	
	Loretta J. Barker, a widow	SWN Production Company, L.L.C.	16.00%	42/504	
	Marion David Ott and Janice L. Ott, husband and wife	SWN Production Company, L.L.C.	16.00%	40/475	
	Marquita Clyburn, a single woman	SWN Production Company, L.L.C.	16.00%	45/17	
	Mary Catherine Thoms-Ott, a widow	SWN Production Company, L.L.C.	16.00%	40/713	
	Richard G. Hlinka and Mary Lou Hagerty Hlinka, husband and wife	SWN Production Company, L.L.C.	16.00%	41/113	
	Orie N. Young and Bernie A. Young, wife and husband	SWN Production Company, L.L.C.	16.00%	51/9	
	Patricia A. Garcar, a single woman	SWN Production Company, L.L.C.	16.00%	46/525	
	Patricia L. Fish, a widow	SWN Production Company, L.L.C.	16.00%	42/364	

RECEIVED
Office of Oil and Gas
MAY 14 2020
W.V. Department of
Environmental Protection

4700900257

Patrick Hagerty and Dalene Hagerty, husband and wife	SWN Production Company, L.L.C.	16.00%	52/307
Rebecca Hagerty, a single woman	SWN Production Company, L.L.C.	16.00%	50/74
Renee Kellar, a single woman	SWN Production Company, L.L.C.	16.00%	45/9
Robert D. Barnes and Rhonda L. Barnes, husband and wife	SWN Production Company, L.L.C.	16.00%	39/654
Rita K. Wineman, a widow	SWN Production Company, L.L.C.	16.00%	42/520
Connie Lou Gilmore, a widow	SWN Production Company, L.L.C.	16.00%	45/109
Robert Lee Marciano, a/k/a Robert Lee Mayer, an incarcerated person located in the Texas Department of Criminal Justice's Gib Lewis Unit, Woodville, Texas 75990, and his court appointed Guardian ad litem, Tyler L. Cline, Esq., of Weirton, West Virginia, 76062-4500	SWN Production Company, LLC	18.00%	56/110
Robert R. Darrow	SWN Production Company, L.L.C.	16.00%	42/372
Robyn Hagerty, a single woman	SWN Production Company, L.L.C.	16.00%	51/658
Ronald Mayer and Debra Mayer, husband and wife	SWN Production Company, L.L.C.	16.00%	46/1
Sandra Salkovich and Ronald J. Salkovick II, wife and husband	SWN Production Company, LLC	16.00%	50/536
Sara A. Fulton, a single woman	SWN Production Company, L.L.C.	16.00%	40/564
Shelli Wheeler and Anthony R. Wheeler, wife and husband	SWN Production Company, L.L.C.	16.00%	50/411
Stephen C. Emery and Cathy J. Emery, husband and wife	SWN Production Company, L.L.C.	16.00%	47/549
Terri J. Brock and Steve E. Brock, wife and husband	SWN Production Company, L.L.C.	16.00%	42/512
Robert A. Tessean, Richard I. Tessean and Patricia A. Harnar, acting as Trustees of the Tessean Family Revocable Living Trust, dated December 29th, 1993	SWN Production Company, L.L.C.	16.00%	52/639
Lisa R. Emery, a single woman	SWN Production Company, LLC	18.00%	56/577
David Drake and Vicki Drake, husband and wife	SWN Production Company, LLC	18.00%	56/472
Dennis A. Strauss and Vicky M. Strauss, husband and wife	SWN Production Company, LLC	18.00%	56/561
Kathleen L. Robertson, a widow	SWN Production Company, LLC	18.00%	56/569
Michelle Campbell, a single woman	SWN Production Company, LLC	18.00%	56/735
Sharron Larrison and Thomas Larrison, wife and husband	SWN Production Company, LLC	18.00%	56/751
Anita Williams, divorced and not remarried	SWN Production Company, LLC	18.00%	56/743
SWN Production Company, LLC (Company Owned Minerals)		12.50%	395/400
SWN Production Company, LLC (Company Owned Minerals)		12.50%	(Mineral Deed) 389/696
SWN Production Company, LLC (Company Owned Minerals)		12.50%	(Mineral Deed) 391/405
SWN Production Company, LLC (Company Owned Minerals)		12.50%	(Mineral Deed) 382/105
SWN Production Company, LLC (Company Owned Minerals)		12.50%	(Mineral Deed) 389/567
			(Mineral Deed)

RECEIVED
Office of Oil and Gas
MAY 14 2020

4700900257
WV Department of
Environmental Protection

SWN Production Company, LLC (Company Owned Minerals)	12.50%	388/629 (Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)	12.50%	383/47 (Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)	12.50%	381/226 (Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)	12.50%	383/138 (Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)	12.50%	383/51 (Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)	12.50%	388/564 (Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)	12.50%	383/143 (Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)	12.50%	381/218 (Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)	12.50%	381/222 (Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)	12.50%	400/464 (Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)	12.50%	399/307 (Mineral Deed)
SWN Production Company, LLC (Company Owned Minerals)	12.50%	399/304 (Mineral Deed)
Royalty Owners	N/A	N/A

