



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

Monday, May 8, 2023
WELL WORK PERMIT
Horizontal 6A / New Drill

SWN PRODUCTION COMPANY, LLC
POST OFFICE BOX 12359

SPRING, TX 773914954

Re: Permit approval for William Ritchea WTZ 405
47-103-03578-00-00

This well work permit is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to any additional specific conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas Inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days of completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

Per 35 CSR 4-5.2.g this permit will expire in two (2) years from the issue date unless 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 the typed name and title.

James A. Martin
Chief

Operator's Well Number: William Ritchea WTZ 405
Farm Name: William D & Shirley E Ritchea
U.S. WELL NUMBER: 47-103-03578-00-00
Horizontal 6A New Drill
Date Issued: 5/8/2023

Promoting a healthy environment.

05/11/2023

PERMIT CONDITIONS

West Virginia Code § 22-6A-8(d) allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

1. This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACE). Through this permit, you are hereby being advised to consult with USACE regarding this proposed activity.
2. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6A-5a (12), which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than one hundred (100) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
3. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the moisture content of the fill material shall be within limits as determined by the Standard Proctor Density test of the actual soils used in specific engineered fill, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort, to achieve 95 % compaction of the optimum density. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.
4. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.
5. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled *Water Well Regulations*, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.
6. Pursuant to the requirements pertaining to the sampling of domestic water supply wells/springs the operator shall, no later than thirty (30) days after receipt of analytical data provide a written copy to the Chief and any of the users who may have requested such analyses.
7. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Also, 24 hours prior to the initiation of the completion process the operator shall notify the Chief or his designee.
8. During the completion process the operator shall monitor annular pressures and report any anomaly noticed to the chief or his designee immediately.
9. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.
10. During the casing and cementing process, in the event cement does not return to the surface, the oil and gas inspector shall be notified within 24 hours.
11. The operator shall provide to the Office of Oil and Gas the dates of each of the following within 30 days of their occurrence: completion of construction of the well pad, commencement of drilling, cessation of drilling, completion of any other permitted well work, and completion of the well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov.

05/11/2023

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 103- Wetzell 007-Pro 681-Wileyville
Operator ID County District Quadrangle

2) Operator's Well Number: William Ritchea WTZ 405H Well Pad Name: William Ritchea WTZ pad

3) Farm Name/Surface Owner: William D. Ritchea & Shirley E. Ritchea Public Road Access: Harlan Ridge

4) Elevation, current ground: 1563' Elevation, proposed post-construction: 1563'

5) Well Type (a) Gas Oil _____ Underground Storage _____
Other _____
(b) If Gas Shallow Deep _____
Horizontal

6) Existing Pad: Yes or No Yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Target Formation- Marcellus, Up-Dip well to the North, Target Top TVD- 7606', Target Base TVD- 7654', Anticipated Thickness- 48', Associated Pressure- 4975

8) Proposed Total Vertical Depth: 7636'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 17171'

11) Proposed Horizontal Leg Length: 4407.26'

12) Approximate Fresh Water Strata Depths: 541'

13) Method to Determine Fresh Water Depths: BOFW determined from salinity calculations from William Ritchea WTZ 3H (API 47-103-03129)

14) Approximate Saltwater Depths: 1556'- Salinity Profile analysis

15) Approximate Coal Seam Depths: 1492'

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: _____

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McGee
4/17/23
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05/11/2023

WW-6B
(04/15)

4710303578
 API NO. 47-009
 OPERATOR WELL NO. William Ritchea WTZ 405H
 Well Pad Name: William Ritchea WTZ pad

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#	110'	110' ✓	CTS
Fresh Water	13 3/8"	New	J-55	54.4#	591'	591' ✓	685 sx/CTS
Coal	See	Interm	Casing				
Intermediate	9 5/8"	New	J-55	36#	2957'	2957' ✓	1129 sx/CTS
Production	5 1/2"	New	P-110 HP	20#	17171'	17171' ✓	lead 2741sx/Tail 1860sx/ 100' Inside
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"	0.380	2730	633	Class A	1.20/30% Excess
Coal	See	Interm	Casing				
Intermediate	9 5/8"	12 1/4"	0.395	3950	1768	Class A	1.19/40% Excess
Production	5 1/2"	8 3/4"-8 1/2"	0.361	14360	10500	Class A	1.19/5% Excess
Tubing							
Liners							

PACKERS

Kind:				RECEIVED Office of Oil and Gas
Sizes:				APR 13 2023
Depths Set:				WV Department of Environmental Protection

DMG
4/17/23
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WW-6B
(10/14)

47 10 30 35 78
API NO. 47-009 -
OPERATOR WELL NO. William Ritchea WTZ 405H
Well Pad Name: William Ritchea WTZ pad

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): 12.2

22) Area to be disturbed for well pad only, less access road (acres): 9.7

23) Describe centralizer placement for each casing string:

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

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

See Attachment ***

25) Proposed borehole conditioning procedures:

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

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*Note: Attach additional sheets as needed.

CEMENT ADDITIVES						
INTERVAL	SCHLUMBERGER PRODUCT NAME	BJ PRODUCT NAME	NEXTier PRODUCT NAME	PRODUCT USE	CHEMICAL NAME	CAS-Number
SURFACE (FRESHWATER) <small>up to 3%</small>	XXXXXXXXXX	INTEGRA SEAL	CJ600	LOST CIRC MATERIAL	CELLOPHANE FLAKES	9005-81-6
	S001	A-7P	0110	ACCELERATOR	CALCIUM CHLORIDE	10043-52-4
COAL PROTECTION <small>up to 3%</small>	XXXXXXXXXX	INTEGRA SEAL	0600	LOST CIRC MATERIAL	CELLOPHANE FLAKES	9005-81-6
	S001	A-7P	CJ110	ACCELERATOR	CALCIUM CHLORIDE	10043-52-4
INTERMEDIATE	D020	BENTONITE	CJ020	EXTENDER	BENTONITE	1302-78-9
	0047	FP 28L	XXXXXXXXXX	LIQUID ANTIFOAM AGENT	POLYPROPYLENE GLYCOL	25322-69-4
	XXXXXXXXXX	INTEGRA SEAL	CJ600	LOST CIRC MATERIAL	CELLOPHANE FLAKES	9005-81-6
	CemNet	XXXXXXXXXX	XXXXXXXXXX	LOST CIRC MATERIAL	COATED FIBERGLASS FIBERS	PROPRIETARY
	SUGAR	SUGAR	CJ795	CMT RETARDER	SUCROSE	57-50-1
	S001	A-7P	CJ110	ACCELERATOR	CALCIUM CHLORIDE	10043-52-4
PRODUCTION	XXXXXXXXXX	XXXXXXXXXX	CJ111	ACCELERATOR	SODIUM CHLORIDE	7440-23-5
	XXXXXXXXXX	55-IWV	0880	SURFACTANT	NONIONIC SURFACTANT	6540-99-4
	DO47	FP 28L	XXXXXXXXXX	LIQUID ANTIFOAM AGENT	POLYPROPYLENE GLYCOL	25322-69-4
	XXXXXXXXXX	XXXXXXXXXX	OX157011	SOLID ANTIFOAM AGENT	FULLERS EARTH(ATTAPULGITE)	8031-18-3
	XXXXXXXXXX	XXXXXXXXXX	CJ540	HP FLUID LOSS ADDITIVE	ALIPHATICAMIDE POLYMER	PROPRIETARY
	0255	XXXXXXXXXX	XXXXXXXXXX	MED TEMP FLUID LOSS ADDITIVE	POLYACRILIC POLYMER	PROPRIETARY
	XXXXXXXXXX	XXXXXXXXXX	CJ213	RETARDER	CHRYSTALLINE SILICA	14808-60-7
	XXXXXXXXXX	FL-66	0501	LOW TEMP FLUID LOSS ADD	POWDERED POLYSACCHARIDE	PROPRIETARY
	XXXXXXXXXX	BENTONITE	CJ020	EXTENDER	BENTONITE	1302-78-9
	D208	ASA-301	XXXXXXXXXX	VISCOSI FIER/ANTI-SETTLING AGENT	REFINED POLYMER/CHRYSTALLINE SILICA	PROPRIETARY
	D198	R-3	XXXXXXXXXX	CEMENT RETARDER	LIGNIN	8068-51-6
	SUGAR	SUGAR	CJ795	CEMENT RETARDER	SUCROSE	57-50-1
	D065	XXXXXXXXXX	XXXXXXXXXX	DISPERSANT	SODIUM POLYNAPHTHALENE SULFONATE	8068-51-6
D800	XXXXXXXXXX	XXXXXXXXXX	CEMENT RETARDER (Mid-Temperature)	SODIUM LIGNOSULFONATE	8061-51-6	

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05/11/2023

WW-9
(4/16)

API Number 47 - 103 - **47 10 303578**
Operator's Well No. William Ritchea Wtz 405H

**STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS**

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name SWN Production Co., LLC OP Code 494512924

Watershed (HUC 10) Fish Creek Quadrangle Wileyville

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes No

Will a pit be used? Yes No

If so, please describe anticipated pit waste: _____

Will a synthetic liner be used in the pit? Yes No If so, what ml.? _____

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number Various Approved Facilities)
- Reuse (at API Number At the next anticipated well)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain recovery and solidification on site)

Will closed loop system be used? If so, describe: Yes- See Attachment 3A

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. Air drill to KOP, fluid drill with SOBM from KOP to TD

-If oil based, what type? Synthetic, petroleum, etc. Synthetic Oil Base

Additives to be used in drilling medium? Attachment 3B

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. landfill

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) _____

-Landfill or offsite name/permit number? Meadowfill SWF- 1032, Short Creek SWF-1034, Carbon Limestone MSWL018781, Wetzel County 1021

Apex Sanitary Landfill 06-08438, Brooke Co SWF-1013, FMS 353100

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature *Brittany Woody* RECEIVED
Office of Oil and Gas
APR 4 2023

Company Official (Typed Name) Brittany Woody

Company Official Title Senior Regulatory Analyst WV Department of
Environmental Protection

Subscribed and sworn before me this 23rd day of February, 20 23

Neil Craft Notary Public

My commission expires 8/21/2024



05/11/2023

517

SWN Production Co., LLC

Proposed Revegetation Treatment: Acres Disturbed 12.2 Prevegetation pH _____

Lime as determined by pH test min.2 Tons/acre or to correct to pH 5.9

Fertilizer type 10-20-20

Fertilizer amount 600/500 lbs/acre

Mulch Hay/Straw Tons/acre

Seed Mixtures

Temporary

Permanent

Seed Type lbs/acre

Seed Type lbs/acre

Attachment 3C

Attach:

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, include dimensions (L x W x D) of the pit, and dimensions (L x W), and area in acreage, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: [Signature]

Comments: Property Reclaim, Seed & Mulch all disturbed areas.

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WV Department of
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Title: Oil & Gas Inspector

Date: 3/9/23

Field Reviewed? () Yes (/) No

**MARCELLUS WELL DRILLING PROCEDURES
AND
WELL SITE SAFETY PLAN**

47 10 303578



SWN Production Company, LLC
1300 Fort Pierpont Drive, Suite 201
Morgantown, West Virginia 26508

**API NO. 47-XXX-XXXXX
WELL NAME: William Ritchea WTZ 405H
Wileyville QUAD
Proctor DISTRICT
WETZEL COUNTY, WEST VIRGINIA**

Submitted by:

Name: Brittany Woody

Brittany Woody

Date: 2/6/2023

Title: Senior Regulatory Analyst

SWN Production Co., LLC

Approved by:

Name: *[Signature]*

Date: 3/9/23

Title: *WV Oil & Gas Inspector*

Approved by:

Name: _____

Date: _____

Title: _____

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SWN PRODUCTION COMPANY, LLC – CONFIDENTIAL

05/11/2023

Latitude: 39°42'30"

SURFACE HOLE 9,664'

Latitude: 39°42'30"

BOTTOM HOLE 11,279'

JACKSON SURVEYING INC.