25) 04-C15H-0016-0000	Dale W. Gaynor, Jr. and Karen S. Gaynor, husband and wife	SWN Production Company, L.L.C.	17.00%	35/527	1.15%	★
	Betty White and Stuart White, wife and husband	SWN Production Company, L.L.C.	16.00%	44/317		
	Bonnie Lou Gruber, a widow	SWN Production Company, L.L.C.	16.00%	43/517		
	Charles Douglas Lane, a widower	SWN Production Company, L.L.C.	16.00%	40/697		
	Larry Green and Cindy Green, husband and wife	SWN Production Company, L.L.C.	16.00%	40/705		
	Crystal M. Hooker and James M. Hooker, wife and husband	SWN Production Company, L.L.C.	16.00%	50/787		
	Debbie Lykeski and Gerald Lykeski, wife and husband	SWN Production Company, L.L.C.	16.00%	47/557		
	Dolores J. Bobovnik and Donald S. Bobovnik, wife and husband	SWN Production Company, L.L.C.	18.00%	46/624		
	Dorothy Duke and Edward Duke, wife and husband	SWN Production Company, L.L.C.	16.00%	40/540		
	Frank E. Cominotti and Marilyn Cominotti, husband and wife	SWN Production Company, L.L.C.	16.00%	47/686		
	Gary F. Obloy and Denise I. Obloy, husband and wife	SWN Production Company, L.L.C.	16.00%	45/117		
	James Neal Emery and Renee R. Emery, husband and wife	SWN Production Company, L.L.C.	16.00%	43/509		
	Joann Hagerty, a widow	SWN Production Company, L.L.C.	16.00%	51/167		
	John W. Obloy, Jr. and Janet Obloy, husband and wife	SWN Production Company, L.L.C.	16.00%	46/666		
	Karen Rich and Richard Rich, wife and husband	SWN Production Company, L.L.C.	16.00%	42/528		

RECEIVED
Office of Oil and Gas
MAY 14 2020
WV Department of
Environmental Protection

Keith Jay Fischer and Dawn Marie Fischer, husband and wife	SWN Production Company, L.L.C.	16.00%	47/541
Kenda Learn and Todd Learn, husband and wife	SWN Production Company, L.L.C.	16.00%	47/756
Kimberly Cox, a single woman	SWN Production Company, L.L.C.	16.00%	51/59
Loretta J. Barker, a widow	SWN Production Company, L.L.C.	16.00%	42/504
Marion David Ott and Janice L. Ott, husband and wife	SWN Production Company, L.L.C.	16.00%	40/475
Marquita Clyburn, a single woman	SWN Production Company, L.L.C.	16.00%	45/17
Mary Catherine Thoms-Ott, a widow	SWN Production Company, L.L.C.	16.00%	40/713
Richard G. Hlinka and Mary Lou Hagerty Hlinka, husband and wife	SWN Production Company, L.L.C.	16.00%	41/113
Orie N. Young and Bernie A. Young, wife and husband	SWN Production Company, L.L.C.	16.00%	51/9
Patricia A. Garcar, a single woman	SWN Production Company, L.L.C.	16.00%	46/525
Patricia L. Fish, a widow	SWN Production Company, L.L.C.	16.00%	42/364
Patrick Hagerty and Dalene Hagerty, husband and wife	SWN Production Company, L.L.C.	16.00%	52/307
Rebecca Hagerty, a single woman	SWN Production Company, L.L.C.	16.00%	50/74
Renee Kellar, a single woman	SWN Production Company, L.L.C.	16.00%	45/9
Robert D. Barnes and Rhonda L. Barnes, husband and wife	SWN Production Company, L.L.C.	16.00%	39/654
Rita K. Wineman, a widow	SWN Production Company, L.L.C.	16.00%	42/520
Connie Lou Gilmore, a widow	SWN Production Company, L.L.C.	16.00%	45/109
Robert Lee Marciano, a/k/a Robert Lee Mayer, an incarcerated person located in the Texas Department of Criminal Justice's Gib Lewis Unit, Woodville, Texas 75990, and his court appointed Guardian ad litem, Tyler L. Cline, Esq., of Weirton, West Virginia, 76062-4500	SWN Production Company, LLC	18.00%	56/110
Robert R. Darrow	SWN Production Company, L.L.C.	16.00%	42/372
Robyn Hagerty, a single woman	SWN Production Company, L.L.C.	16.00%	51/658
Ronald Mayer and Debra Mayer, husband and wife	SWN Production Company, L.L.C.	16.00%	46/1
Sandra Salkovich and Ronald J. Salkovick II, wife and husband	SWN Production Company, LLC	16.00%	50/536
Sara A. Fulton, a single woman	SWN Production Company, L.L.C.	16.00%	40/564
Shelli Wheeler and Anthony R. Wheeler, wife and husband	SWN Production Company, L.L.C.	16.00%	50/411
Stephen C. Emery and Cathy J. Emery, husband and wife	SWN Production Company, L.L.C.	16.00%	47/549
Terri J. Brock and Steve E. Brock, wife and husband	SWN Production Company, L.L.C.	16.00%	42/512
Robert A. Tessean, Richard I. Tessean and Patricia A. Harnar, acting as Trustees of the Tessean Family Revocable Living Trust, dated December 29th, 1993	SWN Production Company, L.L.C.	16.00%	52/639
Lisa R. Emery, a single woman	SWN Production Company, LLC	18.00%	56/577
David Drake and Vicki Drake, husband and wife	SWN Production Company, LLC	18.00%	56/472
Dennis A. Strauss and Vicky M. Strauss, husband and wife	SWN Production Company, LLC	18.00%	56/561
Kathleen L. Robertson, a widow	SWN Production Company, LLC	18.00%	56/569
Michelle Campbell, a single woman	SWN Production Company, LLC	18.00%	56/735