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

SURFACE HOLE LOCATION (SHL):

UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,391,135.150
EASTING: 529,217.761

LANDING POINT LOCATION (LPL):

UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,391,299.922
EASTING: 530,546.801

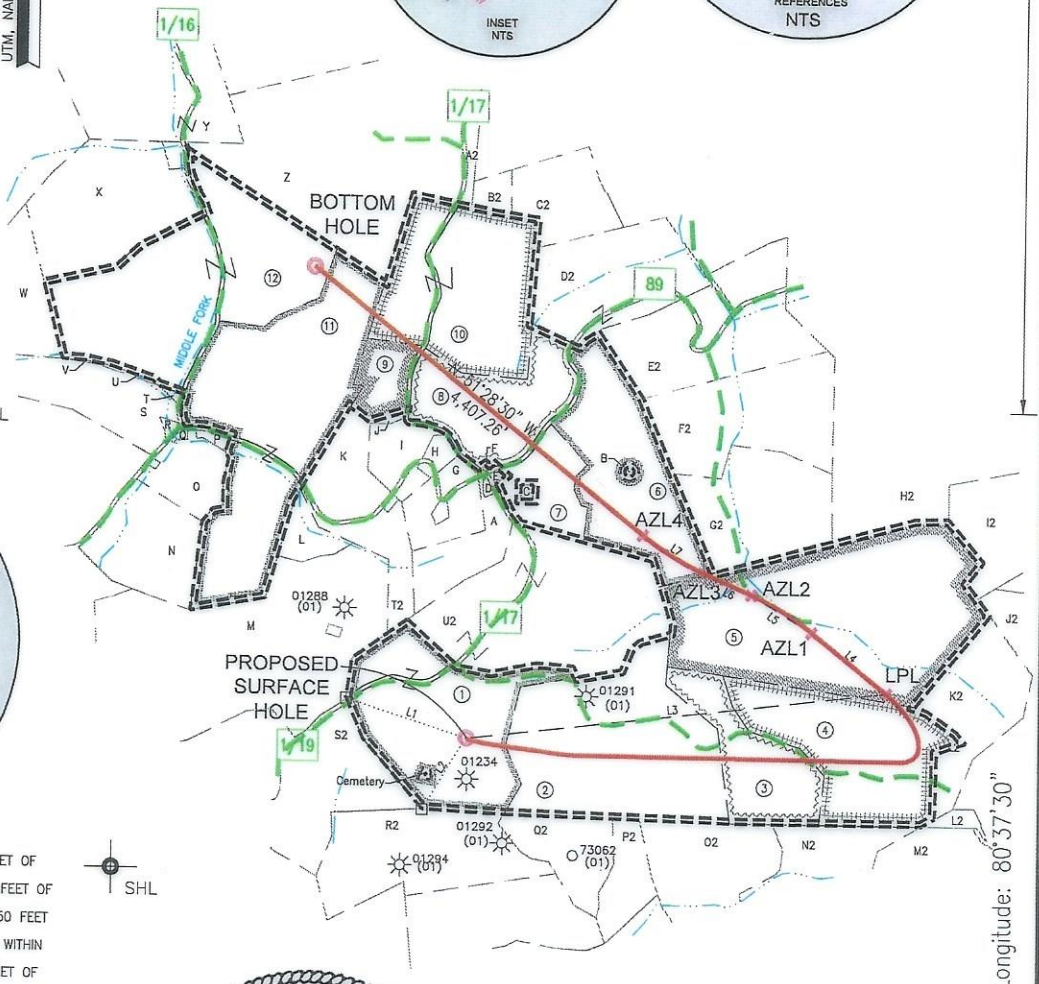
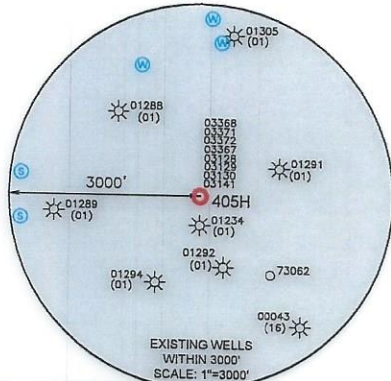
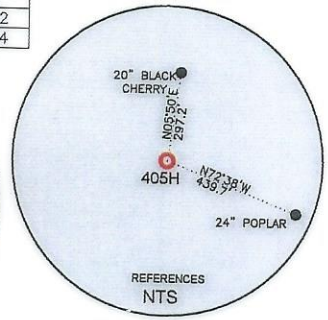
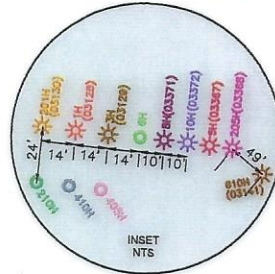
BOTTOM HOLE LOCATION (BHL):

UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,392,626.518
EASTING: 528,719.744

LINE	BEARING	DISTANCE	DESCRIPTION	MONUMENT
L1	N 72°36'56" W	1325.81'	SHL TO LANDMARK	FD. 5/8" REBAR
L2	S 32°01'08" W	877.70'	SHL TO LANDMARK	FD. 5/8" REBAR
L4	N 51°26'02" W	999.38'	LPL TO AZL1	
L6	S 66°13'40" W	551.99'	AZL2 TO AZL3	

LINE	BEARING	DISTANCE	CURVE LENGTH	DESCRIPTION
L3	N 82°55'57" E	4,393.74'	5,481.47'	SHL TO LPL
L5	N 58°49'49" W	737.09'	739.10'	AZL1 TO AZL2
L7	N 58°51'04" W	735.04'	737.04'	AZL3 TO AZL4

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.

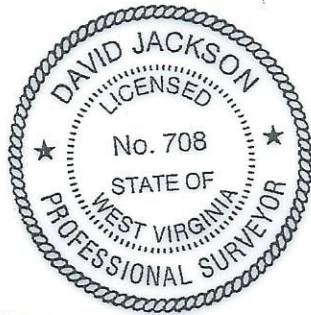
NOTES ON SURVEY

- 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



2000 0 2000

GRAPHIC SCALE IN FEET

COMPANY: **SWN** Production Company, LLC

WILLIAM RITCHEA WTZ

OPERATOR'S WELL #: 405H

API WELL #: 47 STATE 103 COUNTY PERMIT 03578 H6A

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

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

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

WATERSHED: FISH CREEK (HUC-10) ELEVATION: 1562.9' STAKED

DISTRICT: PROCTOR COUNTY: WETZEL QUADRANGLE: WILEYVILLE, WV

SURFACE OWNER: WILLIAM D. RITCHEA & SHIRLEY E. RITCHEA ACREAGE: ±62.00

OIL & GAS ROYALTY OWNER: WILLIAM D. RITCHEA & SHIRLEY E. RITCHEA ACREAGE: ±62.00

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

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

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 7,936' TMD 17,171' TMD

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



LEGEND:	REVISIONS:	DATE:
○ PROPOSED SURFACE HOLE / BOTTOM HOLE	— SURVEYED BOUNDARY	04-12-2023
⊙ EXISTING / PRODUCING WELLHEAD	— DRILLING UNIT	
LPL* LANDING POINT LOCATION	— LEASE BOUNDARY	
⊙ EXISTING WATER WELL	— PROPOSED PATH	
⊙ EXISTING SPRING		
		DRAWN BY: N. MANO
		SCALE: 1" = 2000'
		DRAWING NO:
		WELL LOCATION 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	RITCHEA WILLIAM D & SHIRLEY E (S/R)	12-15-21
TRACT	SURFACE OWNER (S)	
2	CHRISTY MICHAEL M JR ETAL & HALL SUSAN (S)	12-15-22
3	HEETER HAROLD JR ETAL (S)	12-15-23
4	FERRELL HANNAH RAINE; FERRELL JOSEPH ROSS (S)	12-15-24
5	LEMASTERS DOLLY G EST (S)	12-15-19
6	HAESSLY LAND AND TIMBER LLC (S)	12-15-05
7	HAESSLY LAND AND TIMBER LLC (S)	12-15-17
8	HAESSLY LAND AND TIMBER LLC (S)	12-15-04
9	HUGGINS JOSEPH DEAN; HUGGINS BOBBIE SUE (S)	12-15-1
10	HUGGINS JOSEPH DEAN; HUGGINS BOBBIE SUE (S)	12-10-31
11	RITCHEA WILLIAM D & SHIRLEY E (S)	12-14-09
12	GODDARD WAYNE (S)	12-09-46

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
A	RITCHEA GARY A & ALICIA L	12-15-15
B	CALVERT CECIL B HRS	12-15-5.1
C	CALVERT CEMETERY	12-15-17.1
D	RITCHEA GARY	12-15-15.1
E	STILES MARILYN DIANE; STILES JESSIE GLENN	12-15-16
F	RITCHEA JAMES L	12-15-4.1
G	STILES MARILYN DIANE; STILES JESSIE GLENN	12-15-14.2
H	URBANEK SCOTT J & URBANEK CHRYSTAL A	12-15-03
I	LEMASTERS TONY & ROBIN	12-15-02
J	LEMASTERS TONY & ROBIN	12-15-1.1
K	LEMASTERS TONY & ROBIN	12-15-13.2
L	RITCHEA WILLIAM D & SHIRLEY E	12-15-34
M	PITOSCIA WILLIAM R	12-14-16
N	LASURE MICHAEL E & VELVA C	12-14-06
O	HUGGINS WAYNE & SANDRA	12-14-09.1
P	LEMASTERS TONY R & ROBIN M	12-14-09.2
Q	HUGGINS WAYNE & SANDRA	12-14-08
R	HUGGINS WAYNE & SANDRA M	12-14-07
S	HUGGINS WAYNE & SANDRA M	12-09-46.1
T	GODDARD WAYNE	12-09-46.4
U	HUGGINS WAYNE & SANDRA M	12-09-46.2
V	GODDARD WAYNE	12-09-46.3
W	KEENEY NORMAN E JR & NANCY M	12-09-45
X	WOODSTUFF JOYCE K	12-09-44
Y	GODDARD WAYNE L	12-09-33
Z	HAESSLY HARDWOOD LUMBER CO	12-10-23
A2	RITCHEA MARY L & JAMES L	12-10-24
B2	HUGGINS JOSEPH DEAN; HUGGINS BOBBIE SUE	12-10-25
C2	SWN PRODUCTION COMPANY LLC	12-10-26
D2	HAESSLY LAND AND TIMBER LLC	12-10-32
E2	HAESSLY LAND AND TIMBER LLC	12-10-33
F2	HAESSLY LAND AND TIMBER LLC	12-15-06
G2	HAESSLY LAND AND TIMBER LLC	12-15-07
H2	DREYER JOSEPH C	12-15-08
I2	HAESSLY LAND AND TIMBER LLC	12-15-10
J2	WYKERT ERIC D & CEE JAE; WOOD JAMES G & TAMELA P	01-07-21
K2	FERRELL HANNAH RAINE; FERRELL JOSEPH ROSS	01-07-29
L2	WYKERT WAYNE & ASHLEY	01-10-14
M2	WOOD GLENN & TAMELA P	01-10-09
N2	YOHO KIMBERLY & KEITH ALLEN	12-15-29
O2	BROWN SANDY K	12-15-28
P2	BROWN SANDY K	12-15-27
Q2	CHRISTY MICHAEL M JR ETAL; HALL SUSAN	12-15-26
R2	CHRISTY MICHAEL M JR ETAL; HALL SUSAN	12-15-25
S2	PITOSCIA WILLIAM R	12-14-27
T2	URBANEK SCOTT J & CHRYSTAL A	12-15-13
U2	LEMASTERS H C HRS & MANKER CHARLES V REVOC LIVING TR	12-15-18

05/11/2023

REVISIONS: 4710303578 H6A	COMPANY:		 	
	OPERATOR'S		WILLIAM RITCHEA WTZ	
	WELL #:		405H	
	DISTRICT:	COUNTY:	STATE:	DATE: 04-12-2023
	PROCTOR	WETZEL	WV	
				DRAWN BY: N. MANO
				SCALE: N/A
				DRAWING NO:
				WELL LOCATION PLAT 2

WW-6A1
(5/13)

Operator's Well No. William Ritchea WTZ 405H

**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

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

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

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

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

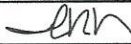
Well Operator: SWN Production Company, LLC.
 By: 
 Its: Staff Landman

EXHIBIT "A"

Attached to and made a part of the State of West Virginia Oil and Gas Form, WW-6A1, by SWN Production Company, L.L.C, as Operator
William Ritchea WTZ 405H
Wetzel County, West Virginia

#	TMP	LESSOR	LESSEE	ROYALTY	BK/PG	Interest Not Leased by SWN Production Company, LLC
1	12-15-21	William D. Ritchea and Shirley E. Ritchea, husband and wife Mobay Chemical Company Wescap Oil and Gas Company Wescap Oil and Gas Company Wescap Oil and Gas Company Inverness Petroleum Inc., c/o Petroleum Reserve Corporation Inverness Petroleum Inc. Petroleum Reserve Corporation, f/k/a Inverness Petroleum Company, Inc. Wescap Oil and Gas Company c/o Wescap Enterprises Limited Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Chesapeake Appalachia, LLC Haddad and Brooks, Inc. Bayer Corporation, successor in interest to Mobay Chemical Corporation Bayer Material-Science LLC Chesapeake Appalachia, LLC Statoil USA Onshore Properties, Inc.	Mobay Chemical Corporation Wescap Oil and Gas Company Inverness Petroleum Inc. Phoenix National Petroleum Company Haddad and Brooks, Inc. Haddad and Brooks, Inc. Petroleum Reserve Corporation Haddad and Brooks, Inc. Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Statoil USA Onshore Properties, Inc. (now Equinor USA Onshore Properties, Inc.) Haddad and Brooks, Inc. Perkin's Oil and Gas, Inc. Bayer MaterialScience LLC Chesapeake Appalachia, LLC SWN Production Company, LLC SWN Exchange Titleholder LLC (now SWN Production Company LLC)	12.50%	60A/59 63A/34 63A/40 64A/619 66A/547 66A/549 71A/628 71A/634 72A/31 102A/302 120A/109 113A/927 216A/94 396/1 140A/883 157A/540 158A/801	0.0000%
2	12-15-22	Esther Peters, Paul J. Shiben, Katherine Mensore and Edward Shiben, as Executors under the Wills of Joseph Shiben and Minnie Shiben, and Shiben Estates, Inc. Mobay Chemical Corporation Haddad and Brooks, Inc. Haddad and Brooks, Inc. Sun Exploration and Production Company Sun Operating Limited Partnership Sun Operating Limited Partnership, by Sun Exploration and Production Company, as its managing general partner Natmin Development Corporation Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Chesapeake Appalachia, LLC Haddad and Brooks, Inc. Arthur Liston, Donald J. Kinser, Lonzo Dolin, Herbert Heeter, Amos McPeak, Jr., George Dent, Jack Nice, LeeMcCoy and Ernest Dent Mobay Chemical Corporation Haddad and Brooks, Inc. Haddad and Brooks, Inc. Sun Exploration and Production Company Sun Operating Limited Partnership Sun Operating Limited Partnership, by Sun Exploration and Production Company, as its managing general partner Natmin Development Corporation Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Chesapeake Appalachia, LLC Statoil USA Onshore Properties Inc. Albert G. Smith and Lillian Smith, husband and wife Mobay Chemical Corporation Haddad and Brooks, Inc. Haddad and Brooks, Inc. Sun Exploration and Production Company Sun Operating Limited Partnership Sun Operating Limited Partnership, by Sun Exploration and Production Company, as its managing general partner Natmin Development Corporation Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Chesapeake Appalachia, LLC Statoil USA Onshore Properties Inc. Fred C. Smith and Imogene Smith, husband and wife Mobay Chemical Corporation Haddad and Brooks, Inc. Haddad and Brooks, Inc.	Mobay Chemical Corporation Haddad and Brooks, Inc. Sun Exploration and Production Company Natmin Development Corporation Sun Operating Limited Partnership Haddad and Brooks, Inc. Haddad and Brooks, Inc. Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Haddad and Brooks, Inc. SWN Exchange Titleholder LLC (now SWN Production Company LLC) SWN Production Company, LLC Mobay Chemical Corporation Haddad and Brooks, Inc. Sun Exploration and Production Company Natmin Development Corporation Sun Operating Limited Partnership Haddad and Brooks, Inc. Haddad and Brooks, Inc. Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Statoil USA Onshore Properties, Inc. (now Equinor USA Onshore Properties, Inc.) SWN Production Company, LLC SWN Exchange Titleholder LLC (now SWN Production Company LLC) Mobay Chemical Corporation Haddad and Brooks, Inc. Sun Exploration and Production Company Natmin Development Corporation Sun Operating Limited Partnership Haddad and Brooks, Inc. Haddad and Brooks, Inc. Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Statoil USA Onshore Properties, Inc. (now Equinor USA Onshore Properties, Inc.) SWN Production Company, LLC SWN Exchange Titleholder LLC (now SWN Production Company LLC) Mobay Chemical Corporation Haddad and Brooks, Inc. Sun Exploration and Production Company Natmin Development Corporation	15.00% 12.50% 12.50% 12.50%	62A/309 65A/67 65A/195 67A/516 69A/328 69A/600 70A/265 71A/593 102A/302 113A/927 157A/540 250A/215 62A/294 65A/67 65A/195 67A/516 69A/328 69A/600 70A/265 71A/593 102A/302 120A/109 157A/540 158A/801 64A/641 65A/67 65A/195 67A/516 69A/328 69A/600 70A/265 71A/593 102A/302 120A/109 157A/540 158A/801 64A/643 65A/67 65A/195 67A/516	0.0000%

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EXHIBIT "A"

Attached to and made a part of the State of West Virginia Oil and Gas Form, WW-6A1, by SWN Production Company, L.L.C, as Operator
 William Ritchea WTZ 405H
 Wetzel County, West Virginia

Sun Exploration and Production Company Sun Operating Limited Partnership Sun Operating Limited Partnership, by Sun Exploration and Production Company, as its managing general partner Natmin Development Corporation Haddad and Brooks, Inc. Chesapeake Appalachia, LLC	Sun Operating Limited Partnership Haddad and Brooks, Inc. Haddad and Brooks, Inc. Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Statoil USA Onshore Properties, Inc. (now Equinor USA Onshore Properties, Inc.) SWN Production Company, LLC SWN Exchange Titleholder LLC (now SWN Production Company LLC)		69A/328 69A/600 70A/265 71A/593 102A/302 120A/109 157A/540 158A/801
Chalmer T. Smith and Myrtle Smith, husband and wife	Mobay Chemical Corporation	12.50%	64A/639
Mobay Chemical Corporation Haddad and Brooks, Inc. Haddad and Brooks, Inc. Sun Exploration and Production Company Sun Operating Limited Partnership Sun Operating Limited Partnership, by Sun Exploration and Production Company, as its managing general partner Natmin Development Corporation Haddad and Brooks, Inc. Chesapeake Appalachia, LLC	Haddad and Brooks, Inc. Sun Exploration and Production Company Natmin Development Corporation Sun Operating Limited Partnership Haddad and Brooks, Inc. Haddad and Brooks, Inc. Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Statoil USA Onshore Properties, Inc. (now Equinor USA Onshore Properties, Inc.) SWN Production Company, LLC SWN Exchange Titleholder LLC (now SWN Production Company LLC)		65A/67 65A/195 67A/516 69A/328 69A/600 70A/265 71A/593 102A/302 120A/109 157A/540 158A/801
Garnet Snider and Hugh Snider, husband and wife	Mobay Chemical Corporation	12.50%	64A/645
Mobay Chemical Corporation Haddad and Brooks, Inc. Haddad and Brooks, Inc. Sun Exploration and Production Company Sun Operating Limited Partnership Sun Operating Limited Partnership, by Sun Exploration and Production Company, as its managing general partner Natmin Development Corporation Haddad and Brooks, Inc. Chesapeake Appalachia, LLC	Haddad and Brooks, Inc. Sun Exploration and Production Company Natmin Development Corporation Sun Operating Limited Partnership Haddad and Brooks, Inc. Haddad and Brooks, Inc. Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Statoil USA Onshore Properties, Inc. (now Equinor USA Onshore Properties, Inc.) SWN Production Company, LLC SWN Exchange Titleholder LLC (now SWN Production Company LLC)		65A/67 65A/195 67A/516 69A/328 69A/600 70A/265 71A/593 102A/302 120A/109 157A/540 158A/801
Harold Eugene Lemasters and Betty Lee Lemasters, husband and wife	Mobay Chemical Corporation	12.50%	65A/54
Mobay Chemical Corporation Haddad and Brooks, Inc. Haddad and Brooks, Inc. Sun Exploration and Production Company Sun Operating Limited Partnership Sun Operating Limited Partnership, by Sun Exploration and Production Company, as its managing general partner Natmin Development Corporation Haddad and Brooks, Inc. Chesapeake Appalachia, LLC	Haddad and Brooks, Inc. Sun Exploration and Production Company Natmin Development Corporation Sun Operating Limited Partnership Haddad and Brooks, Inc. Haddad and Brooks, Inc. Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Statoil USA Onshore Properties, Inc. (now Equinor USA Onshore Properties, Inc.) SWN Production Company, LLC SWN Exchange Titleholder LLC (now SWN Production Company LLC)		65A/67 65A/195 67A/516 69A/328 69A/600 70A/265 71A/593 102A/302 120A/109 157A/540 158A/801
Fred A. Heeter and Janet K. Heeter, husband and wife, Frank E. Heeter ad Kathleen J.Heeter, husband and wife, and Thomas R. Heeter and Robin D. Heeter, husband and wife	Haddad and Brooks Inc.	12.50%	65A/293
Haddad and Brooks, Inc. Sun Exploration and Production Company Sun Operating Limited Partnership Sun Operating Limited Partnership, by Sun Exploration and Production Company, as its managing general partner Natmin Development Corporation Haddad and Brooks, Inc. Chesapeake Appalachia, LLC	Sun Exploration and Production Company Sun Operating Limited Partnership Haddad and Brooks, Inc. Haddad and Brooks, Inc. Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Statoil USA Onshore Properties, Inc. (now Equinor USA Onshore Properties, Inc.) SWN Production Company, LLC SWN Exchange Titleholder LLC (now SWN Production Company LLC)		66A/61 69A/328 69A/600 70A/265 71A/593 102A/302 120A/109 157A/540 158A/801
William G. Sheppard and Virginia S. Sheppard, husband and wife	Haddad and Brooks Inc.	12.50%	65A/305
Haddad and Brooks, Inc. Sun Exploration and Production Company Sun Operating Limited Partnership	Sun Exploration and Production Company Sun Operating Limited Partnership Haddad and Brooks, Inc.		66A/61 69A/328 69A/600

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William Ritchea WTZ 405H
Wetzel County, West Virginia

		Sun Operating Limited Partnership, by Sun Exploration and Production Company, as its managing general partner Natmin Development Corporation Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Chesapeake Appalachia, LLC Statoil USA Onshore Properties Inc.	Haddad and Brooks, Inc. Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Statoil USA Onshore Properties, Inc. (now Equinor USA Onshore Properties, Inc.) SWN Production Company, LLC SWN Exchange Titleholder LLC (now SWN Production Company LLC)		70A/265 71A/593 102A/302 120A/109 157A/540 158A/801	
3	12-15-23	A.C. Ballard and Virginia Ballard, husband and wife and Paul R. Lemasters, single Mobay Chemical Corporation Haddad and Brooks, Inc. Haddad and Brooks, Inc. Sun Exploration and Production Company Haddad and Brooks, Inc. Haddad and Brooks, Inc. Haddad and Brooks, Inc. Sun Exploration and Production Company Sun Operating Limited Partnership, by Sun Exploration and Production Company, as its managing general partner Natmin Development Corporation Petroleum Reserve Corporation, f/k/a Inverness Petroleum Corporation John C. Oliver, Jr. Mellon Bank N.A., John C. Oliver, III, and James H. Oliver, Co-Executors of the Estate of John C. Oliver, Jr. Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Chesapeake Appalachia, LLC Statoil USA Onshore Properties Inc.	Mobay Chemical Corporation Haddad and Brooks, Inc. Sun Exploration and Production Company Natmin Development Corporation Haddad and Brooks, Inc. Natmin Development Corporation John C. Oliver, Jr. Inverness Petroleum, Inc., c/o Petroleum Reserve Corporation Sun Operating Limited Partnership Haddad and Brooks, Inc. Haddad and Brooks, Inc. Haddad and Brooks, Inc. Constance H. Oliver Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Statoil USA Onshore Properties, Inc. SWN Exchange Titleholder LLC (now SWN Production Company LLC) SWN Exchange Titleholder LLC (now SWN Production Company LLC)	12.50%	60A/137 65A/67 65A/195 67A/516 66A/189 66A/532 66A/541 67A/274 69A/502 70A/265 71A/350 71A/634 894/16 72A/198 103A/350 120A/109 157A/540 158A/801	0.0000%
		Albert Ray Taylor and Carrie M. Taylor, husband and wife Mobay Chemical Corporation Haddad and Brooks, Inc. Haddad and Brooks, Inc. Sun Exploration and Production Company Haddad and Brooks, Inc. Haddad and Brooks, Inc. Haddad and Brooks, Inc. Sun Exploration and Production Company Sun Operating Limited Partnership, by Sun Exploration and Production Company, as its managing general partner Natmin Development Corporation Petroleum Reserve Corporation, f/k/a Inverness Petroleum Corporation John C. Oliver, Jr. Mellon Bank N.A., John C. Oliver, III, and James H. Oliver, Co-Executors of the Estate of John C. Oliver, Jr. Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Chesapeake Appalachia, LLC Statoil USA Onshore Properties Inc.	Mobay Chemical Corporation Haddad and Brooks, Inc. Sun Exploration and Production Company Natmin Development Corporation Haddad and Brooks, Inc. Natmin Development Corporation John C. Oliver, Jr. Inverness Petroleum, Inc., c/o Petroleum Reserve Corporation Sun Operating Limited Partnership Haddad and Brooks, Inc. Haddad and Brooks, Inc. Haddad and Brooks, Inc. Constance H. Oliver Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Statoil USA Onshore Properties, Inc. SWN Exchange Titleholder LLC (now SWN Production Company LLC) SWN Exchange Titleholder LLC (now SWN Production Company LLC)	12.50%	60A/153 65A/67 65A/195 67A/516 66A/189 66A/532 66A/541 67A/274 69A/502 70A/265 71A/350 71A/634 894/16 72A/198 103A/350 120A/109 157A/540 158A/801	
4	12-15-24	John D. Henerson and Cornelia Henderson, husband and wife, and David L. Henderson and Victoria J. Henderson, husband and wife Mobay Chemical Corporation Haddad and Brooks, Inc. Haddad and Brooks, Inc. Sun Exploration and Production Company Haddad and Brooks, Inc. Haddad and Brooks, Inc. Haddad and Brooks, Inc. Sun Exploration and Production Company Sun Operating Limited Partnership, by Sun Exploration and Production Company, as its managing general partner Natmin Development Corporation Petroleum Reserve Corporation, f/k/a Inverness Petroleum Corporation John C. Oliver, Jr. Mellon Bank N.A., John C. Oliver, III, and James H. Oliver, Co-Executors of the Estate of John C. Oliver, Jr.	Mobay Chemical Corporation Haddad and Brooks, Inc. Sun Exploration and Production Company Natmin Development Corporation Haddad and Brooks, Inc. Natmin Development Corporation John C. Oliver, Jr. Inverness Petroleum, Inc., c/o Petroleum Reserve Corporation Sun Operating Limited Partnership Haddad and Brooks, Inc. Haddad and Brooks, Inc. Haddad and Brooks, Inc. Constance H. Oliver Haddad and Brooks, Inc.	12.50%	60A/141 65A/67 65A/195 67A/516 66A/189 66A/532 66A/541 67A/274 69A/502 70A/265 71A/593 71A/634 894/16 72A/198	0.0000%

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Attached to and made a part of the State of West Virginia Oil and Gas Form, WW-6A1, by SWN Production Company, L.L.C, as Operator
 William Ritchea WTZ 405H
 Wetzel County, West Virginia