	Sharron Larrison and Thomas Larrison, wife and husband	SWN Production Company, LLC	18.00%	56/751		
	Anita Williams, divorced and not remarried	SWN Production Company, LLC	18.00%	56/743		
	SWN Production Company, LLC (Company Owned Minerals)		12.50%	395/400		
	SWN Production Company, LLC (Company Owned Minerals)		12.50%	(Mineral Deed) 389/696		
	SWN Production Company, LLC (Company Owned Minerals)		12.50%	(Mineral Deed) 391/405		
	SWN Production Company, LLC (Company Owned Minerals)		12.50%	(Mineral Deed) 382/105		
	SWN Production Company, LLC (Company Owned Minerals)		12.50%	(Mineral Deed) 389/567		
	SWN Production Company, LLC (Company Owned Minerals)		12.50%	(Mineral Deed) 388/629		
	SWN Production Company, LLC (Company Owned Minerals)		12.50%	(Mineral Deed) 383/47		
	SWN Production Company, LLC (Company Owned Minerals)		12.50%	(Mineral Deed) 381/226		
	SWN Production Company, LLC (Company Owned Minerals)		12.50%	(Mineral Deed) 383/138		
	SWN Production Company, LLC (Company Owned Minerals)		12.50%	(Mineral Deed) 383/51		
	SWN Production Company, LLC (Company Owned Minerals)		12.50%	(Mineral Deed) 388/564		
	SWN Production Company, LLC (Company Owned Minerals)		12.50%	(Mineral Deed) 383/143		
	SWN Production Company, LLC (Company Owned Minerals)		12.50%	(Mineral Deed) 381/218		
	SWN Production Company, LLC (Company Owned Minerals)		12.50%	(Mineral Deed) 381/222		
	SWN Production Company, LLC (Company Owned Minerals)		12.50%	(Mineral Deed) 400/464 (Mineral		
	SWN Production Company, LLC (Company Owned Minerals)		12.50%	Deed) 399/307		
	SWN Production Company, LLC (Company Owned Minerals)		12.50%	(Mineral Deed) 399/304 (Mineral		
	Royalty Owners	N/A	N/A	Deed) N/A		
26)	04-C15D-0040-0000	Val Jean DeLong, Trustee of the 2011 DeLong Keystone Family Trust dated April 20, 2011	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	28/182 30/480	0.00%
27)	04-C15D-0039-0000	William C. Black and Heather N. Black, Husband and Wife	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	28/427 30/480	0.00%
28)	04-C15D-0036-0000	Dolly's LLC	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	28/437 30/480	0.00%

4700900257

RECEIVED
Office of Oil and Gas
MAY 14 2020
WV Department of
Environmental Protection

29)	04-C15D-0035-0000	James K. Warrick, a single man, and Burl D. Warrick, a single man	SWN Production Company, L.L.C.	17.00%	45/187	0.00%
30)	04-C15D-0034-0000	Clondell Barkley, a Widow	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	28/412 30/480	0.00%
31)	04-C15D-0004-0000	John M. Kafton, a married man dealing in his sole and separate property Karen E. Kafton a/k/a Karen K. Kafton, a single woman	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC SWN Production Company, LLC and Equinor USA Onshore Properties Inc. SWN Production Company, LLC and Equinor USA Onshore Properties Inc. SWN Production Company, LLC and Equinor USA Onshore Properties Inc. SWN Production Company, LLC and Equinor USA Onshore Properties Inc. SWN Production Company, LLC and Equinor USA Onshore Properties Inc.	18.00% 15.00% 15.00% 12.50% 18.00% 18.00% 18.00% 18.00% 18.00% 18.00% 18.00% 18.00% 18.00% 18.00% 18.00%	19/626 30/480 19/634 30/480 19/622 30/480 19/630 30/480 55/149 55/155 55/173 55/179 55/167 55/161	0.00%
32)	04-C15D-0006-0000	John M. Kafton, a married man dealing in his sole and separate property Karen E. Kafton a/k/a Karen K. Kafton, a single woman	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC SWN Production Company, LLC and Equinor USA Onshore Properties Inc. SWN Production Company, LLC and Equinor USA Onshore Properties Inc. SWN Production Company, LLC and Equinor USA Onshore Properties Inc. SWN Production Company, LLC and Equinor USA Onshore Properties Inc. SWN Production Company, LLC and Equinor USA Onshore Properties Inc.	18.00% 15.00% 15.00% 12.50% 18.00% 18.00% 18.00% 18.00% 18.00% 18.00% 18.00% 18.00% 18.00% 18.00% 18.00%	19/626 30/480 19/634 30/480 19/622 30/480 19/630 30/480 55/149 55/155 55/173 55/179 55/167 55/161	0.00%

RECEIVED
Office of Land and Gas
MAY 14 2020
WV Department of
Environmental Protection