		Chesapeake Appalachia, LLC	Statoil USA Onshore Properties, Inc. (now Equinor USA Onshore Properties, Inc.)		120A/109	
		Chesapeake Appalachia, LLC	Haddad and Brooks, Inc.		113A/927	
		Haddad and Brooks, Inc.	Perkins Oil and Gas, Inc.		216A/94	
		Perkins Oil and Gas, Inc.	Stone Energy Corporation		126A/958	
		Stone Energy Corporation	Chesapeake Appalachia, LLC and Statoil USA Onshore Properties Inc.		158A/564	
		Chesapeake Appalachia, LLC	SWN Production Company, LLC		157A/540	
		Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC (now SWN Production Company LLC)		158A/801	
12-15-17	H.L. Calvert J.H. Ferrell J.H. Ferrell J.H. Ferrell J.H. Ferrell J.H. Ferrell J.H. Ferrell J.H. Ferrell J.H. Ferrell J.H. Ferrell H.L. Calvert J.H. Ferrell J.H. Ferrell J.H. Ferrell J.H. Ferrell E.R. Busch Chester Lemon and Nella Lemon, husband and wife Clyde Gillespie and Thelmas Gillespie, husband and wife Paul Stillings and Orval C. Baker W. Frank Jones Wade H. Miller Paul Stillings and Orval C. Baker Frank W. HineLine and Bertha HineLine, husband and wife J.H. Ferrell Thayer M. McIntire and Walter F. Ball, Special Commissioners Orval C. Baker Paul Stillings George F. Eagon John H. Robinson John H. Robinson, Blanche Eagon, Mildred M. Lartigue, Carl L. Eagon Elva Robinson and Mary Ellen Davis Elva Robinson and Mary Ellen Davis Andrew L. Henry Katherine A. Henry and Harry R. Cronis, Jr. Kathryn C. Reed Carl D. Perkins and Dorothy Louise Perkind, husband and wife Perkins Oil and Gas, Inc. Haddad and Brooks, Inc. Haddad and Brooks, Inc. Sun Exploration and Production Company Sun Operating Limited Partnership, by Sun Exploration and Production Company, as its managing general partner Natmin Development Corporation Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Chesapeake Appalachia, LLC Haddad and Brooks, Inc. Perkins Oil and Gas, Inc. Stone Energy Corporation Chesapeake Appalachia, LLC Statoil USA Onshore Properties Inc.	J.H. Ferrell Frank W. HineLine and Bertha HineLine Clyde Gillespie and Thelma Gillespie Chester Lemon and Nella Lemon W.L. Smith, Jr. Winnie Miller Orval C. Baker H.L. Calvert J.W. Tobin Mrs. Paul Stillings Mrs. Paul Stillings Oliver Calvert E.R. Busch W. Frank Jones H.L. Calvert E.R. Busch W.H. Miller W.H. Miller W.H. Miller Wade H. Miller Paul W. Stillings Orval C. Baker and Paul Stillings Orval C. Baker Orval C. Baker and Paul Stillings Paul Stillings Orval C. Baker and Paul Stillings Paul Stillings G.F. Eagon and John H. Robinson Mildred M. Lartigue and Carl L. Eagon Elva Robinson and Mary Ellen Davis Elva Robinson and Mary Ellen Davis Andrew L. Henry, Charles E. Reed and Harry R. Cronin, Jr. Katherine A. Henry Charles E. Reed and Kathryn C. Reed, husband and wife Carl Perkins Perkins Oil and Gas, Inc. Haddad and Brooks, Inc. Sun Exploration and Production Company Natmin Development Corporation Sun Operating Limited Partnership Haddad and Brooks, Inc. Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Statoil USA Onshore Properties, Inc. (now Equinor USA Onshore Properties, Inc.) Haddad and Brooks, Inc. Perkins Oil and Gas, Inc. Stone Energy Corporation Chesapeake Appalachia, LLC and Statoil USA Onshore Properties Inc. SWN Production Company, LLC SWN Exchange Titleholder LLC (now SWN Production Company LLC)	12.50%	33A/272 34A/672 34A/68 34A/69 34A/67 34A/32 34A/39 35A/274 34A/74 36A/15 36A/14 33A/488 35A/148 34A/33 35A/285 34A/70 35A/149 35A/187 35A/198 36A/350 36A/429 36A/431 36A/483 37A/54 37A/112 37A/155 39A/107 39A/115 14/268 15/455 43A/440 44A/92 46/518 51A/241 55A/54 84A/9 67A/74 67A/109 66A/510 69A/328 69A/600 71A/593 102A/302 120A/109 113A/927 216A/94 126A/958 158A/564 157A/540 158A/801	0.0000%	
12-15-04	H.L. Calvert J.H. Ferrell J.H. Ferrell J.H. Ferrell J.H. Ferrell J.H. Ferrell J.H. Ferrell J.H. Ferrell J.H. Ferrell J.H. Ferrell J.H. Ferrell H.L. Calvert	J.H. Ferrell Frank W. HineLine and Bertha HineLine Clyde Gillespie and Thelma Gillespie Chester Lemon and Nella Lemon W.L. Smith, Jr. Winnie Miller Orval C. Baker H.L. Calvert J.W. Tobin Mrs. Paul Stillings Mrs. Paul Stillings Oliver Calvert	12.50%	33A/272 34A/672 34A/68 34A/69 34A/67 34A/32 34A/39 35A/274 34A/74 36A/15 36A/14 33A/488	0.0000%	

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Attached to and made a part of the State of West Virginia Oil and Gas Form, WW-6A1, by SWN Production Company, L.L.C, as Operator
 William Ritchea WTZ 405H
 Wetzel County, West Virginia

		J.H Ferrell J.H Ferrell J.H Ferrell J.H Ferrell E.R. Busch Chester Lemon and Nella Lemon, husband and wife Clyde Gillespie and Thelmas Gillespie, husband and wife Paul Stillings and Orval C. Baker W. Frank Jones Wade H. Miller Paul Stillings and Orval C. Baker Frank W. Hineline and Bertha Hineline, husband and wife J.H Ferrell Thayer M. McIntire and Walter F. Ball, Special Commissioners Orval C. Baker Paul Stillings George F. Eagon John H. Robinson John H. Robinson, Blanche Eagon, Mildred M. Lartigue, Carl L. Eagon Elva Robinson and Mary Ellen Davis Elva Robinson and Mary Ellen Davis Andrew L. Henry Katherine A. Henry and Harry R. Cronis, Jr. Kathryn C. Reed Carl D. Perkins and Dorothy Louise Perkind, husband and wife Perkins Oil and Gas, Inc. Haddad and Brooks, Inc. Haddad and Brooks, Inc. Sun Exploration and Production Company Sun Operating Limited Partnership, by Sun Exploration and Production Company, as its managing general partner Natmin Development Corporation Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Chesapeake Appalachia, LLC Haddad and Brooks, Inc. Perkins Oil and Gas, Inc. Stone Energy Corporation Chesapeake Appalachia, LLC Statoil USA Onshore Properties Inc.	E.R. Busch W. Frank Jones H.L. Calvert E.R. Busch W.H. Miller W.H. Miller W.H. Miller Wade H. Miller Paul W. Stillings Orval C. Baker and Paul Stillings Orval C. Baker Orval C. Baker and Paul Stillings Paul Stillings Orval C. Baker and Paul Stillings Paul Stillings G.F. Eagon and John H. Robinson Mildred M. Lartigue and Carl L. Eagon Elva Robinson and Mary Ellen Davis Elva Robinson and Mary Ellen Davis Andrew L. Henry, Charles E. Reed and Harry R. Cronin, Jr. Katherine A. Henry Charles E. Reed and Kathryn C. Reed, husband and wife Carl Perkins Perkins Oil and Gas, Inc. Haddad and Brooks, Inc. Sun Exploration and Production Company Natmin Development Corporation Sun Operating Limited Partnership Haddad and Brooks, Inc. Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Statoil USA Onshore Properties, Inc. (now Equinor USA Onshore Properties, Inc.) Haddad and Brooks, Inc. Perkins Oil and Gas, Inc. Stone Energy Corporation Chesapeake Appalachia, LLC and Statoil USA Onshore Properties Inc. SWN Production Company, LLC SWN Exchange Titleholder LLC (now SWN Production Company LLC)	35A/148 34A/33 35A/285 34A/70 35A/149 35A/187 35A/198 36A/350 36A/429 36A/431 36A/483 37A/54 37A/112 37A/155 39A/107 39A/115 14/268 15/455 43A/440 44A/92 46/518 51A/241 55A/54 84A/9 67A/74 67A/109 66A/510 69A/328 69A/600 71A/593 102A/302 120A/109 113A/927 216A/94 126A/958 158A/564 157A/540 158A/801	
12-15-01	Thelma Taylor Haddad and Brooks, Inc. Haddad and Brooks, Inc. Haddad and Brooks, Inc. Sun Exploration and Production Company Sun Operating Limited Partnership Sun Operating Limited Partnership, by Sun Exploration and Production Company, as its managing general partner Natmin Development Corporation Haddad and Brooks, Inc. Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Chesapeake Appalachia, LLC Statoil USA Onshore Properties Inc.	Haddad and Brooks, Inc. Natmin Development Corporation Sun Exploration and Production Company Natmin Development Corporation Sun Operating Limited Partnership Haddad and Brooks, Inc. Haddad and Brooks, Inc. Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Statoil USA Onshore Properties, Inc. (now Equinor USA Onshore Properties, Inc.) SWN Exchange Titleholder LLC (now SWN Production Company LLC) SWN Exchange Titleholder LLC (now SWN Production Company LLC)	12.50%	62A/309 66A/519 67A/166 67A/336 69A/502 69A/600 70A/265 70A/380 103A/350 102A/302 120A/109 157A/540 158A/801	0.0000%
	Dochia P. Whiteman Haddad and Brooks, Inc. Haddad and Brooks, Inc. Sun Exploration and Production Company Sun Operating Limited Partnership Sun Operating Limited Partnership, by Sun Exploration and Production Company, as its managing general partner Natmin Development Corporation Haddad and Brooks, Inc. Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Chesapeake Appalachia, LLC Statoil USA Onshore Properties Inc.	Haddad and Brooks, Inc. Natmin Development Corporation Sun Exploration and Production Company Sun Operating Limited Partnership Haddad and Brooks, Inc. Haddad and Brooks, Inc. Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Statoil USA Onshore Properties, Inc. (now Equinor USA Onshore Properties, Inc.) SWN Production Company, LLC SWN Exchange Titleholder LLC (now SWN Production Company LLC)	12.50%	66A/340 66A/513 67A/169 70A/366 69A/600 70A/385 70A/380 103A/350 102A/302 120A/109 157A/540 158A/801	

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Office of Oil and Gas
APR 4 2023
WV Department of
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EXHIBIT "A"

Attached to and made a part of the State of West Virginia Oil and Gas Form, WW-6A1, by SWN Production Company, L.L.C, as Operator
 William Ritchea Wtz 405H
 Wetzel County, West Virginia

Maxine Simms, individually and as Attorney-in-Fact for Paul Simms Haddad and Brooks, Inc. Haddad and Brooks, Inc. Sun Exploration and Production Company Sun Operating Limited Partnership Sun Operating Limited Partnership, by Sun Exploration and Production Company, as its managing general partner Natmin Development Corporation Haddad and Brooks, Inc. Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Chesapeake Appalachia, LLC Statoil USA Onshore Properties Inc.	Haddad and Brooks, Inc. Natmin Development Corporation Sun Exploration and Production Company Sun Operating Limited Partnership Haddad and Brooks, Inc. Haddad and Brooks, Inc. Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Statoil USA Onshore Properties, Inc. (now Equinor USA Onshore Properties, Inc.) SWN Production Company, LLC SWN Exchange Titleholder LLC (now SWN Production Company LLC)	12.50%	66A/471 68A/570 69A/498 69A/662 69A/600 70A/265 71A/42 103A/350 102A/302 120A/109 157A/540 158A/801
Raymond W. Postlethwait and Mary E. Postlethwait, husband and wife Haddad and Brooks, Inc. Haddad and Brooks, Inc. Sun Exploration and Production Company Sun Operating Limited Partnership Sun Operating Limited Partnership, by Sun Exploration and Production Company, as its managing general partner Natmin Development Corporation Haddad and Brooks, Inc. Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Chesapeake Appalachia, LLC Statoil USA Onshore Properties Inc.	Haddad and Brooks, Inc. Natmin Development Corporation Sun Exploration and Production Company Sun Operating Limited Partnership Haddad and Brooks, Inc. Haddad and Brooks, Inc. Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Statoil USA Onshore Properties, Inc. (now Equinor USA Onshore Properties, Inc.) SWN Production Company, LLC SWN Exchange Titleholder LLC (now SWN Production Company LLC)	12.50%	66A/465 67A/316 68A/55 69A/502 69A/600 70A/265 71A/42 103A/350 102A/302 120A/109 157A/540 158A/801
John Oblinger and Edith Oblinger, husband and wife Haddad and Brooks, Inc. Haddad and Brooks, Inc. Sun Exploration and Production Company Sun Operating Limited Partnership, by Sun Exploration and Production Company, as its managing general partner Natmin Development Corporation Haddad and Brooks, Inc. Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Chesapeake Appalachia, LLC Statoil USA Onshore Properties Inc.	Haddad and Brooks, Inc. Sun Exploration and Production Company Natmin Development Corporation Sun Operating Limited Partnership Haddad and Brooks, Inc. Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Statoil USA Onshore Properties, Inc. (now Equinor USA Onshore Properties, Inc.) SWN Production Company, LLC SWN Exchange Titleholder LLC (now SWN Production Company LLC)	12.50%	66A/459 67A/161 67A/326 70A/366 70A/385 71A/42 103A/350 102A/302 120A/109 157A/540 158A/801
George Gorby and Margaret Gorby, husband and wife Haddad and Brooks, Inc. Haddad and Brooks, Inc. Sun Exploration and Production Company Sun Operating Limited Partnership Sun Operating Limited Partnership, by Sun Exploration and Production Company, as its managing general partner Natmin Development Corporation Haddad and Brooks, Inc. Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Chesapeake Appalachia, LLC Statoil USA Onshore Properties Inc.	Haddad and Brooks, Inc. Natmin Development Corporation Sun Exploration and Production Company Sun Operating Limited Partnership Haddad and Brooks, Inc. Haddad and Brooks, Inc. Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Statoil USA Onshore Properties, Inc. (now Equinor USA Onshore Properties, Inc.) SWN Production Company, LLC SWN Exchange Titleholder LLC (now SWN Production Company LLC)	12.50%	66A/451 68A/570 69A/498 69A/662 69A/600 70A/265 71A/42 103A/350 102A/302 120A/109 157A/540 158A/801
Stanley F. Postlethwait and Kay Postlethwait, husband and wife Haddad and Brooks, Inc. Natmin Development Corporation Sun Operating Limited Partnership, by Sun Exploration and Production Company, as its managing general partner Haddad and Brooks, Inc. Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Chesapeake Appalachia, LLC Statoil USA Onshore Properties Inc.	Haddad and Brooks, Inc. Sun Operating Limited Partnership Haddad and Brooks, Inc. Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Chesapeake Appalachia, LLC Statoil USA Onshore Properties, Inc. (now Equinor USA Onshore Properties, Inc.) SWN Production Company, LLC SWN Exchange Titleholder LLC (now SWN Production Company LLC)	12.50%	67A/241 70A/82 71A/350 70A/265 103A/350 102A/302 120A/109 157A/540 158A/801
Donald E. Postlethwait and Love L. Postlethwait, husband and wife Haddad and Brooks, Inc. Haddad and Brooks, Inc. Sun Exploration and Production Company	Haddad and Brooks, Inc. Natmin Development Corporation Sun Exploration and Production Company Sun Operating Limited Partnership	12.50%	67A/449 68A/17 68A/77 70A/366

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EXHIBIT "A"

Attached to and made a part of the State of West Virginia Oil and Gas Form, WW-6A1, by SWN Production Company, L.L.C, as Operator
 William Ritchea WTZ 405H
 Wetzel County, West Virginia

		Sun Operating Limited Partnership, by Sun Exploration and Production Company, as its managing general partner Natmin Development Corporation Sun Operating Limited Partnership, by Sun Exploration and Production Company, as its managing general partner Haddad and Brooks, Inc. Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Chesapeake Appalachia, LLC Statoil USA Onshore Properties Inc.	Haddad and Brooks, Inc. Haddad and Brooks, Inc. Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Chesapeake Appalachia, LLC Statoil USA Onshore Properties, Inc. (now Equinor USA Onshore Properties, Inc.) SWN Production Company, LLC SWN Exchange Titleholder LLC (now SWN Production Company LLC)		70A/385 70A/380 70A/265 103A/350 102A/302 120A/109 157A/540 158A/801	
		Buddy L. Postlethwait and Heidi Postlethwait, husband and wife Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Chesapeake Appalachia, LLC Statoil USA Onshore Properties Inc.	Haddad and Brooks Inc. Chesapeake Appalachia, LLC Statoil USA Onshore Properties, Inc. (now Equinor USA Onshore Properties, Inc.) SWN Production Company, LLC SWN Exchange Titleholder LLC (now SWN Production Company LLC)	12.50%	72A/293 102A/302 120A/109 157A/540 158A/801	
		Robert G. Postlethwait and Joyce Postlethwait, husband and wife Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Chesapeake Appalachia, LLC Statoil USA Onshore Properties Inc.	Haddad and Brooks Inc. Chesapeake Appalachia, LLC Statoil USA Onshore Properties, Inc. (now Equinor USA Onshore Properties, Inc.) SWN Production Company, LLC SWN Exchange Titleholder LLC (now SWN Production Company LLC)	12.50%	72A/588 102A/302 120A/109 157A/540 158A/801	
		O. Pauline Bucher, single Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Chesapeake Appalachia, LLC Statoil USA Onshore Properties Inc.	Haddad and Brooks Inc. Chesapeake Appalachia, LLC Statoil USA Onshore Properties, Inc. (now Equinor USA Onshore Properties, Inc.) SWN Production Company, LLC SWN Exchange Titleholder LLC (now SWN Production Company LLC)	12.50%	72A/538 102A/302 120A/109 157A/540 158A/801	
		Albert R. Ferree and Donna J. Ferree, husband and wife Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Chesapeake Appalachia, LLC Statoil USA Onshore Properties Inc.	Haddad and Brooks Inc. Chesapeake Appalachia, LLC Statoil USA Onshore Properties, Inc. (now Equinor USA Onshore Properties, Inc.) SWN Production Company, LLC SWN Exchange Titleholder LLC (now SWN Production Company LLC)	12.50%	72A/631 102A/302 120A/109 157A/540 158A/801	
10	12-10-31	Appalachian Royalties, Inc. Joseph Dean Huggins And Bobbie Sue Huggins, Husband And Wife Haddad And Brooks, Inc.	SWN Production Company, LLC SWN Production Company, LLC SWN Production Company, LLC	18.00% 18.00% 18.00%	188A/126 185A/587 290A/601	0.0000%
11	12-14-09	William D. Ritchea and Shirley E. Ritchea, husband and wife Haddad and Brooks, Inc. Haddad and Brooks, Inc. Haddad and Brooks, Inc. Haddad and Brooks, Inc. Sun Exploration and Production Company Sun Operating Limited Partnership, by Sun Exploration and Production Company, as its managing general partner Natmin Development Corporation John C. Oliver, Jr. Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Chesapeake Appalachia, LLC Statoil USA Onshore Properties Inc.	Haddad and Brooks, Inc. Natmin Development Corporation John C. Oliver Inverness Petroleum, Inc. Sun Exploration and Production Company Sun Operating Limited Partnership Haddad and Brooks, Inc. Haddad and Brooks, Inc. Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Statoil USA Onshore Properties, Inc. (now Equinor USA Onshore Properties, Inc.) SWN Production Company, LLC SWN Exchange Titleholder LLC (now SWN Production Company LLC)	12.50%	63A/48 67A/561 65A/565 65A/567 66A/67 69A/502 70A/265 70A/380 71A/355 102A/302 120A/109 157A/540 158A/801	0.0000%
		Lewis F. Blake and Opal M. Blake, husband and wife Haddad and Brooks, Inc. Haddad and Brooks, Inc. Sun Exploration and Production Company Sun Operating Limited Partnership, by Sun Exploration and Production Company, as its managing general partner Natmin Development Corporation Haddad and Brooks, Inc. Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Chesapeake Appalachia, LLC Statoil USA Onshore Properties Inc.	Haddad and Brooks, Inc. Sun Exploration and Production Company Natmin Development Corporation Sun Operating Limited Partnership Haddad and Brooks, Inc. Haddad and Brooks, Inc. Chesapeake Appalachia, LLC Chesapeake Appalachia, LLC Statoil USA Onshore Properties, Inc. (now Equinor USA Onshore Properties, Inc.) SWN Production Company, LLC SWN Exchange Titleholder LLC (now SWN Production Company LLC)	12.50%	66A/93 67A/112 67A/314 70A/366 70A/385 71A/350 102A/302 103A/350 120A/109 157A/540 158A/801	
		Albert Woodstuff, widower Haddad and Brooks, Inc.	Haddad and Brooks, Inc. Chesapeake Appalachia, LLC	12.50%	71A/250 102A/302	

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EXHIBIT "A"

Attached to and made a part of the State of West Virginia Oil and Gas Form, WW-6A1, by SWN Production Company, L.L.C, as Operator
 William Ritchea Wtz 405H
 Wetzel County, West Virginia

		Chesapeake Appalachia, LLC	Statoil USA Onshore Properties, Inc. (now Equinor USA Onshore Properties, Inc.)		120A/109	
		Chesapeake Appalachia, LLC	SWN Production Company, LLC		157A/540	
		Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC (now SWN Production Company LLC)		158A/801	
12	12-09-46	Blake Realty, LLC	SWN Production Company, LLC	18.00%	233A/938	0.0000%
		Darlene Hall Waggoner, a married woman dealing in her sole and separate property	SWN Production Company, LLC	18.00%	225A/792	
		Gerald L. Hall, a married man dealing in his sole and separate property	SWN Production Company, LLC	18.00%	226A/327	
		Julie L. Price, a married woman dealing in her sole and separate property	SWN Production Company, LLC	18.00%	226A/332	
		Albert Woodstuff, widower	Haddad and Brooks, Inc.	12.50%	71A/250	
		Haddad and Brooks, Inc.	Chesapeake Appalachia, LLC		102A/302	
		Chesapeake Appalachia, LLC	Statoil USA Onshore Properties, Inc. (now Equinor USA Onshore Properties, Inc.)		120A/109	
		Chesapeake Appalachia, LLC	SWN Production Company, LLC		157A/540	
		Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC (now SWN Production Company LLC)		158A/801	

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47 10 303578



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

March 30, 2023

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

RE: SWN's proposed New Well: William Ritchea WTZ 405H in Wetzel County, West Virginia, Drilling under Hollman Ridge Road, Proctor Creek Road, and Harlan Ridge 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 Hollman Ridge Road, Proctor Creek Road, and Harlan Ridge 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,

A handwritten signature in black ink, appearing to read "I. Nicas".

Ian R. Nicas
Staff Landman
SWN Production Company, LLC

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Office of Oil and Gas
APR 4 2023
WV Department of
Environmental Protection

A small version of the SWN logo, with the letters "SWN" in a stylized font.

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

05/11/2023

WW-PN
(11-18-2015)

**Horizontal Natural Gas Well Work Permit
Application Notice By Publication**

Notice is hereby given:

Pursuant to West Virginia Code 22-6A-10(e) prior to filing an application for a permit for a horizontal well the applicant shall publish in the county in which the well is located or is proposed to be located a Class II legal advertisement.

Paper: Wetzel Chronicle

Public Notice Date: February 22, 2023 & March 1, 2023

The following applicant intends to apply for a horizontal natural well work permit which disturbs three acres or more of surface excluding pipelines, gathering lines and roads or utilizes more than two hundred ten thousand gallons of water in any thirty day period.

Applicant: SWN Production Company, LLC **Well Number:** William Ritchea WTZ 405H

Address: 1300 Fort Pierpont Dr., Suite 201
Morgantown, WV 26508

Business Conducted: Natural gas production.

Location –

State:	<u>West Virginia</u>	County:	<u>Wetzel</u>	RECEIVED Office of Oil and Gas APR 4 2023 WV Department of Environmental Protection
District:	<u>Proctor</u>	Quadrangle:	<u>Wileyville</u>	
UTM Coordinate NAD83 Northing:	<u>4,391,136</u>			
UTM coordinate NAD83 Easting:	<u>529,218</u>			
Watershed:	<u>Fish Creek</u>			

Coordinate Conversion:

To convert the coordinates above into longitude and latitude, visit: http://tagis.dep.wv.gov/convert/llutm_conus.php

Electronic notification:

To receive an email when applications have been received or issued by the Office of Oil and Gas, visit <http://www.dep.wv.gov/insidedep/Pages/DEPMailingLists.aspx> to sign up.

Reviewing Applications:

Copies of the proposed permit application may be reviewed at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE Charleston, WV 25304 (304-926-0450). Full copies or scans of the proposed permit application will cost \$15, whether mailed or obtained at DEP headquarters. Copies may be requested by calling the office or by sending an email to DEP_comments@wv.gov.

Submitting Comments:

Comments may be submitted online at <https://apps.dep.wv.gov/oog/comments/comments.cfm>, or by letter to Permit Review, Office of Oil and Gas, 601 57th Street, SE Charleston, WV 25304. Please reference the county, well number, and operator when using this option.

Regardless of format for comment submissions, they must be received no later than thirty days after the permit application is received by the Office of Oil and Gas.

For information related to horizontal drilling visit: www.dep.wv.gov/oil-and-gas/pages/default.aspx

05/11/2023

**STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE CERTIFICATION**

Date of Notice Certification: 3/31

API No. 47- ~~000~~ - _____
Operator's Well No. William Ritchea WTZ 405H
Well Pad Name: William Ritchea WTZ pad

Notice has been given:

Pursuant to the provisions in West Virginia Code § 22-6A, the Operator has provided the required parties with the Notice Forms listed below for the tract of land as follows:

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>529,217.761</u>
County:	<u>103- Wetzell</u>		Northing:	<u>4,391,135.150</u>
District:	<u>Proctor</u>	Public Road Access:	<u>Harlan Ridge</u>	
Quadrangle:	<u>Wileyville</u>	Generally used farm name:	<u>William Ritchea</u>	
Watershed:	<u>Fish Creek</u>			

Pursuant to West Virginia Code § 22-6A-7(b), every permit application filed under this section shall be on a form as may be prescribed by the secretary, shall be verified and shall contain the following information: (14) A certification from the operator that (i) it has provided the owners of the surface described in subdivisions (1), (2) and (4), subsection (b), section ten of this article, the information required by subsections (b) and (c), section sixteen of this article; (ii) that the requirement was deemed satisfied as a result of giving the surface owner notice of entry to survey pursuant to subsection (a), section ten of this article six-a; or (iii) the notice requirements of subsection (b), section sixteen of this article were waived in writing by the surface owner; and Pursuant to West Virginia Code § 22-6A-11(b), the applicant shall tender proof of and certify to the secretary that the notice requirements of section ten of this article have been completed by the applicant.

Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following: *PLEASE CHECK ALL THAT APPLY <input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED <input checked="" type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED <input checked="" type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or <input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH) <input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION <input checked="" type="checkbox"/> 5. PUBLIC NOTICE <input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION		OOG OFFICE USE ONLY <input type="checkbox"/> RECEIVED/ NOT REQUIRED <input type="checkbox"/> RECEIVED <input type="checkbox"/> RECEIVED/ NOT REQUIRED <input type="checkbox"/> RECEIVED <input type="checkbox"/> RECEIVED <input type="checkbox"/> RECEIVED
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Required Attachments:

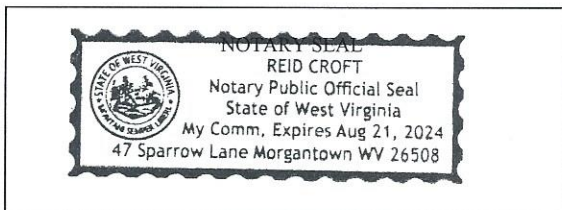
The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication date verification or the associated Affidavit of Publication. The attached Notice Forms and Certifications of Notice shall serve as proof that the required parties have been noticed as required under West Virginia Code § 22-6A. Pursuant to West Virginia Code § 22-6A-11(b), the Certification of Notice to the person may be made by affidavit of personal service, the return receipt card or other postal receipt for certified mailing.

RECEIVED
Office of Personal Service
APR 13 2023
WV Department of Environmental Protection
05/11/2023

Certification of Notice is hereby given:

THEREFORE, I Brittany Woody, have read and understand the notice requirements within West Virginia Code § 22-6A. I certify that as required under West Virginia Code § 22-6A, I have served the attached copies of the Notice Forms, identified above, to the required parties through personal service, by registered mail or by any method of delivery that requires a receipt or signature confirmation. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this Notice Certification and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator:	<u>SWN Production Co., LLC</u>	Address:	<u>1300 Fort Pierpont Dr., Suite 201</u>
By:	<u>Brittany Woody</u>		<u>Morgantown, WV 26508</u>
Its:	<u>Senior Regulatory Analyst</u>	Facsimile:	<u>304-884-1690</u>
Telephone:	<u>304-884-1610</u>	Email:	<u>Brittany_Woody@swn.com</u>



Subscribed and sworn before me this 23rd day of Feb, 2023.