33) 04-C15D-0007-0000	John M. Kafton, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	18.00%	19/626	0.00%
	Karen E. Kafton a/k/a Karen K. Kafton, a single woman	SWN Production Company, LLC		30/480	
		Chesapeake Appalachia, L.L.C.	15.00%	19/634	
		SWN Production Company, LLC		30/480	
	Mark A. Kafton, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	15.00%	19/622	
	Linda J. Meadows, a married woman dealing in her sole and separate property	SWN Production Company, LLC		30/480	
	John D. Kafton, Jr., married	Chesapeake Appalachia, L.L.C.	12.50%	19/630	
		SWN Production Company, LLC		30/480	
	Diana R. Soltis, married	SWN Production Company, LLC and Equinor USA Onshore Properties Inc.	18.00%	55/149	
	Richard J. Kafton, married	SWN Production Company, LLC and Equinor USA Onshore Properties Inc.	18.00%	55/155	
34) 04-C15D-0008-0001	John M. Kafton, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	18.00%	19/626	0.00%
	Karen E. Kafton a/k/a Karen K. Kafton, a single woman	SWN Production Company, LLC		30/480	
		Chesapeake Appalachia, L.L.C.	15.00%	19/634	
		SWN Production Company, LLC		30/480	
	Mark A. Kafton, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	15.00%	19/622	
	Linda J. Meadows, a married woman dealing in her sole and separate property	SWN Production Company, LLC		30/480	
	John D. Kafton, Jr., married	Chesapeake Appalachia, L.L.C.	12.50%	19/630	
		SWN Production Company, LLC		30/480	
	Diana R. Soltis, married	SWN Production Company, LLC and Equinor USA Onshore Properties Inc.	18.00%	55/149	
	Richard J. Kafton, married	SWN Production Company, LLC and Equinor USA Onshore Properties Inc.	18.00%	55/155	
35) 04-C15D-0008-0000	John M. Kafton, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	18.00%	19/626	0.00%
	Karen E. Kafton a/k/a Karen K. Kafton, a single woman	SWN Production Company, LLC		30/480	
		Chesapeake Appalachia, L.L.C.	15.00%	19/634	
		SWN Production Company, LLC		30/480	
	Mark A. Kafton, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	15.00%	19/622	
	Linda J. Meadows, a married woman dealing in her sole and separate property	SWN Production Company, LLC		30/480	
	John D. Kafton, Jr., married	Chesapeake Appalachia, L.L.C.	12.50%	19/630	
		SWN Production Company, LLC		30/480	
	Diana R. Soltis, married	SWN Production Company, LLC and Equinor USA Onshore Properties Inc.	18.00%	55/149	
	Richard J. Kafton, married	SWN Production Company, LLC and Equinor USA Onshore Properties Inc.	18.00%	55/155	

RECEIVED
Office of Oil and Gas
MAY 14 2020

WV Department of
Environmental Protection

700900257

	Mark A. Kafton, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	15.00%	19/622		
	Linda J. Meadows, a married woman dealing in her sole and separate property	SWN Production Company, LLC		30/480		
	John D. Kafton, Jr., married	Chesapeake Appalachia, L.L.C.	12.50%	19/630		
		SWN Production Company, LLC		30/480		
		SWN Production Company, LLC and Equinor	18.00%	55/149		
		USA Onshore Properties Inc.				
	Diana R. Soltis, married	SWN Production Company, LLC and Equinor	18.00%	55/155		
		USA Onshore Properties Inc.				
	Richard J. Kafton, married	SWN Production Company, LLC and Equinor	18.00%	55/173		
		USA Onshore Properties Inc.				
	Linda L. Gereg, married	SWN Production Company, LLC and Equinor	18.00%	55/179		
		USA Onshore Properties Inc.				
	Marsha J. Bland, single	SWN Production Company, LLC and Equinor	18.00%	55/167		
		USA Onshore Properties Inc.				
	Joyce L Surbaugh, single	SWN Production Company, LLC and Equinor	18.00%	55/161		
		USA Onshore Properties Inc.				
36)	04-C15D-0010-0000	John M. Kafton, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	18.00%	19/626	0.00%
		Karen E. Kafton a/k/a Karen K. Kafton, a single woman	SWN Production Company, LLC		30/480	
			Chesapeake Appalachia, L.L.C.	15.00%	19/634	
			SWN Production Company, LLC		30/480	
		Mark A. Kafton, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	15.00%	19/622	
		Linda J. Meadows, a married woman dealing in her sole and separate property	SWN Production Company, LLC		30/480	
		John D. Kafton, Jr., married	Chesapeake Appalachia, L.L.C.	12.50%	19/630	
			SWN Production Company, LLC		30/480	
			SWN Production Company, LLC and Equinor	18.00%	55/149	
			USA Onshore Properties Inc.			
		Diana R. Soltis, married	SWN Production Company, LLC and Equinor	18.00%	55/155	
			USA Onshore Properties Inc.			
		Richard J. Kafton, married	SWN Production Company, LLC and Equinor	18.00%	55/173	
			USA Onshore Properties Inc.			
		Linda L. Gereg, married	SWN Production Company, LLC and Equinor	18.00%	55/179	
			USA Onshore Properties Inc.			
		Marsha J. Bland, single	SWN Production Company, LLC and Equinor	18.00%	55/167	
			USA Onshore Properties Inc.			
		Joyce L Surbaugh, single	SWN Production Company, LLC and Equinor	18.00%	55/161	
			USA Onshore Properties Inc.			
37)	04-C11S-0023-0000	Troy A. Lucas, a single man	SWN Production Company, LLC	18.00%	55/105	0.00%
38)	04-CC11-0091-0000	John M. Kafton, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	18.00%	19/626	0.00%
		Karen E. Kafton a/k/a Karen K. Kafton, a single woman	SWN Production Company, LLC		30/480	
			Chesapeake Appalachia, L.L.C.	15.00%	19/634	
			SWN Production Company, LLC		30/480	
		Mark A. Kafton, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	15.00%	19/622	
			SWN Production Company, LLC		30/480	