Reid Croft Notary Public

My Commission Expires 8/21/2024

Oil and Gas Privacy Notice:

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

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Office of Oil and Gas
APR 4 2023
WV Department of
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STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF APPLICATION

Notice Time Requirement: notice shall be provided no later than the filing date of permit application.

Date of Notice: 3/31 Date Permit Application Filed: 3/31

Notice of:

- PERMIT FOR ANY WELL WORK CERTIFICATE OF APPROVAL FOR THE CONSTRUCTION OF AN IMPOUNDMENT OR PIT

Delivery method pursuant to West Virginia Code § 22-6A-10(b)

- PERSONAL SERVICE REGISTERED MAIL METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION

Pursuant to W. Va. Code § 22-6A-10(b) no later than the filing date of the application, the applicant for a permit for any well work or for a certificate of approval for the construction of an impoundment or pit as required by this article shall deliver, by personal service or by registered mail or by any method of delivery that requires a receipt or signature confirmation, copies of the application, the erosion and sediment control plan required by section seven of this article, and the well plat to each of the following persons: (1) The owners of record of the surface of the tract on which the well is or is proposed to be located; (2) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for roads or other land disturbance as described in the erosion and sediment control plan submitted pursuant to subsection (c), section seven of this article; (3) The coal owner, operator or lessee, in the event the tract of land on which the well proposed to be drilled is located [sic] is known to be underlain by one or more coal seams; (4) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for the placement, construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this article; (5) Any surface owner or water purveyor who is known to the applicant to have a water well, spring or water supply source located within one thousand five hundred feet of the center of the well pad which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field within which the proposed well work activity is to take place. (c)(1) If more than three tenants in common or other co-owners of interests described in subsection (b) of this section hold interests in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be maintained pursuant to section eight, article one, chapter eleven-a of this code. (2) Notwithstanding any provision of this article to the contrary, notice to a lien holder is not notice to a landowner, unless the lien holder is the landowner. W. Va. Code R. § 35-8-5.7.a requires, in part, that the operator shall also provide the Well Site Safety Plan ("WSSP") to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

Application Notice WSSP Notice E&S Plan Notice Well Plat Notice is hereby provided to:

SURFACE OWNER(s)

Name: William & Shirley Ritchea
Address: 12263 Proctor Creek Road
New Martinsville, WV 26155

Name: _____
Address: _____

SURFACE OWNER(s) (Road and/or Other Disturbance)

Name: _____
Address: _____

Name: _____
Address: _____

SURFACE OWNER(s) (Impoundments or Pits)

Name: _____
Address: _____

COAL OWNER OR LESSEE

Name: C/O Leatherwood Attn: Casey Saunders
Address: 275 Technology Drive Suite 101
Canonsburg, PA 15317

COAL OPERATOR

Name: _____
Address: _____

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)

Name: None
Address: _____

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

Name: _____
Address: _____

*Please attach additional forms if necessary

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Office of Oil and Gas
APR 4 2023

WV Department of Environmental Protection

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-10(b), notice is hereby given that the undersigned well operator has applied for a permit for well work or for a certificate of approval for the construction of an impoundment or pit.

This Notice Shall Include:

Pursuant to W. Va. Code § 22-6A-10(b), this notice shall include: (1) copies of the application; (2) the erosion and sediment control plan required by section seven of this article; and (3) the well plat.

Pursuant to W. Va. Code § 22-6A-10(f), this notice shall include: (1) a statement of the time limits for filing written comments; (2) who may file written comments; (3) the name and address of the secretary for the purpose of filing the comments and obtaining additional information; and (4) a statement that the persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

Pursuant to W. Va. Code R. § 35-8-5.7.a, the operator shall provide the Well Site Safety Plan to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

Pursuant to W. Va. Code R. § 35-8-15.2.c, this notice shall: (1) contain a statement of the surface owner's and water purveyor's right to request sampling and analysis; (2) advise the surface owner and water purveyor of the rebuttable presumption for contamination or deprivation of a fresh water source or supply; advise the surface owner and water purveyor that refusal to allow the operator to conduct a pre-drilling water well test constitutes a method to rebut the presumption of liability; (3) advise the surface owner and water purveyor of his or her independent right to sample and analyze any water supply at his or her own expense; advise the surface owner and water purveyor whether or not the operator will utilize an independent laboratory to analyze any sample; and (4) advise the surface owner and or water purveyor that he or she can obtain from the Chief a list of water testing laboratories in the subject area capable of and qualified to test water supplies in accordance with standard acceptable methods.

Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Well Location Restrictions

Pursuant to W. Va. Code § 22-6A-12, Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided, whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements. (b) No well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland, or within three hundred feet of a naturally reproducing trout stream. No well pad may be located within one thousand feet of a surface or ground water intake of a public water supply. The distance from the public water supply as identified by the department shall be measured as follows: (1) For a surface water intake on a lake or reservoir, the distance shall be measured from the boundary of the lake or reservoir. (2) For a surface water intake on a flowing stream, the distance shall be measured from a semicircular radius extending upstream of the surface water intake. (3) For a groundwater source, the distance shall be measured from the wellhead or spring. The department may, in its discretion, waive these distance restrictions upon submission of a plan identifying sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state. A waiver, if granted, shall impose any permit conditions as the secretary considers necessary. (c) Notwithstanding the foregoing provisions of this section, nothing contained in this section prevents an operator from conducting the activities permitted or authorized by a Clean Water Act Section 404 permit or other approval from the United States Army Corps of Engineers within any waters of the state or within the restricted areas referenced in this section. (d) The well location restrictions set forth in this section shall not apply to any well on a multiple well pad if at least one of the wells was permitted prior to the effective date of this article. (e) The secretary shall, by December 31, 2012, report to the Legislature on the noise, light, dust and volatile organic compounds generated by the drilling of horizontal wells as they relate to the well location restrictions regarding occupied dwelling structures pursuant to this section. Upon a finding, if any, by the secretary that the well location restrictions regarding occupied dwelling structures are inadequate or otherwise require alteration to address the items

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WW-6A
(8-13)

API NO. 4710303578
OPERATOR WELL NO. William Ritchea WTZ 405H
Well Pad Name: William Ritchea WTZ pad

examined in the study required by this subsection, the secretary shall have the authority to propose for promulgation legislative rules establishing guidelines and procedures regarding reasonable levels of noise, light, dust and volatile organic compounds relating to drilling horizontal wells, including reasonable means of mitigating such factors, if necessary.

Water Well Testing:

Pursuant to West Virginia Code § 22-6A-10(d), notification shall be made, with respect to surface landowners identified in subsection (b) or water purveyors identified in subdivision (5), subsection (b) of this section, of the opportunity for testing their water well. The operator shall provide an analysis to such surface landowner or water purveyor at their request.

Water Testing Laboratories:

Pursuant to West Virginia Code § 22-6A-10(i), persons entitled to notice pursuant to subsection (b) of this section may contact the department to ascertain the names and locations of water testing laboratories in the subject area capable and qualified to test water supplies in accordance with standard accepted methods. In compiling that list of names the department shall consult with the state Bureau for Public Health and local health departments. A surface owner and water purveyor has an independent right to sample and analyze any water supply at his or her own expense. The laboratory utilized by the operator shall be approved by the agency as being certified and capable of performing sample analyses in accordance with this section.

Rebuttable Presumption for Contamination or Deprivation of a Fresh Water Source or Supply:

W. Va. Code § 22-6A-18 requires that (b) unless rebutted by one of the defenses established in subsection (c) of this section, in any action for contamination or deprivation of a fresh water source or supply within one thousand five hundred feet of the center of the well pad for horizontal well, there is a rebuttable presumption that the drilling and the oil or gas well or either was the proximate cause of the contamination or deprivation of the fresh water source or supply. (c) In order to rebut the presumption of liability established in subsection (b) of this section, the operator must prove by a preponderance of the evidence one of the following defenses: (1) The pollution existed prior to the drilling or alteration activity as determined by a predrilling or prealteration water well test. (2) The landowner or water purveyor refused to allow the operator access to the property to conduct a predrilling or prealteration water well test. (3) The water supply is not within one thousand five hundred feet of the well. (4) The pollution occurred more than six months after completion of drilling or alteration activities. (5) The pollution occurred as the result of some cause other than the drilling or alteration activity. (d) Any operator electing to preserve its defenses under subdivision (1), subsection (c) of this section shall retain the services of an independent certified laboratory to conduct the predrilling or prealteration water well test. A copy of the results of the test shall be submitted to the department and the surface owner or water purveyor in a manner prescribed by the secretary. (e) Any operator shall replace the water supply of an owner of interest in real property who obtains all or part of that owner's supply of water for domestic, agricultural, industrial or other legitimate use from an underground or surface source with a comparable water supply where the secretary determines that the water supply has been affected by contamination, diminution or interruption proximately caused by the oil or gas operation, unless waived in writing by that owner. (f) The secretary may order the operator conducting the oil or gas operation to: (1) Provide an emergency drinking water supply within twenty-four hours; (2) Provide temporary water supply within seventy-two hours; (3) Within thirty days begin activities to establish a permanent water supply or submit a proposal to the secretary outlining the measures and timetables to be used in establishing a permanent supply. The total time in providing a permanent water supply may not exceed two years. If the operator demonstrates that providing a permanent replacement water supply cannot be completed within two years, the secretary may extend the time frame on case-by-case basis; and (4) Pay all reasonable costs incurred by the real property owner in securing a water supply. (g) A person as described in subsection (b) of this section aggrieved under the provisions of subsections (b), (e) or (f) of this section may seek relief in court... (i) Notwithstanding the denial of the operator of responsibility for the damage to the real property owner's water supply or the status of any appeal on determination of liability for the damage to the real property owner's water supply, the operator may not discontinue providing the required water service until authorized to do so by the secretary or a court of competent jurisdiction.

Written Comment:

Pursuant to West Virginia Code § 22-6A-11(a), all persons described in subsection (b), section ten of this article may file written comments with the secretary as to the location or construction of the applicant's proposed well work within thirty days after the application is filed with the secretary. All persons described in West Virginia Code § 22-6A-10(b) may file written comments as to the location or construction of the applicant's proposed well work to the Secretary at:

Chief, Office of Oil and Gas
Department of Environmental Protection
601 57th St. SE
Charleston, WV 25304
(304) 926-0450

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WV Department of
Environmental Protection

Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water. **NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.**

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Time Limits and Methods for Filing Comments.

The law requires these materials to be served on or before the date the operator files its Application. You have **THIRTY (30) DAYS** after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

Pursuant to West Virginia Code § 22-6A-11(c)(2), Any objections of the affected coal operators and coal seam owners and lessees shall be addressed through the processes and procedures that exist under sections fifteen, seventeen and forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article. The written comments filed by the parties entitled to notice under subdivisions (1), (2), (4), (5) and (6), subsection (b), section ten of this article shall be considered by the secretary in the permit issuance process, but the parties are not entitled to participate in the processes and proceedings that exist under sections fifteen, seventeen or forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article.

Comment Requirements

Your comments must be in writing and include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

Disclaimer: All comments received will be placed on our web site <http://www.dep.wv.gov/oil-and-gas/Horizontal-Permits/Pages/default.aspx> and the applicant will automatically be forwarded an email notice that such comments have been submitted. The applicant will be expected to provide a response to comments submitted by any surface owner, water purveyor or natural gas storage operator noticed within the application.

Permit Denial or Condition

The Chief has the power to deny or condition a well work permit. Pursuant to West Virginia Code § 22-6A-8(d), the permit may not be issued or be conditioned, including conditions with respect to the location of the well and access roads prior to issuance if the director determines that:

- (1) The proposed well work will constitute a hazard to the safety of persons;
- (2) The plan for soil erosion and sediment control is not adequate or effective;
- (3) Damage would occur to publicly owned lands or resources; or
- (4) The proposed well work fails to protect fresh water sources or supplies.

A permit may also be denied under West Virginia Code § 22-6A-7(k), the secretary shall deny the issuance of a permit if the secretary determines that the applicant has committed a substantial violation of a previously issued permit for a horizontal well, including the applicable erosion and sediment control plan associated with the previously issued permit, or a substantial violation of one or more of the rules promulgated under this article, and in each instance has failed to abate or seek review of the violation within the time prescribed by the secretary pursuant to the provisions of subdivisions (1) and (2), subsection (a), section five of this article and the rules promulgated hereunder, which time may not be unreasonable.

Pursuant to West Virginia Code § 22-6A-10(g), any person entitled to submit written comments to the secretary pursuant to subsection (a), section eleven of this article, shall also be entitled to receive from the secretary a copy of the permit as issued or a copy of the order modifying or denying the permit if the person requests receipt of them as a part of the written comments submitted concerning the permit application. Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

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WV Department of
Environmental Protection

05/11/2023

WW-6A
(8-13)

API NO. 47 009 **4710303578**
OPERATOR WELL NO. William Ritchea WTZ 405H
Well Pad Name: William Ritchea WTZ pad

Notice is hereby given by:

Well Operator: SWN Production Co., LLC
Telephone: 304-884-1610
Email: Brittany_Woody@swn.com

Brittany Woody

Address: 1300 Fort Pierpont Dr., Suite 201
Morgantown, WV 26508
Facsimile: 304-884-1690

Oil and Gas Privacy Notice:

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



Subscribed and sworn before me this 23rd day of Feb, 2023.

Reid Croft

Notary Public

My Commission Expires 8/21/2024

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05/11/2023

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STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF ENTRY FOR PLAT SURVEY

Notice Time Requirement: Notice shall be provided at least SEVEN (7) days but no more than FORTY-FIVE (45) days prior to entry

Date of Notice: 5/18/2022 Date of Planned Entry: 5/25/2022

Delivery method pursuant to West Virginia Code § 22-6A-10a

- PERSONAL SERVICE
- REGISTERED MAIL
- METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION

Pursuant to West Virginia Code § 22-6A-10(a), Prior to filing a permit application, the operator shall provide notice of planned entry on to the surface tract to conduct any plat surveys required pursuant to this article. Such notice shall be provided at least seven days but no more than forty-five days prior to such entry to: (1) The surface owner of such tract; (2) to any owner or lessee of coal seams beneath such tract that has filed a declaration pursuant to section thirty-six, article six, chapter twenty-two of this code; and (3) any owner of minerals underlying such tract in the county tax records. The notice shall include a statement that copies of the state Erosion and Sediment Control Manual and the statutes and rules related to oil and gas exploration and production may be obtained from the Secretary, which statement shall include contact information, including the address for a web page on the Secretary's web site, to enable the surface owner to obtain copies from the secretary.

Notice is hereby provided to:

SURFACE OWNER(s)

Name: William & Shirley Ritchea
Address: 12263 Proctor Creek Road
New Martinsville, WV 26155

Name: _____
Address: _____

Name: _____
Address: _____

COAL OWNER OR LESSEE

Name: C/O Leatherwood Attn: Casey Saunders
Address: 275 Technology Drive Suite 101
Canonsburg, PA 15317-9585

MINERAL OWNER(s)

Name: William & Shirley Ritchea
Address: 12263 Proctor Creek Road
New Martinsville, WV 26155

*please attach additional forms if necessary

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WV Department of
Environmental Protection

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-10(a), notice is hereby given that the undersigned well operator is planning to conduct a plat survey on the tract of land as follows:

State: West Virginia
County: Wetzel
District: Proctor
Quadrangle: Wileyville

Approx. Latitude & Longitude: 39.670670 -80.663580
Public Road Access: Harlan Ridge
Watershed: Little Fishing Creek
Generally used farm name: William Ritchea

Copies of the state Erosion and Sediment Control Manual and the statutes and rules related to oil and gas exploration and production may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450). Copies of such documents or additional information related to horizontal drilling may be obtained from the Secretary by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Notice is hereby given by:

Well Operator: SWN PRODUCTION COMPANY, LLC
Telephone: 304-884-1610
Email: Brittany_Woody@swn.com

Address: 1300 Fort Pierpont Dr., Suite 201
Morgantown, WV 26508
Facsimile: 304-884-1690

Oil and Gas Privacy Notice:

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

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STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF INTENT TO DRILL

Pursuant to W. Va. Code § 22-6A-16(b), the Notice of Intent to Drill is only required if the notice requirements of W. Va. Code § 22-6A-10(a) have NOT been met or if the Notice of Intent to Drill requirement has NOT been waived in writing by the surface owner.

Notice Time Requirement: Notice shall be provided at least **TEN (10)** days prior to filing a permit application.

Date of Notice: 02/16/2023 **Date Permit Application Filed:** 3/31

Delivery method pursuant to West Virginia Code § 22-6A-16(b)

- HAND DELIVERY
- CERTIFIED MAIL RETURN RECEIPT REQUESTED

Pursuant to W. Va. Code § 22-6A-16(b), at least ten days prior to filing a permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner notice of its intent to enter upon the surface owner's land for the purpose of drilling a horizontal well: *Provided*, That notice given pursuant to subsection (a), section ten of this article satisfies the requirements of this subsection as of the date the notice was provided to the surface owner: *Provided, however*, That the notice requirements of this subsection may be waived in writing by the surface owner. The notice, if required, shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative.

Notice is hereby provided to the SURFACE OWNER(s):

Name: William D. & Shirley E. Ritchea
Address: 12263 Proctor Creek Rd.
New Martinsville, WV 26155

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Office of Oil and Gas
Name: _____
Address: _____
APR 4 2023

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-16(b), notice is hereby given that the undersigned well operator has an intent to enter upon the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State: <u>West Virginia</u>	UTM NAD 83	Easting: <u>529,217.870</u>
County: <u>Wetzel</u>		Northing: <u>4,391,136.363</u>
District: <u>Proctor</u>	Public Road Access: <u>Fairview Ridge</u>	
Quadrangle: <u>Wileyville, WV</u>	Generally used farm name: <u>William Ritchea</u>	
Watershed: <u>Fish Creek (HUC-10)</u>		

WV Department of Environmental Protection

This Notice Shall Include:

Pursuant to West Virginia Code § 22-6A-16(b), this notice shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Notice is hereby given by:

Well Operator: SWN Production Company, LLC
Address: 1300 Fort Pierpont Road, Suite 201
Morgantown, WV 26508
Telephone: 304-884-1675
Email: Justin_Booth@swn.com
Facsimile: _____

Authorized Representative: Justin Booth
Address: 1300 Fort Pierpont Road, Suite 201
Morgantown, WV 26508
Telephone: 304-884-1675
Email: Justin_Booth@swn.com
Facsimile: _____

Oil and Gas Privacy Notice:

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

05/11/2023

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**STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF PLANNED OPERATION**

Notice Time Requirement: notice shall be provided no later than the **filing date of permit application.**
Date of Notice: 02/16/2023 **Date Permit Application Filed:** 3/31

Delivery method pursuant to West Virginia Code § 22-6A-16(c)

- | | |
|--|-------------------------------|
| <input checked="" type="checkbox"/> CERTIFIED MAIL | <input type="checkbox"/> HAND |
| RETURN RECEIPT REQUESTED | DELIVERY |

Pursuant to W. Va. Code § 22-6A-16(c), no later than the date for filing the permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner whose land will be used for the drilling of a horizontal well notice of the planned operation. The notice required by this subsection shall include: (1) A copy of this code section; (2) The information required to be provided by subsection (b), section ten of this article to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. (d) The notices required by this section shall be given to the surface owner at the address listed in the records of the sheriff at the time of notice.

Notice is hereby provided to the SURFACE OWNER(s)

(at the address listed in the records of the sheriff at the time of notice):

Name: William D. & Shirley E. Ritchea
Address: 12263 Proctor Creek Rd.
New Martinsville, WV 26155

Name: _____
Address: _____

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-16(c), notice is hereby given that the undersigned well operator has developed a planned operation on the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State: <u>West Virginia</u>	UTM NAD 83 Easting: <u>529,217.870</u>
County: <u>Wetzel</u>	Northing: <u>4,391,136.363</u>
District: <u>Proctor</u>	Public Road Access: <u>Fairview Ridge</u>
Quadrangle: <u>Wileyville, WV</u>	Generally used farm name: <u>William Ritchea</u>
Watershed: <u>Fish Creek (HUC-10)</u>	

This Notice Shall Include:

Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: (1) A copy of this code section; (2) The information required to be provided by **W. Va. Code § 22-6A-10(b)** to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-6450) or by visiting www.dep.wv.gov/oilandgas/pages/default.aspx.

Well Operator: SWN Production Company, LLC
Telephone: 304-884-1675
Email: Justin_Booth@swn.com

Address: 1300 Fort Pierpont Road, Suite 201
Morgantown, WV 26508
Facsimile: _____

Oil and Gas Privacy Notice:

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

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WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
Division of Highways

1900 Kanawha Boulevard East • Building Five • Room 110
 Charleston, West Virginia 25305-0430 • (304) 558-3505

Gregory L. Bailey, P.E.
 Interim
 State Highway Engineer

Jimmy Wriston, P. E.
 Secretary of Transportation
 Commissioner of Highways

February 22, 2023

James A. Martin, Chief
 Office of Oil and Gas
 Department of Environmental Protection
 601 57th Street, SE
 Charleston, WV 25304

Subject: DOH Permit for the William Ritchea Pad, Wetzel County
 William Ritchea WTZ 405H Well Site

Dear Mr. Martin,

This well site will be accessed from a DOH permit #06-2011-0618 which has been issued to Southwestern Energy for access to the State Road for a well site located off Wetzel County Route 1/19 SLS MP 1.77.

This operator is in compliance with §22-6A-20 of the WV Code. Operator has signed a STATEWIDE OIL AND GAS ROAD MAINTENANCE BONDING AGREEMENT and provided the required Bond. This operator is currently in compliance with the DOH OIL AND GAS POLICY dated October 1, 2018. This letter is valid for permitting purposes for one year from the date of this letter.

Very Truly Yours,

Gary K. Clayton, P.E.
 Regional Operations Engineer
 Central Office O&G Coordinator

Cc: Brittany Woody
 Southwestern Energy
 CH, OM, D-6
 File

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 Office of Oil and Gas

APR 4 2023

WV Department of
 Environmental Protection

Attachment VI Frac Additives

Product Name	Product Use	Chemical Name	CAS Number
AI-303 (U.S. Well Services)	Mixture	Ethylene glycol	107-21 1
		Cinnamaldehyde	104-55 2
		Butyl cellosolve	111-76 2
		Formic acid	64-18 6
		Polyether	Proprietary
		Acetophenone, thiourea, formaldehyde polymer	68527-49 1
AP ONE (U.S. Well Services)	Breaker	Ammonium persulfate	7727-54-0
Bactron K-139 (Champion Technologies)	Biocide	Glutaraldehyde	111-30-8
		Quaternary Ammonium Compounds, Benzyl-C12-16-Alkyldimethyl, Chlorides	68424-85-1
		Ethanol	64-17-5
Bactron K-219 (Champion Technologies)	Biocide	Methanol	67-56-1
		Quaternary Ammonium Compounds, Benzyl-C12-16-Alkyldimethyl, Chlorides	68424-85-1
CarbonRT	Tracer	Ceramic Proppant	66402-68-4
EC6486A (Nalco Champion)	Scale Inhibitor	Amine Triphosphate	Proprietary
		Ethylene Glycol	107-21-1
EC6734A (Champion Technologies)	Biocide	Hydrogen Peroxide	7722-84-1
		Acetic Acid	64-19-7
		Peroxyacetic Acid	79-21-0
		Methanol	67-56-1
Econo-CI200 (SWN Well Services)	Corrosion Inhibitor	Oxalkylated fatty acid	68951-67-7
		Fatty acids	61790-12-3
		Modified thiourea polymer	68527-49-1
		Water	7732-18-5
		Hydrochloric acid	7647-01-0
		Potassium acetate	127-08-2
		Formaldehyde	50-00-0
		Acetic Acid	64-19-7
Ecopol-FEAC (SWN Well Services)	Iron Control	Citric Acid	77-92-9
		Water	7732-18-5
		Polyacrylate	Proprietary
FDP-S1176-15 (Halliburton)	Friction Reducer	Hydrotreated light petroleum distillate	64742-47-8
		Distillates (petroleum) hydrotreated light	64674-47-8
FLOJET DR900 LPP (SWN Well Services)	Friction Reducer	Ethylene Glycol	107-21-1
		Alcohols, C12-16, Exoxylated propoxylated	68213-24-1
		Fatty Alcohols ethoxylated	Proprietary
		Water	7732-18-5
		Proprietary	Proprietary
FLOJET DRP 1130X (SWN Well Services)	Friction Reducer	Hydrotreated light petroleum distillate	64742-47-8
FR-76 (Halliburton)	Friction Reducer	Inorganic Salt	Proprietary
GYPTRON T-390 (Champion Technologies)	Scale Inhibitor	Methanol	67-56-1
		Nonylphenol Ethoxylate	Proprietary
HAI-150E (Halliburton)	Corrosion Inhibitor	No hazardous substance	N/A
HCL (SWN Well Services)	Hydrochloric Acid	Hydrochloric Acid	7647-01-0
		Water	7732-18-5
LP-65 MC (Halliburton)	Scale Inhibitor	Organic phosphonate	Proprietary
		Ammonium Chloride	12125-02-9
OPTI-FLEX (U.S. Well Services)	Viscosifying Agent	Distillates, petroleum, hydrotreated light	64742-47-8
Plexslick 930	Friction Reducer	Copolymer of 2-propenamide	Proprietary
		Hydrotreated Distillate	64742-47-8
		Sodium Chloride	7647-14-5
		Alcohols, C12-16, Exoxylated	68551-12-2
		Oleic Acid Diethanolamide	93-83-4
		Ammonium Chloride	12125-02-9
Plexslick 953	Friction Reducer	Petroleum Distillate	64742-47-8
		Sodium Chloride	7647-14-5
		Ammonium Chloride	12125-02-9
		N,N-bis (2-hydroxyethyl) oleamide	93-83-4
		Petroleum Distillate	64742-47-8
Plexslick 957	Friction Reducer	Ammonium Chloride	12125-02-9
		Oleic Acid Diethanolamide	93-83-4
		Alcohols, C12-16, Exoxylated	68551-12-2
		Water	7732-15-5
		Copolymer of 2-Propeenamide	*****
Plexslick V996	no data available	Distillates (petroleum), hydrotreated light	64742-47-8
		Alcohol Ethoxylate	*****
		Surfactant	*****
WFRA-2000 (U.S. Well Services)	Anionic Friction Reducer	Hydrotreated light distillate (petroleum)	64742-47-8
		Propenoic acid, polymer with propenamide	9003-06 9
Plexaid 655 NM	Scale Inhibitor	Diethylenetriamine penta (methylene phosphonic acid)	15827-30-8
Plexslick 922	no data available	Copolymer of 2-propenamide	69418-26-4
		Distillates (petroleum), hydrotreated light	64742-47-8
		Ammonium chloride ((NH4)Cl)	12125-02-9
		Oleic Acid Diethanolamide	93-83-4
		Phosphonium, tetrakis (hydroxymethyl), Sulfate	55566-30-8
Tolcide 4Frac	Mixture	Quaternary ammonium Compounds, Benzyl-C12-16-Alkyldimethyl, Chlorides	68424-85-1
		Ethanol	64-17-5
Tolcide PS50A	Biocidal product	Tetrakis (hydroxymethyl) phosphonium sulphate	55566-30-8
		Acrylic acid terpolymer containing carboxylate phosphonate and sulfonate groups	397256-50-7
		Hydrotreated light petroleum distillate	64742-47-8
LD-2950	Friction Reducer	Ethoxylated alcohol	Proprietary
		Poly (oxy-1,2-ethanediyl) alpha.-tridecyl.-omega.-hydroxy-, branched	69011-36-5
		Methanol	67-56-1
Legend LD-7750W	Scale Control	Phosphonic Acid Salt	Proprietary
		Sodium Nitrate	7631-99-4
MC MX 8-4743	Specialty Product	Sodium erythorbate	6381-77-7
Ferriplex 80	Iron Control	Sodium erythorbate	67-56-1
Plexaid 655 WG	Scale Inhibitor	Glycerine	7732-18-5
		Water	7732-18-5
		Organic Phosphonic Acid Salts	15827-30-8