4700900257
 RECEIVED
 Office of Oil and Gas
 MAY 14 2020
 WV Department of
 Environmental Protection

	Linda J. Meadows, a married woman dealing in her sole and separate property	Chesapeake Appalachia, L.L.C.	12.50%	19/630	
	John D. Kafton, Jr., married	SWN Production Company, LLC		30/480	
		SWN Production Company, LLC and Equinor	18.00%	55/149	
	Diana R. Soltis, married	USA Onshore Properties Inc.			
		SWN Production Company, LLC and Equinor	18.00%	55/155	
	Richard J. Kafton, married	USA Onshore Properties Inc.			
		SWN Production Company, LLC and Equinor	18.00%	55/173	
	Linda L. Gereg, married	USA Onshore Properties Inc.			
		SWN Production Company, LLC and Equinor	18.00%	55/179	
	Marsha J. Bland, single	USA Onshore Properties Inc.			
		SWN Production Company, LLC and Equinor	18.00%	55/167	
	Joyce L Surbaugh, single	USA Onshore Properties Inc.			
		SWN Production Company, LLC and Equinor	18.00%	55/161	
		USA Onshore Properties Inc.			
39) 04-CC11-0090-0000	John M. Kafton, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	18.00%	19/626	0.00%
	Karen E. Kafton a/k/a Karen K. Kafton, a single woman	SWN Production Company, LLC		30/480	
		Chesapeake Appalachia, L.L.C.	15.00%	19/634	
		SWN Production Company, LLC		30/480	
	Mark A. Kafton, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	15.00%	19/622	
		SWN Production Company, LLC		30/480	
	Linda J. Meadows, a married woman dealing in her sole and separate property	Chesapeake Appalachia, L.L.C.	12.50%	19/630	
	John D. Kafton, Jr., married	SWN Production Company, LLC		30/480	
		SWN Production Company, LLC and Equinor	18.00%	55/149	
	Diana R. Soltis, married	USA Onshore Properties Inc.			
		SWN Production Company, LLC and Equinor	18.00%	55/155	
	Richard J. Kafton, married	USA Onshore Properties Inc.			
		SWN Production Company, LLC and Equinor	18.00%	55/173	
	Linda L. Gereg, married	USA Onshore Properties Inc.			
		SWN Production Company, LLC and Equinor	18.00%	55/179	
	Marsha J. Bland, single	USA Onshore Properties Inc.			
		SWN Production Company, LLC and Equinor	18.00%	55/167	
	Joyce L Surbaugh, single	USA Onshore Properties Inc.			
		SWN Production Company, LLC and Equinor	18.00%	55/161	
		USA Onshore Properties Inc.			
40) 04-CC11-0089-0000	John M. Kafton, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	18.00%	19/626	0.00%
	Karen E. Kafton a/k/a Karen K. Kafton, a single woman	SWN Production Company, LLC		30/480	
		Chesapeake Appalachia, L.L.C.	15.00%	19/634	
		SWN Production Company, LLC		30/480	
	Mark A. Kafton, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	15.00%	19/622	
		SWN Production Company, LLC		30/480	
	Linda J. Meadows, a married woman dealing in her sole and separate property	Chesapeake Appalachia, L.L.C.	12.50%	19/630	
	John D. Kafton, Jr., married	SWN Production Company, LLC		30/480	
		SWN Production Company, LLC and Equinor	18.00%	55/149	
		USA Onshore Properties Inc.			

4700900257

RECEIVED
Office of Oil and Gas

MAY 14 2020

WV Department of
Environmental Protection

	Diana R. Soltis, married	SWN Production Company, LLC and Equinor USA Onshore Properties Inc.	18.00%	55/155		
	Richard J. Kafton, married	SWN Production Company, LLC and Equinor USA Onshore Properties Inc.	18.00%	55/173		
	Linda L. Gereg, married	SWN Production Company, LLC and Equinor USA Onshore Properties Inc.	18.00%	55/179		
	Marsha J. Bland, single	SWN Production Company, LLC and Equinor USA Onshore Properties Inc.	18.00%	55/167		
	Joyce L Surbaugh, single	SWN Production Company, LLC and Equinor USA Onshore Properties Inc.	18.00%	55/161		
41)	04-CC11-0088-0000	Ramon L. Bowen, a widower	SWN Production Company, LLC	17.00%	51/699	0.00%



4700900257

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

May 6, 2020

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

RE: SWN's proposed New Well: State of WV DNR C BRK 5H in Brooke County, West Virginia, Drilling under St. Johns Road, Putney Ridge Road, Pleasant Valley Lane, and Tent Church Road.