As of 9/8/2022

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Office of Oil and Gas

APR 4 2023

WV Department of
Environmental Protection

05/11/2023

OPERATOR: SWN Production Co., LLC

WELL NO: William Ritchea WTZ 405H

PAD NAME: William Ritchea WTZ pad

REVIEWED BY: _____

SIGNATURE: Brittany Moody

WELL RESTRICTIONS CHECKLIST

HORIZONTAL 6A WELL

** Pad Built 7/22/13*

Well Restrictions

At Least 100 Feet from Pad and LOD (including any E&S Control Feature) to any Perennial Stream, Lake, Pond, Reservoir or Wetland; OR

DEP Waiver and Permit Conditions

At Least 300 Feet from Pad and LOD (including any E&S Control Feature) to any Naturally Producing Trout Stream; OR

DEP Waiver and Permit Conditions

At Least 1000 Feet from Pad and LOD (including any E&S Control Feature) to any Groundwater Intake or Public Water Supply; OR

DEP Waiver and Permit Conditions

At Least 250 Feet from an Existing Water Well or Developed Spring to Well Being Drilled; OR

Surface Owner Waiver and Recorded with County Clerk, OR

DEP Variance and Permit Conditions

At Least 625 Feet from an Occupied Dwelling Structure to Center of the Pad; OR

Surface Owner Waiver and Recorded with County Clerk, OR

DEP Variance and Permit Conditions

At Least 625 Feet from Agricultural Buildings Larger than 2500 Square Feet to the Center of the Pad; OR

Surface Owner Waiver and Recorded with County Clerk, OR

DEP Variance and Permit Conditions

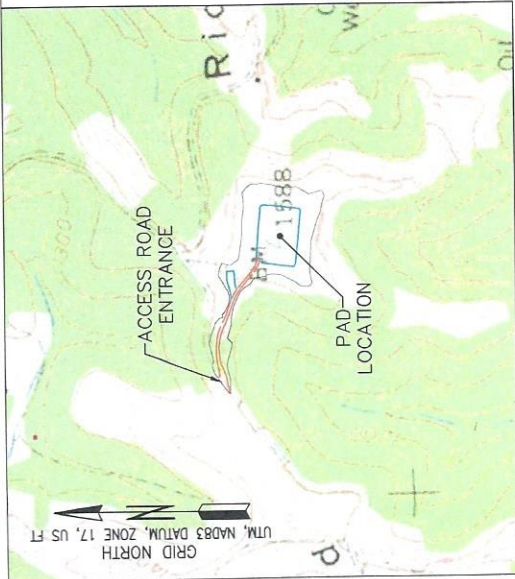
RECEIVED
Office of Oil and Gas

APR 4 2023

WV Department of
Environmental Protection

WILLIAM RITCHEA WTZ PAD CONSTRUCTION AND RECLAMATION PLAN AS-BUILT PROCTOR DISTRICT, WETZEL COUNTY, WV APRIL 2018

SHEET INDEX
 TS1. TITLE SHEET
 EP2.1 EVACUATION ROUTE/ PREVAILING WIND
 EP2.2 EVACUATION ROUTE/ PREVAILING WIND
 AS3.1 ASBUILT OVERVIEW
 AS3.2 ASBUILT
 AS3.3 ASBUILT
 AS3.4 ASBUILT
 ASR4.1 CONSTRUCTION AND RECLAMATION ACCESS ROAD PROFILE
 MRD5.1 RECLAMATION PLAN OVERVIEW
 MRD5.2 RECLAMATION PLAN
 MRD5.3 RECLAMATION PLAN
 MRD5.4 RECLAMATION PLAN
 MRD6.3 DETAILS
 MRD6.4 DETAILS



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

LOD
 TOTAL DISTURBED AREA: 12.2 ACRES
 ROAD DISTURBED AREA: 3.2 ACRES
 PAD DISTURBED AREA: 9.0 ACRES

COORDINATES:
 SITE ENTRANCE
 (NAD83)
 LAT: 39.670804
 LONG: 80.663337

AT RITCHEA PAD
 (NAD83)
 LAT: 39.669954
 LONG: 80.659848

CENTER OF PAD
 (NAD83)
 LAT: 39.669560
 LONG: 80.659179

GATHERING AREA
 (NAD83)
 LAT: 39.670678
 LONG: 80.663452

EXISTING WELLS:
 WILLIAM RITCHEA 1H
 API:47-103-03128H
 (NAD83)
 LAT: 39.669602
 LONG: 80.659388

WILLIAM RITCHEA 3H
 API:47-103-03129H
 (NAD83)
 LAT: 39.669598
 LONG: 80.659338

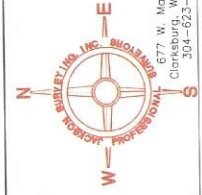
WILLIAM RITCHEA 201H
 API:47-103-03130H
 (NAD83)
 LAT: 39.669606
 LONG: 80.659438

WILLIAM RITCHEA 610H
 API:47-103-03141H
 (NAD83)
 LAT: 39.669514
 LONG: 80.658999

ENGINEERING ESTIMATE OF QUANTITIES		
WELL SITE PAD DATA (DRILLING)		
INSTALL STANDARD SUMP	2	EA
STONE FOR PAD AREA	100	TON
GRADE TO ELIMINATE STANDING WATER	1	LS
REPAIR BERM	1	LS
SEED & MULCH (BERMS)	250	SY
REPAIR RAMP	1	EA
ACCESS ROAD DATA (DRILLING)		
2"-3" AGGREGATE (POTHLES)	40	TON
CRUSHER RUN	40	TON
GRADE ROAD & STAGING AREA	1	LS
STONE FOR STAGING AREA	40	TON
15" HDPE CULVERT FOR STAGING AREA	60	FT
WELL SITE PAD DATA (RECLAMATION)		
REMOVE SUMP	4	EA
BREACH BERM	4	EA
DISCHARGE CHANNELS		
RIPRAP	180	TON
OR		
EROSION CONTROL FABRIC	200	SY
SPREAD TOPSOIL	2,600	CY
REINFORCED SILT FENCE	1,800	FT
SEED & MULCH	15,600	SY

LOD

ENGINEERING ESTIMATE OF QUANTITIES		
WELL SITE PAD DATA (DRILLING)		
INSTALL STANDARD SUMP	2	EA
STONE FOR PAD AREA	100	TON
GRADE TO ELIMINATE STANDING WATER	1	LS
REPAIR BERM	1	LS
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15" HDPE CULVERT FOR STAGING AREA	60	FT
WELL SITE PAD DATA (RECLAMATION)		
REMOVE SUMP	4	EA
BREACH BERM	4	EA
DISCHARGE CHANNELS		
RIPRAP	180	TON
OR		
EROSION CONTROL FABRIC	200	SY
SPREAD TOPSOIL	2,600	CY
REINFORCED SILT FENCE	1,800	FT
SEED & MULCH	15,600	SY



Jackson Surveying Inc.
 TITLE SHEET
 TS:1

SOUTHWESTERN PRODUCTION COMPANY LLC.
 WILLIAM RITCHEA WTZ PAD
 PROCTOR DISTRICT, WETZEL COUNTY, WV
 APRIL 27, 2018

WV DEP OOG
ACCEPTED AS-BUILT
 Updated
 4/17/2023



Joshua R. Cook RPE 17950

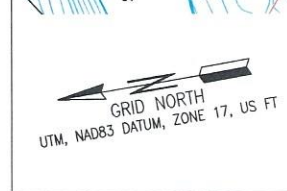
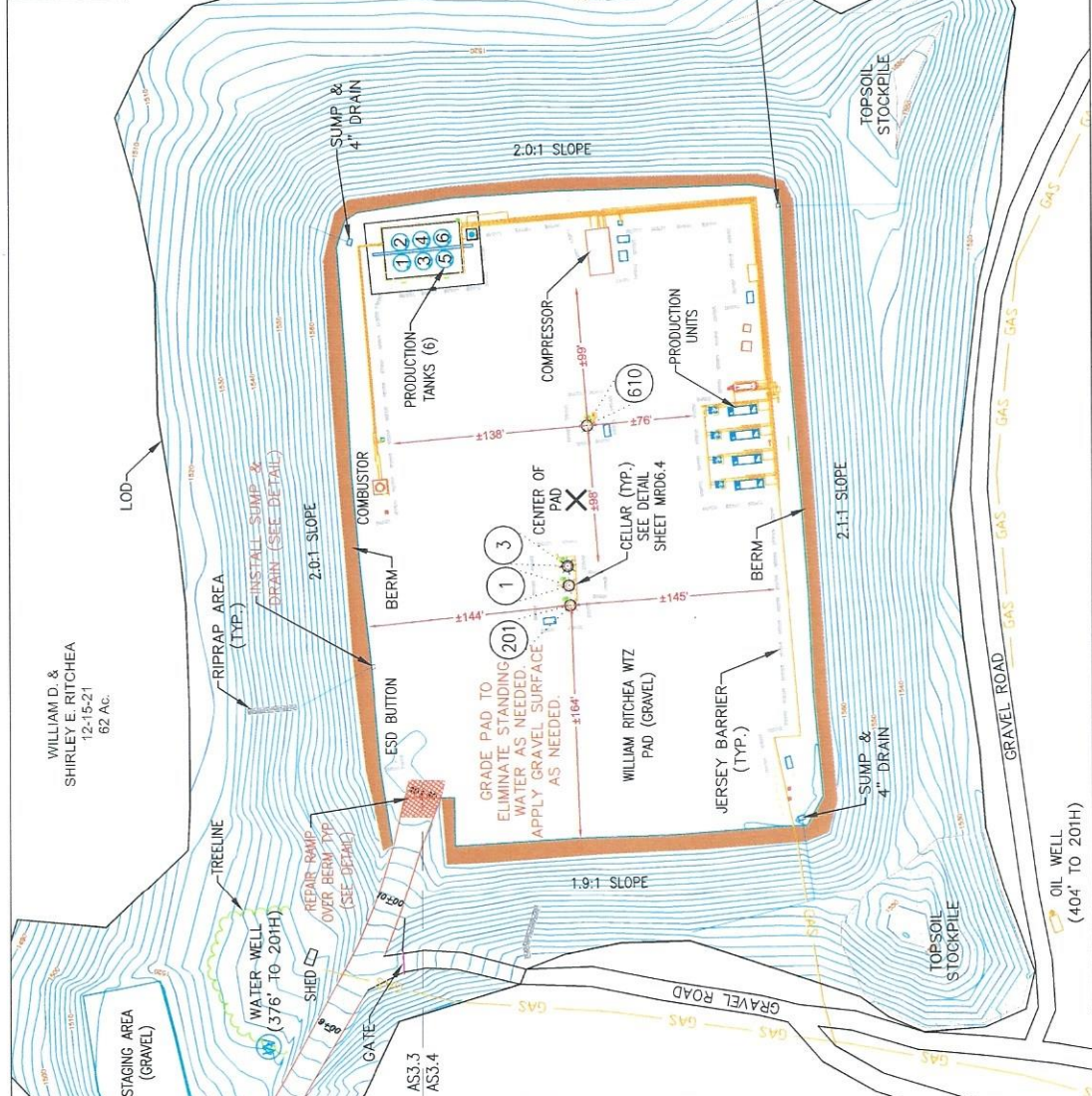
04-27-2018
 Date:

05/11/2023

REVISION	DATE

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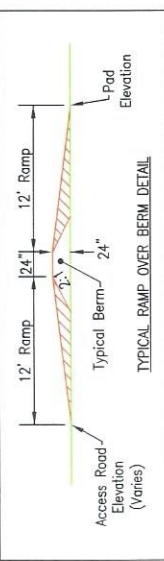


LEGEND -

- EDGE ACCESS ROAD
- PUBLIC/Private ROAD
- LOD
- CHAIN LINK FENCE
- DITCH/DRAIN
- PROPERTY LINES
- CL ACCESS ROAD
- CONTOUR MAJOR ASBUILT
- CONTOUR MINOR ASBUILT
- WATER WELL

RED TEXT INDICATES ITEMS TO BE CONSTRUCTED PRIOR TO DRILLING ACTIVITY.

PRODUCTION TANKS (UTM METERS)		
#	Northing	Eastng
#1	4,391,166.273	529,288.952
#2	4,391,165.882	529,293.414
#3	4,391,161.641	529,288.566
#4	4,391,161.310	529,293.146
#5	4,391,157.125	529,288.225
#6	4,391,156.829	529,292.831



WILLIAM D. & SHIRLEY E. RITCHEA
 12-15-21
 62 AC.

Jackson Surveying Inc.
 ASBUILT
 AS3.4
SOUTHWESTERN PRODUCTION COMPANY LLC.
WILLIAM RITCHEA WZ PAD
 PROCTOR DISTRICT, WETZEL COUNTY, WV
 APRIL 27, 2018



Date: 04-27-2018
 Joshua R. Cook RPE 17950



WV DEP OOG
ACCEPTED AS-BUILT
 Updated
 4/17/2023

SWM
 Production Company

05/11/2023