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 St. Johns Road, Putney Ridge Road, Pleasant Valley Lane, and Tent Church 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,

Bailey Brougher
Landman – SW Appalachia
SWN Production Company, LLC

RECEIVED
Office of Oil and Gas
MAY 14 2020
WV Department of
Environmental Protection

The Right People doing the Right Things,
wisely Investing the cash flow from our
underlying Assets, will create Value+®

4700900257

**RECORDING SUPPLEMENT TO
OPERATING AGREEMENT AND FINANCING STATEMENT**

THIS AGREEMENT, entered into by and between SWN Production, Company, LLC, hereinafter referred to as "Operator," and the signatory party or parties other than Operator, hereinafter referred to individually as "Non-Operator," and collectively as "Non-Operators."

WHEREAS, the parties to this agreement are owners of all or such identified portion of Oil and Gas Leases and/or Oil and Gas Interests in the lands shown in Exhibit "A-1" (said land, Leases and Interests being hereinafter called the "Contract Area"), and in any instance in which the Leases or Interests of a party are not of record, the record owner and the party hereto that owns the interest or rights therein are shown in Exhibit "A-1";

WHEREAS, the parties hereto have executed an Operating Agreement dated **September 1st, 2020** (herein the "Operating Agreement"), covering the Contract Area for the purpose of exploring and developing such lands, Leases and Interests for Oil and Gas; and

WHEREAS, the parties hereto have executed this agreement for the purpose of imparting notice to all persons of the rights and obligations of the parties under the Operating Agreement and for the further purpose of perfecting those rights capable of perfection.

NOW, THEREFORE, in consideration of the mutual rights and obligations of the parties hereto, it is agreed as follows:

1. This agreement supplements the Operating Agreement, ~~which Agreement in its entirety is incorporated herein by reference,~~ and all terms used herein shall have the meaning ascribed to them in the Operating Agreement.
2. The parties do hereby agree that:
 - A. The Oil and Gas Leases and/or Oil and Gas Interests of the parties comprising the Contract Area shall be subject to and burdened with the terms and provisions of this agreement and the Operating Agreement, and the parties do hereby commit such Leases and Interests to the performance thereof.
 - B. The exploration and development of the Contract Area for Oil and Gas shall be governed by the terms and provisions of the Operating Agreement, as supplemented by this agreement.
 - C. All costs and liabilities incurred in operations under this agreement and the Operating Agreement shall be borne and paid, and all equipment and materials acquired in operations on the Contract Area shall be owned, by the parties hereto, as provided in the Operating Agreement.
 - D. Regardless of the record title ownership to the Oil and Gas Leases and/or Oil and Gas Interests identified on Exhibit "A-1," all production of Oil and Gas from the Contract Area shall be owned by the parties as provided in the Operating Agreement; provided nothing contained in this agreement shall be deemed an assignment or cross-assignment of interests covered hereby.
 - E. Each party shall pay or deliver, or cause to be paid or delivered, all burdens on its share of the production from the Contract Area as provided in the Operating Agreement.
 - F. An overriding royalty, production payment, net profits interest or other burden payable out of production hereafter created, assignments of production given as security for the payment of money and those overriding royalties, production payments and other burdens payable out of production heretofore created and defined as Subsequently Created Interests in the Operating Agreement shall be (i) borne solely by the party whose interest is burdened therewith, (ii) subject to suspension if a party is required to assign or relinquish to another

RECEIVED
Office of Oil and Gas

OCT 28 2020

WV Department of
Environmental Protection

4700900257

SWN Production Company, LLC, who has prepared and circulated this form for execution, represents and warrants that the form was printed from and, with the exception(s) listed below, is identical to the AAPL Form 610RS-1989 Model Form Recording Supplement to Operating Agreement and Financing Statement, as published in computerized form by Forms On-A-Disk, Inc. No changes, alterations, or modifications, other than those made by strikethrough and/or insertion and that are clearly recognizable as changes in Articles II, III.B, IV.A, V, VI, VIII, IX, X, XIII, XIV.B, and XVI, have been made to the form.

IN WITNESS WHEREOF, this agreement shall be effective as of the **September 1st, 2020**.

OPERATOR

ATTEST OR WITNESS

Barley Baugh

SWN Production Company, LLC

By: [Signature]

Printed
Name: Paul M. Bacho
Title: Land Manager
Date: 9/15/20
Address: 10000 Energy Drive, Spring, Texas 77389

ACKNOWLEDGMENTS

State of Texas :
County of Harris : SS:

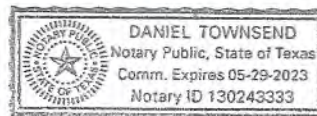
On this, the 27th day of October, 2020, before me, the undersigned officer, personally appeared **Paul M. Bacho** who acknowledged himself to be the **Land Manager** of **SWN Production Company, LLC**, a Texas limited liability company, and that he as such officer, being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing the name of the company by himself as **Land Manager**.

In Witness Whereof, I hereunto set my hand and Notarial seal.

[Signature]

Notary Public

My commission expires: May 29, 2023



RECEIVED
Office of Oil and Gas
OCT 28 2020
WV Department of
Environmental Protection

Signature page to that certain State of WV DNR C North Unit Recording Supplement to Operating Agreement and Financing Statement.

Kees, Kelly L

From: Brewer, Charles T
Sent: Tuesday, December 1, 2020 11:48 AM
To: Kees, Kelly L
Subject: FW: [External] FW: State of WV DNR C Unit

Importance: High

Got approval from our legal to move forward with this permit based on the email confirmation below. I would include the emails below as an addendum to the permit.

Taylor Brewer, B.S., M.S.
Assistant Chief - Permitting
WVDEP Office of Oil and Gas
601 57th Street, SE
Charleston, WV 25304
304-926-0499 ext. 41108

From: Carla Suszkowski <Carla_Suszkowski@SWN.COM>
Sent: Tuesday, November 24, 2020 1:43 PM
To: Brewer, Charles T <Charles.T.Brewer@wv.gov>; Harmon, Henry J <Henry.J.Harmon@wv.gov>
Cc: Chris Weikle <Chris_Weikle@SWN.COM>; Brittany Woody <Brittany_Woody@SWN.COM>
Subject: [External] FW: State of WV DNR C Unit
Importance: High

CAUTION: External email. Do not click links or open attachments unless you verify sender.

Taylor and Jason,

Please see the email below from EQNR regarding the WV DNR C 5H permit – it was my understanding from Chris and Jason’s conversation that an email could suffice. Please let me know if this will satisfy the requirements.

Carla L. Suszkowski, P.E.
Regulatory Manager – SW Appalachia
Direct: 832-796-6372

Cell: 724-561-8129
Email: Carla_Suszkowski@SWN.com

From: Bailey Brougher
Sent: Tuesday, November 24, 2020 12:40 PM
To: Carla Suszkowski <Carla_Suszkowski@SWN.COM>
Subject: FW: State of WV DNR C Unit

Carla,

Please see the confirmation from EQNR below on SWN's right to operate on the lands covering the State of WV DNR C North Unit, which includes the 6 leases they had questioned earlier this year.

Please let me know if this will be enough to get approval from the DEP on the State of WV DNR C BRK 3H and 5H permits.

Thank you,
Bailey Brougher, RPL
Landman – SW Appalachia

SWN $\frac{R^+}{A} \rightarrow V^+$
Southwestern Energy™
10000 Energy Drive
Spring TX, 77389
Bailey_Brougher@SWN.com
Office: (832) 796-7814
Cell: (832) 585-7551

From: Tyler Roche [<mailto:TYLR@equinor.com>]
Sent: Tuesday, November 24, 2020 12:19 PM
To: Bailey Brougher <Bailey_Brougher@SWN.COM>
Subject: [External] RE: State of WV DNR C Unit

Bailey,

Yes, I can confirm that SWN has the right to permit, drill, extract and produce the oil and gas underlying the lands covering the State of WV DNR C North Unit. As additional backup to confirm EQNR's support, I have provided the following documentation, all of which has been fully approved and executed by EQNR:

- State of WV DNR C North Unit JOA
- State of WV DNR C North Unit Recording Supplement to JOA

- Non-Consent Election Letter Agreement – State of WV DNR C BRK 5H
- Permit Letter Agreement – State of WV DNR C BRK 3H & 5H
- Memorandum to Permit Letter Agreement – State of WV DNR C BRK 3H & 5H

Thank you and I hope you have a wonderful Thanksgiving!

Best regards,

—

Tyler Roche
Senior Consultant Land
TE LAN MAR
Equinor US

+1 512 999 5697
tylr@equinor.com

Visitor address: 6300 Bridge Point Parkway, Bldg. 2, Suite 100, Austin, Texas 78730, USA

equinor.com

From: Bailey Brougher <Bailey_Brougher@SWN.COM>
Sent: Tuesday, November 24, 2020 11:50 AM
To: Tyler Roche <TYLR@equinor.com>
Subject: RE: State of WV DNR C Unit

Tyler,

SWN's Regulatory group has let me know that an email could and would be enough to get this approved by the DEP. Based on our Joint Operating Agreement dated September 1, 2020, can you please confirm that SWN has the right to permit, drill, extract and produce the oil and gas underlying the lands covering the State of WV DNR C North Unit?

A fully executed recording supplement is attached.

Thank you,
Bailey Brougher

Notice: This e-mail may contain privileged and/or confidential information and is intended only for the addressee. If you are not the addressee or the person responsible for delivering it to the addressee, you may not copy or distribute this communication to anyone else. If you received this communication in error, please notify us immediately by telephone or return e-mail and promptly delete the original message from your system.

May 13, 2020

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

RE: Proposed Expedited Modification: State of WV DNR C BRK 5H

Dear Ms. Adkins

Enclosed please find the required documents to modify this well from a vertical to a horizontal permit. This well is situated on the DNR's property, in Cross Creek District, Brooke County, West Virginia.

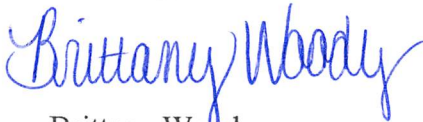
Enclosed you will find:

- Updated 6B
- Updated Casing Program
- Mylar Plat
- 6A1

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

Thank you.

Sincerely,



Brittany Woody
Senior Regulatory Analyst
Southwestern Energy Production Company, LLC

RECEIVED
Office of Oil and Gas
MAY 14 2020
WV Department of
Environmental Protection

CK# 1051374
Amt \$ 5000
Date 5/12/20

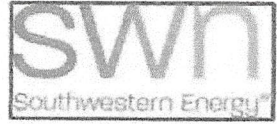
4700900257

Southwestern Energy Company

Proposed Drilling Program

Well: STATE OF WV DNR C BRK 5
 Field: PANHANDLE FIELD WET
 County: BROOKE
 SHL: 40.3024 Latitude -80.5378 Longitude
 BHL: 40.3460 Latitude -80.5545 Longitude
 KB Elev: 1,016 ft MSL KB: 26 ft AGL GL Elev: 990 ft MSL

Re-entry Rig: TBD
 Prospect: Marcellus Shale
 State: WV



PROD TOC Lead @ 1,500' MD
 PROD TOC Tail @ 5,187' MD

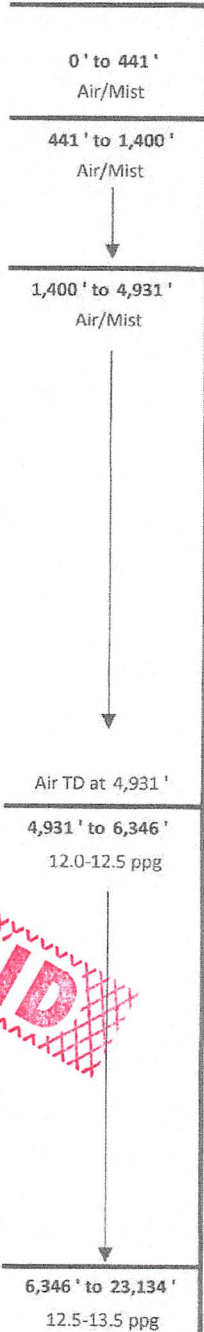
Handwritten: 2-15-20
 5-1-20

TUBULAR DETAIL

Casing String	Casing Size (in)	Weight (Min)	Grade (Min)	Planned Interval	
				From	To
Cond/Coal	20	94.0 #	J-55	0'	100'
Surface	13.375	48.0 #	H-40	0'	421'
Intermediate	9.625	36.0 #	J-55	0'	1,380'
Production	5.5	20.0 #	P-110 HP	0'	23,134'

CEMENT DETAIL

	Sacks	Class	Density
Conductor:	151	A	19.3
Surface:	415	A	15.6
Intermediate:	456	A	15.6
Production:	4253	A	15.6



KOP at 4,931' MD

Freshwater Depth - 371' TVD
 Coal Depth - 6' TVD
 Saltwater Depth - 575' TVD
 TVD - 5,632'
 TMD - 23,134'

VOID

5,632' TVD Target Center

TD at 23,134' MD
 5,427' TVD

EOB at 6,346' MD

EOB at 5,632' TVD

SHL Onondaga 5,650' TVD

Onondaga 5,445' TVD

6,346' to 23,134'

12.5-13.5 ppg

Created by: C R Hall on 04/27/2020

RECEIVED
 Office of Oil and Gas

MAY 14 2020

WV Department of
 Environmental Protection

4700900257

WW-6B
(04/15)

API NO. 47- 009
OPERATOR WELL NO. State of WV DNR C BRK 5H
Well Pad Name: State of WV DNR C BRK

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#	100'	100'	CTS
Fresh Water	13 3/8"	New	H-40	48#	421'	421'	415 sx/CTS
Coal	See	Conductor	Casing				
Intermediate	9 5/8"	New	J-55	36#	1380'	1380'	456 sx/CTS
Production	5 1/2"	New	P-110 HP	20#	23134'	23134'	Int'l 4250'sx100' inside intermediate
Tubing							
Liners							

C. Hill 5-1-20

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	20"	30"	0.25	2120	81	Class A	1.19/50% Excess
Fresh Water	13 3/8"	17.5"	0.380	2740	633	Class A	1.19/50% Excess
Coal	See	Conductor	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							

VOID

PACKERS

Kind:				
Sizes:				
Depths Set:				

RECEIVED
Office of Oil and Gas

MAY 14 2020

WV Department of
Environmental Protection

4700900257

EXPEDITED MODIFICATION

EXP Date Rec'd: 5/14/20

EXP Due Date: 6/2/20

on hold waiting for agreement

API: 47-009-00257

Well Name: 5H

Pad name: WUDNRC

Operator: SWN

Type of Modification: Vertical to horizontal

Notifications needed for the modification?

Yes (30days)

No (20 days)

Shortend FW strings

Review Notes:

	New	Orig
TVD	5632 (Marcellus)	5755 (Onondaga)
IMD	23134	5755
HL	16105.77	0
FW	371 (Near by water well)	396 (Salinity Profile)
Conductor	100	100
FW Casing	421	496 75' shallower
Int Casing	1380	1454
Prod. Casing	23134	5755
SW	575	575

* Wellhead waiver

* Contingency on 21-25

* No Coal.

* Need copy of agreement w/ Equinor USA Onshore properties

* Taylor calling Carla